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CHECWORKS SFA Model


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**Indian Point Unit 3
CHECWORKS SFA Model**

**Calculation No. 0705.100-01
Revision 2
Issued For-Use**

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1. Introduction

Flow-Accelerated Corrosion (FAC) is a form of material degradation that results in thinning of the inside pipe wall in carbon steel piping and fittings under certain flow and chemistry conditions. Undetected FAC-induced wall thinning may cause a pipe to leak or rupture, potentially causing injury to plant personnel and/or plant shutdown. For these reasons, and in response to regulatory requirements, Indian Point 3 Nuclear Power Plant (IP3) has developed and implemented a program to monitor and mitigate FAC-induced wall thinning in high energy, large-bore piping systems [7.1].

This report uses plant design and operation information to document the CHECWORKS model for IP3. It documents the CHECWORKS Pass 1 analysis to generate a wear rate prediction for every piping component modeled in CHECWORKS. Component inspection data through the Refuel Outage 16 was imported to the model where available. A Pass 2 analysis was performed on all lines to provide wear predictions calibrated to the inspection data, as well as remaining life based upon measured wear rates for inspected components. The results of these analyses can be used to select components for inspection in order to mitigate pipe deterioration due to FAC.

This calculation replaces all previous CHECWORKS model calculations used to document the IP3 model. Previous CHECWORKS model calculations are listed in the References [7.2].

2. Purpose

The purpose of CHECWORKS SFA is to generate relative rankings by wear rate for piping components within the scope, to generate wear rate predictions calibrated to the inspection data, and to predict remaining life based upon predicted wear rate. The results of the CHECWORKS SFA model predictions can be used to select components for inspection in order to monitor pipe deterioration due to FAC.

The purpose of this calculation is to document the development of and updates to the CHECWORKS SFA model. Additionally, this calculation provides the results of the CHECWORKS SFA model Pass 1 and Pass 2 predictions and evaluates the accuracy of the predictions compared to actual measurements.

3. Scope

The large-bore FAC monitoring program has a clearly defined scope and has been in place for several years. The scope of the current FAC inspection program includes the following systems:

- Condensate
- Extraction Steam
- Feedwater
- Heater Drains
- Main Steam
- Moisture Preseparator Drains
- Moisture Separator Drains
- Reheater Drains

Selected lines from the above systems are modeled in the IP3 CHECWORKS Model. The scope of modelable lines was determined in the Indian Point Unit 3 System Susceptibility Evaluation Report [7.3]. The lines from these systems that are a part of the CHECWORKS Model scope are listed in Appendix D.

The CHECWORKS model reflects plant design and operation through Refuel Outage 16. All historical records (i.e. inspections, replacements, water chemistry, power levels, etc.) through Refuel Outage 16 were included in this analysis. Future updates to the FAC program (additional inspections, replacements, chemistry, power uprates, etc.) should be addressed in subsequent revisions of this document.

This analysis was performed using CHECWORKS SFA version 3.0 SP-2 (build 200).

Assumptions and modeling decisions made during this analysis are documented in Section 4. The methodology employed during this analysis is detailed in Section 5. Results obtained are listed in Section 6 and in the Appendices. Finally, Section 7 includes a list of all references used in this analysis.

4. Assumptions and Modeling Decisions

The following assumptions and modeling decisions apply to the Indian Point Unit 3 CHECWORKS model. The assumptions and modeling decisions are categorized below based on the range of their influence. See Appendix A for all historical changes to the model.

4.1. Global Assumptions and Modeling Decisions

- 4.1.1. In general, when modeling decisions or matters of interpretation arise, the plant is modeled to reflect actual conditions as closely as possible. This information can be obtained from heat balance diagrams, PEPSE models, hydraulic analyses, sample data readings, input from system engineers, etc. This realistic approach results in the most accurate and realistic model possible, not necessarily one that results in a higher predicted wear rate for a particular component. Because the results of the model will be considered when deciding which components to inspect, and because only a finite number of the modeled components will actually be inspected, realistic and accurate modeling is imperative to the decision making process. For instance, entering an unrealistically high flow rate for a particular component will result in a high-predicted wear rate for that component. If the model consisted of only that one component, this could be considered a conservative approach. However, because the model consists of many components, artificially or unrealistically raising the predicted wear rate for one component may cause that component to be selected for inspection at the expense of another with a higher actual wear rate. Therefore, the plant was modeled as realistically as possible. If additional conservatism is needed, it can be built into the FAC program by increasing the size of the inspection sample.
- 4.1.2. All input information was assumed to be correct from the previously verified CHECMATE model. Where discrepancies were found, engineering judgment was used to model the system as realistically as possible.
- 4.1.3. Small taps and drains off the main piping that are <25% of the main outer diameter and <4" do not significantly affect the flow rate or cause a flow disturbance and were not modeled.
- 4.1.4. In multiple train systems, when one or more trains are in standby during normal operation, a duty factor is applied to the Wear Rate Analysis runs containing those lines. When one of these trains flow into or out of a header, a duty factor cannot be applied if the time of operation for portions of the header varies, which will usually be the case. Instead of applying a duty factor, the flow rate was scaled back, and the component was modeled to operate 100% of the time. For each component (or portion of component in the case of tees), the average flow over time is calculated and entered. In this way, if a particular component experiences a flow of

1.2 Mlb/hr for one-third of the time, and no flow for the other two-thirds, the flow for that component is entered as 0.4 Mlb/hr. This process is the best possible option and is equivalent to the recommendation presented in option 3 of the section entitled “Cyclic Usage of Lines” of the EPRI Advanced CHECWORKS Training Manual [7.5].

- 4.1.5. Water Treatment for future operating cycles was assumed to match the most recent completed operating cycle. The current water treatment will be updated when the data becomes available.
- 4.1.6. Parallel trains of equal pipe diameter were assumed to have equal flow unless otherwise indicated.
- 4.1.7. For a number of lines on the Heat Balance Diagrams [7.6], thermodynamic and flow values (pressure, enthalpy, and flow rate) were listed separately for the steam phase and the water phase or for each train in a parallel train configuration. The overall flow rate, pressure, and enthalpy of these lines were calculated and entered in the CHECWORKS Steam Cycle (see Section 5.1.3). The combined flow rate was calculated as the sum of the liquid and steam flow rates (or the sum of multiple trains), the combined pressure was calculated as the average of all pressures, and the enthalpy was calculated as the weighted average of liquid and steam enthalpy (or the weighted average of multiple trains). These calculations were performed based on EPRI’s “Guidelines for Plant Modeling and Evaluation of Component Inspection Data” [7.7].
- 4.1.8. When hydrazine data was not available at the Steam Generator Outlet and MSR Drain, the “rules of thumb” [7.7] for a Recirculating Steam Generator were applied to all chemistry cycles. Based on the “rules of thumb”, the concentration of hydrazine at the Steam Generator Outlet was assumed to be 60% of the final feedwater concentration, while the concentration of hydrazine at the MSR Drain was assumed to be 120% of the final feedwater concentration.
- 4.1.9. The CHECWORKS Heat Balance Diagram (HBD) in the input model had the Boiler Feed Pump modeled as an electric pump instead of a steam driven pump. The CHECWORKS HBD was corrected to portray the Boiler Feed Pump as a steam driven pump.
- 4.1.10. Because the Boiler Feed Pump was remodeled as a steam driven pump, Steam Cycle Data was input for the original power level in addition to the Appendix K [7.6.2] and SPU [7.6.3] power levels for this location. Flow rate was obtained from the original HBD [7.6.1]. Feed Pump Turbine drain pressure and enthalpy was not shown on the original HBD; therefore, the original pressure and enthalpy was assumed to be equivalent to the SPU pressure and enthalpy as shown on the SPU HBD [7.6.3]. Note that this assumption has little impact on the model as no components in the Feed Pump Turbine drain are modeled.

- 4.1.11. The flow rate in the Feedwater Pump Recirculation lines was shown as zero on the SPU Heat Balance [7.6.3] and Appendix K Heat Balance [7.6.2]. In general flow through such lines is not zero under normal operation, so a heat balance is not a good source for determining this flow. Therefore, an assumption was made that the flow rate under SPU and Appendix K conditions was equivalent to the flow rate under original pre-uprate conditions as defined in the input CHECWORKS model (the as-received model) [7.8]. Note that all components in these lines are constructed with FAC-resistant material, so this assumption has little to no impact on wear rate predictions.
- 4.1.12. Wear in valves and orifices with negative Times to Tcrit was assumed to be documented and well-understood if the nearby downstream components had been inspected.

4.2. Component Assumptions and Modeling Decisions

4.2.1. General

- 4.2.1.1. Replaced components were added to the model with materials and schedule according to Addendum A to Spec. No. 6604-104-248-4 [7.3]. Replacement dates were input as the first day of the outage in which the replacement was made. As an exception, replacements made in 1994 was given a replacement date of 1/1/94.

4.2.2. Nozzles

- 4.2.2.1. In some cases, the imported CHECMATE data listed nozzle material as A234 WPB. When this occurred, the nozzle material was changed in CHECWORKS to A106 Grade B. The change was made because nozzles are generally fabricated from A106 Grade B, a piping material, rather than A234 Grade WPB, a fitting material. When the imported CHECMATE data listed nozzle material as other than carbon steel, the material code was left as-imported.
- 4.2.2.2. Nozzle materials SA508 CL3 and A240 TP321 were added to the material table.
- 4.2.2.3. When necessary for the calculation of the length of adjoining pipe, nozzles were assumed to have a length of 1/2 times the nominal pipe size. This has no effect on the predicted wear rate of the nozzle.

4.2.3. Straight Pipes

- 4.2.3.1. Pipe lengths were imported from the previously verified CHECMATE model when available. Pipe lengths were rounded to the nearest inch.

4.2.4. Valves

- 4.2.4.1. Valves were modeled with the material, thickness and diameter from the CHECMATE model.
- 4.2.4.2. When necessary for the calculation of the length of adjoining pipe, valves were assumed to have a length of 1.5 times the nominal pipe size. This has no effect on the predicted wear rate of the valve.

4.2.5. Orifices, Flanges, and Expansion Joints

- 4.2.5.1. Flow elements were assigned Geometry Code 6 with an orifice size equal to 90% of the inside diameter of the nominal pipe size. The downstream pipe was assigned Geometry Code 56.

4.2.6. Elbows

- 4.2.6.1. Elbows were assumed to be standard radius unless otherwise indicated.
- 4.2.6.2. Per EPRI recommendations [7.7], elbows cut to an angle between 0° and 45° were modeled as 45° elbows.
- 4.2.6.3. Per EPRI recommendations [7.7], elbows cut to an angle between 46° and 90° were modeled as 90° elbows.
- 4.2.6.4. Per EPRI recommendations [7.7], elbows cut to an angle between 91° and 180° were modeled as 180° returns.

4.2.7. Tees, Crosses, and Headers

- 4.2.7.1. All tees were left with the material that is associated to them from the CHECMATE model.
- 4.2.7.2. In cases where tees were modeled twice in CHECMATE, the branch component was deleted in this model and the associated information entered to the main component.
- 4.2.7.3. Per EPRI recommendations [7.7], crosses were modeled as type 11 tees with one main and one branch.
- 4.2.7.4. All tees were assumed to be fabricated when determining pipe material and schedule.

4.2.8. Piping Material and Schedule

- 4.2.8.1. Materials A672 A55 10, A217-C5, and A155 EFW Grade C55 Class 2 were added to the Material library.
- 4.2.8.2. The 54" pipe size for the Steam Generator Feed Pump Turbine drains was added to the Pipe Schedules and Sizes library.

4.2.9. Design and Operating Conditions

4.2.9.1. The design pressures and temperatures were imported from the previously verified CHECMATE model.

4.3. UT Inspection Assumptions and Modeling Decisions

- 4.3.1. In cases where there was insufficient information regarding the direction the inspection was taken, it was assumed that the numbers were axial, parallel to flow, and letters were clockwise radial, perpendicular to flow.
- 4.3.2. Version 1.0F of CHECWORKS did not recognize UT data imported as the downstream extension of nozzles. To compensate for this, the calculated wear was entered as user-specified wear, at that time. This bug was corrected in Version 1.0G of CHECWORKS, and the calculated wear for the downstream extension of nozzles does not have to be user-specified.
- 4.3.3. Prior to 3RO13, inspections performed online during the final days of an operating cycle were imported to the first day of the following refueling outage. Note that this has a minimal effect on predicted wear rates and service life as the operating hours are off by a small margin.
- 4.3.4. A number of inspections were performed over a month prior to 3RO13. Because this was an extended period of time, these inspections were imported to Cycle 13, not to the upcoming outage. The operating hours were adjusted accordingly to account for any difference in predicted wear.
- 4.3.5. In cases where a counterbore was present, the counterbore was excluded from the calculation of lifetime wear. However, the lowest reading from the counterbore area was used for the calculation of time to Tcrit.
- 4.3.6. See Appendix F for any changes (excluding points, excluding counterbore rows, etc.) made to the UT data after importation.
- 4.3.7. For Outage RO14, any measured wear that was found to be less than 0.030" or 5% of Tnom was excluded in the calculation of the LCF. This check was performed automatically when the data was imported from FAC Manager [7.9] to CHECWORKS SFA. In cases where this occurred, the wear was set to zero in SFA but the wear measurement was maintained in FAC Manager.
- 4.3.8. For Outage RO14, all inspection dates were set at the first day of the outage (March 7, 2007). This will have no impact on the time remaining to Tcrit since SFA uses in service hours to calculate remaining life.
- 4.3.9. For Outage RO14, only components that were found in CHECWORKS SFA were imported from FAC Manager. The other inspections that did not fit these criteria were assumed to not be in the official CHECWORKS model.

4.3.10. Subcomponents with the suffix “BR-DSX” in FAC Manager were imported to the branch extension in SFA.

5. Methodology

The development of the CHECWORKS model included inputting the Plant Global Data, Line Data, Component Data, and UT Inspection data.

5.1. Plant Global Data

CHECWORKS Plant Global Data pertains to the entire model, and includes the Heat Balance Diagram, Plant Power Level Data, Plant Steam Cycle Data, Plant Water Treatment Data, and Plant Period Data.

5.1.1. Heat Balance Diagram

The Indian Point 3 Heat Balance Diagrams were used to create the CHECWORKS HBD [7.8]. Represented on the HBD are all elements necessary to allow Water Chemistry Analysis to accurately calculate hydrazine and other constituent concentrations around the steam cycle. Also, the association of lines to the HBD allows the correct operating conditions to be applied to each line. Note that the CHECWORKS HBD numbering of the Feedwater Heaters, Reheaters, and Extraction Steam Lines proceeds from highest pressure item to lowest pressure item. However, IP3 uses the reverse order of the CHECWORKS HBD for the Feedwater Heaters. Therefore, IP3 items are not the same number as the CHECWORKS items. For example, IP3 #21 Feedwater Heater is the CHECWORKS #6 Feedwater Heater, IP3 #22 Feedwater Heater is the CHECWORKS #5 Feedwater Heater, and so on.

5.1.2. Plant Power Level Data

A Power Level was defined for each power level at which the plant has operated for a significant period of time or for a proposed level of operation. The power level corresponds to main generator output. A brief description of the fields in the CHECWORKS SFA Power Level form follows. The values input to the model and the reference from which the value was obtained is listed in Appendix C.

- **Power Level:** The Power Level can be defined as a percent between 0 and 200. The initial power level that the plant operated at was labeled as 100%. Later power levels were named as a percentage of power output relative to the initial power level. Table 5.1 lists the power levels and the applicable operating cycles.

Table 5.1 CHECWORKS Power Levels

Power Level (%)	Power (MWt)	Operating Cycles	Notes
100.00	3045.3	Cycles 1-12A	Original Power Level
101.12	3079.0	Cycles 12B-13	Appendix K Uprate
104.95	3196.0	Cycle 14 to Present	Stretch Power Uprate SPU

Data was entered for the new power levels on the Power Level Form in accordance with the CHECWORKS User's Guide [7.2].

- **Steam Rate:** The steam mass flow rate out of the Steam Generator was taken from the Heat Balance Diagrams [7.6].
- **Steam Generator/Reactor Vessel Pressure:** The pressure at the outlet of the Steam Generator was taken from the Heat Balance Diagrams [7.6].
- **Steam Generator/Reactor Vessel Temperature:** The temperature at the outlet of the Steam Generator was taken from the Heat Balance Diagrams [7.6].
- **Steam Generator Blowdown Rate:** The blowdown rate was taken from the Heat Balance Diagrams [7.6].
- **Carryover:** The carryover percentage was obtained from the Heat Balance Diagrams [7.6].
- **Feedwater Vent Rate:** This field is not used for a PWR plant.
- **Reheater Vent Rate:** This field is not used for a PWR plant.
- **Moisture Separator Carryunder:** This field is not used for a PWR plant.

5.1.3. Plant Steam Cycle Data

The following Steam Cycle Data is used by CHECWORKS to calculate dissolved oxygen concentrations during wear rate analysis. Steam Cycle Data was entered for each Heat Balance Item at each Plant Power Level. The values input to the model and the reference from which the value was obtained is listed in Appendix C.

- **Power Level:** A Power Level is selected from the pull down menu, which includes all of the power levels entered into the Plant Power Level data discussed in Section 5.1.2.
- **Flow Rate:** This is the flow rate taken from the HBD [7.6] in Mlb/hr. Flow rates were entered for the HBD Items when required.

- **Vent Rate:** Vent rates are not entered for PWR plants.
- **Quality:** The steam quality, from the HBD [7.6], was entered in this location as necessary.
- **Enthalpy:** The enthalpy, from the HBD [7.6], is required for the two-phase lines and was entered as necessary in this field in Btu/lb.
- **Temperature:** The temperature, from the HBD [7.6] was entered in this field as necessary in °F.
- **Pressure:** The pressure, from the HBD [7.6], was entered in this field as necessary in psia.
- **FWH Drain Temperature:** This field specifies the temperature for the drain line of the Feedwater Heater.

5.1.4. Plant Water Treatment Data

Water Treatment Data in CHECWORKS consists of name & title, cold pH, dissolved oxygen concentration, single amine, complex constituents, boron injection rate, hydrazine, and ammonia. The values input to the model and the reference from which the value was obtained is listed in Appendix C. Data is entered into the following Water Treatment Data fields:

- **Name & Title:** These two fields contain a descriptive name or title that allows the user to identify the chemistry period.
- **Cold pH:** The cold pH of the condensate is entered into this field if simple water chemistry is used.
- **Dissolved Oxygen:** The dissolved oxygen concentration in the condensate is entered into this field.
- **Single Amine:** If a single amine, rather than a combination of amines, is used, the amine type is entered here.
- **Complex Constituents:** If multiple amines are used, the amine type, their sampling locations, and their concentrations are entered here.
- **Boron Injection Rate:** If boron is injected, the injection rate, sampling location, and the concentration are entered here.
- **Hydrazine Treatment:** Separate sampling location and measured concentration data is entered for ammonia and hydrazine. In addition, hydrazine concentrations at the Steam Generator Outlet and MSR Drain are entered (see Section 4.1.8).

5.1.5. Plant Period Data

CHECWORKS divides plant history into two types of periods: operating and maintenance. Whenever a significant change occurs in the power level or water chemistry for the unit, a new operating period should be defined. For any significant period of plant down time, a maintenance period can be created. The values input to the model and the reference from which the value was obtained is listed in Appendix C. For each period, data was entered to the following fields:

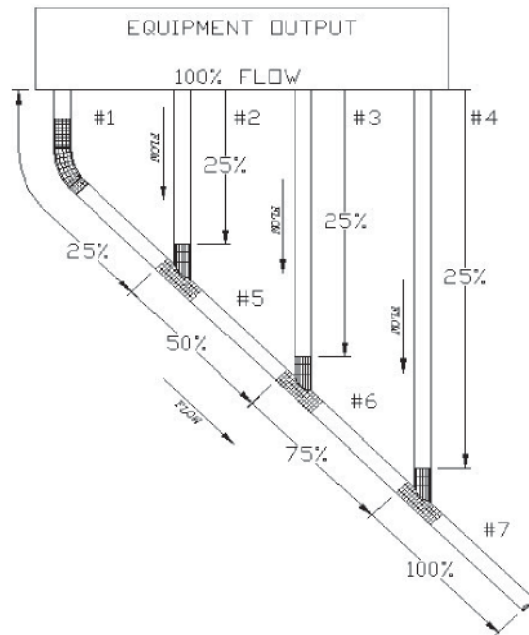
- **Period Name:** A user designated name for a Plant Period was entered in this field.
- **Period Begin Date:** The begin date of the Plant Period was entered in this field.
- **Period End Date:** The end date of the Plant Period was entered in this field.
- **Operating Hours:** The calculated operating hours per period were entered here.
- **Water Treatment:** The appropriate water treatment was selected for each period from a list of all water treatments in the CHECWORKS model.
- **Power Level:** The appropriate power level was selected for each period from a list of all power levels in the CHECWORKS model.
- **Period Type:** The appropriate period type, operating or maintenance was selected for each period.

5.2. Line Data

All components in the CHECWORKS model were grouped into lines. Lines containing components with identical thermodynamic and chemistry conditions are linked to the same CHECWORKS Heat Balance Diagram Line. A listing of all lines that appear in the CHECWORKS model can be found in Appendix D.

For full use of the Advanced Run Definition lines were divided where flow rates change. For conservatism, the tee where flow rate changed was associated to the line having the greatest flow rate (see Figure 5-1). Note that this will over predict the wear for some sections of tees.

Figure 5-1 Diagram of Line Grouping Convention



Components were grouped into lines by comparing the input CHECWORKS model [7.8] with FAC isometrics [7.10] and flow diagrams [7.11]. Lines were named according to the naming convention, below.

AA-BB.CC D

AA = System Abbreviation
 BB.CC = Multi-digit code to identify a plant line or location
 D = Brief line description

Note that the AA-BB.CC portion of the line name corresponds to the plant line name and component name prefix as taken from the flow diagrams [7.11] and FAC isometrics [7.10]. New line names were created as required by CHECWORKS, not where plant line names changed. Therefore, some lines contain components with different component name prefixes, but in general the component prefix and line name agree. Note that if the AA-BB.CC portion of the line name was not unique for CHECWORKS purposes, an underscore followed by a 1, 2, 3 etc. was added to this portion of the line name.

For example, line name "CD-01.1A FWH 31A to FWH 32A" is plant line name CD-01.1A in the Unit 3 Condensate system from Feedwater Heater 31A to Feedwater Heater 32A.

In addition to the line name, the following information was entered in the Line Data Form.

- **System:** The name of the system in which the line belongs was entered in this field. This field is optional.

- **Phase:** This is a pull-down menu with three choices: All Water, All Steam, or Wet Steam. This field is optional.
- **Line Group:** This field is used to sort and display the lines. This field is optional.
- **Notes:** A full description of the line and the P&ID that the line is on is entered in this field.
- **Heat Balance Association:** Each modeled line was linked to the appropriate Heat Balance Diagram line, except Z-type lines (see Section 5.8.7). This allows the calculated chemistry, thermodynamic data, and flow rate to be correctly associated to the lines of the model. Please note that this association is not shown on the Line Data Form. Instead, Heat Balance Association appears on the CHECWORKS HBD (see Section 5.1.1).

5.3. Component Data

Component data within CHECWORKS was entered in the Component Data Form, which contained two tabs: the Main Tab, and the Optional Tab. All component input data is presented in Appendix E.

5.3.1. Component Data Form, Main Tab

The Component Data Form, Main Tab contains key information about the component, including its name, geometry, size, material, operating conditions, and design conditions.

- **Component Name:** Component names are based upon the unique identification system employed at Indian Point 3. The component naming convention includes the system, a numerical identifier, and a letter representing geometry type (“P” for pipe, “T” for tee, “N” for nozzle, etc.). Components in the IP3 model were named according to the convention below:

AA-BB.CC-DDE

AA Abbreviation of the system (ex: CD = Condensate, EX = Extraction Steam, etc.)
BB Subsystem Number
CC Segment Number
DD Component Number within Segment
E Component Type Code

- **Geometry:** The geometry was selected from a pull-down menu with a description of the component type (e.g., “STRAIGHT PIPE”). The component type was obtained from isometric drawings [7.10].
- **Geometry Code:** The component type was obtained from the isometric drawings [7.10]. The component geometry code was entered in accordance with the CHECWORKS SFA User’s Guide [7.2].

- **Pipe Size:** A pull-down menu contains outside pipe diameter, nominal wall thickness, and schedule. These were determined from piping specifications [7.3].
- **Material:** The material is selected from a pull-down menu containing material choices. Material was determined from piping specifications [7.3]. The material of replacements was taken from the FAC isometrics [7.10] and documentation from IP3 personnel [7.12].
- **Wear Rate Analysis (WRA) Options:** The option selection determines whether or not inspections on the component will be used to calibrate the model. There are four options. “Use Measured Wear for LCF” allows CHECWORKS SFA to use inspection data for the component in the Pass 2 Wear Rate Analysis. “Do Not Use Measured Wear” eliminates the inspection data for the component from the Pass 2 Wear Rate Analysis. “Exclude From Analysis” eliminates the component itself from Wear Rate Analysis. The option “Use Measured Wear for LCF” is the default option and was selected for the majority of components. Based on the interpretation of inspection data, the option “Do Not Use Measured Wear” was selected if appropriate (see Appendix F). The option “Exclude From Analysis” was generally not used. Selection of the fourth option “Use D/S Ext. from Prev. Comp” is discussed in Section 5.5.2.2.
- **Operating Data** Pressure, enthalpy, quality, and temperature can be entered for the component (only two of four required). These values were entered on the component form for cases where operating conditions did not change due to power level changes. See Appendix D for the lines that use the Component Form as the source of operating conditions. The HBDs were used as a first priority [7.6]. When data was not available on the HBD, the flow diagrams were used [7.11].
- **Design Data:** Design pressure and temperature were obtained from the flow diagrams [7.11].
- **Flow Rate:** Flow rate was entered on the component form for cases where operating conditions did not change due to power level changes. See Appendix D for the lines that use the Component Form as the source of operating conditions. The HBDs were used as a first priority [7.6]. When data was not available on the HBD, the flow diagrams were used [7.11].
- **Orientation Angle:** Component orientation angle was determined from the isometrics [7.10] in accordance with the CHECWORKS SFA User’s Guide [7.2].
- **Orifice Size:** Orifice size is the inside diameter of the orifice and is entered for all orifices, components modeled as orifices, and for all piping immediately downstream of an orifice. Orifice size was

obtained from drawings [7.10] or an assumption was made (see Section 4.2.5).

- **Valve Size and Valve Coefficient:** The valve opening size (Valve Size) and valve flow capacity (Valve Coefficient) is entered in these fields. These fields may be used for lines utilizing Network Flow Analysis (see Section 5.6).
- **Pipe Roughness:** This field specifies the absolute internal roughness for the component. Only lines utilizing NFA use this field (see Section 5.6).
- **Branch or Small End Diameter (Br./S.E. OD):** Entered in this field is the outside branch diameter for tees, or the small end diameter for reducers, expanders, reducing elbows, or expanding elbows. This data was obtained from the isometrics [7.11].
- **Branch or Small End Nominal Thickness (Br./S.E. T_{nom}):** Entered in this field is the nominal pipe thickness for the branch of tees, or the small end of reducers, expanders, reducing elbows, or expanding elbows. This data was obtained from piping specifications [7.3].
- **Branch/Bend Angle:** The Branch/Bend Angle may be used to specify the angle between the main run and the branch in the case of a lateral. This data is not used in calculating wear rates and was not entered.
Elbow R/D: For elbows, the radius to diameter ratio was entered in this field. This data was obtained from the isometrics [7.10] where available. If the Elbow R/D could not be determined from the isometrics, an assumption was made (see Section 4.2.6.1).
- **User Defined Field (1):** This field was not used.

5.3.2. Component Data Form, Optional Tab

The Optional Tab of the Component Data Form contains information on component size, critical thickness, insulation, location, installation, adjacent equipment, and notes.

- **Length:** The pipe length can be entered in this field. This field is optional for all lines that do not utilize Network Flow Analysis (NFA). For lines utilizing NFA, only the length of straight piping is needed. This data was obtained from the isometrics [7.10].
- **Nominal Thickness:** The nominal thickness of extensions was entered if appropriate. The extension thickness was set equal to the appropriate main component thickness (upstream main, downstream main, or branch). This data is used during UT Analysis wear calculation.
- **Initial Thickness:** The initial thickness was set equal to the nominal thickness.

- **Screening Thickness:** This field can be used to determine color-setting thresholds in the UT Analysis displays. Since this is not used in the prediction of corrosion rate no value was entered.
- **Critical Thickness:** CHECWORKS SFA allows the user to define the Component Critical Thickness (T_{crit}). The T_{crit} field is used to establish the critical thickness criteria for calculating all components' remaining life.

Since a true engineering calculated T_{crit} value is not available for all components in the CHECWORKS SFA model, generally only for inspected components, engineering calculated values of T_{crit} were not entered into the CHECWORKS SFA model. Instead a uniform method for estimating T_{crit} was established, which would account for both inspected and non-inspected components. This was done to level the field when ranking components by remaining life to T_{crit} , so that the ranking of inspected components was not skewed compared to the ranking of non-inspected components.

In this model, T_{crit} was set equal to the greatest of T_{long} , an assumed minimum thickness for longitudinal stresses, T_{hoop} , the pipe wall thickness determined from hoop stress allowables, or an administrative limit of 0.100”.

T_{hoop} was calculated using the following equations:

$$T_{hoop} = \frac{(D_o \cdot P_D)}{2[S_A + (P_D \cdot Y)]} \quad [7.13]$$

where:

D_o = Outside Diameter

P_D = Design Pressure

S_A = Allowable Stress

Y = (0.4) constant

T_{long} was an assumed value for the longitudinal stresses. For safety related components it was assumed that T_{long} was equal to 87.5% of the nominal thickness. For non-safety related components, it was assumed that T_{long} was equal to 70% of the nominal thickness.

- **Drawing Name:** This field lists the isometric that the component appears on.
- **Insulation:** The insulation type and insulation thickness fields can be entered for lines utilizing NFA (see Section 5.6).
- **Installation and Replacement Dates:** The dates components are installed or replaced are entered in these fields. When the install date field is empty, the install date is set equal to the plant start date. When

the replacement date field is empty, the component is currently in operation.

- **Location and Adjacent Equipment:** Information on component location, and adjacent equipment can be entered in these fields. This information is not required in order to calculate predicted wear rate and was not entered.
- **User Defined Field (2):** This field was not used.
- **User Defined Field (3):** This field was not used.
- **Notes:** Comments and notes were entered into this field as appropriate.

5.3.3. Replacement records (outage and material) were obtained from the information submitted to CSI from personnel at Indian Point Unit 3 [7.12]. Where replacement material or replacement date was unknown, an assumption was made (see Section 4.2.1.1).

5.4. **Component Connectivity**

The component connectivity feature tells the CHECWORKS SFA code what the modeled component is connected to. To define component connectivity, components were assigned to flow segments; similar to the way they were assigned to lines. Components were assigned to flow segments in flow order starting where flow began, such as the outlet nozzle of a heater, and terminating where flow ended, such as the inlet nozzle of a heater. Flow segments were further divided where flow changed or could potentially change, such as the upstream main, downstream main, or branch of tee.

Component connectivity is used in Network Flow Analysis run definitions, in the Advanced Run Definition, and in reporting results.

Component connectivity consists of one form, the Flow Segment form. Data was entered on the Flow Segment form as described below.

- **Flow Segment Name:** Flow segments are essentially a further breakdown of CHECWORKS SFA lines. Therefore, flow segments were named by taking the line name, followed by the letters “SEG”, and then a sequential numbering 01, 02, 03, etc. For example, line “EX-01.3 HP EXT FWH 36 HEADER” was broken down into flow segments named “EX-01.3 HP EXT FWH 36 HEADER SEG01”, “EX-01.3 HP EXT FWH 36 HEADER SEG02”, etc.
- **Component Name:** Entered in this column is the component name. Components were assigned to flow segments in flow order starting where flow began and terminating where flow ended, changed, or could potentially change, such as at a nozzle or tee.
- **Line Name:** The CHECWORKS SFA line that the component is grouped in appears in this column.

- **Section Code:** Entered in this field is the section of the component (upstream main, downstream main, or branch) that lies on the flow segment. If the last component or first component in a flow segment is a tee, this field is used to specify how the tee is connected to the other components in the flow segment.

For example, a type 10 tee with flow from the branch to the upstream main and downstream main should appear in three flow segments, one for each section. The branch of the tee will be the last component in one segment, while the upstream main and downstream main will be the first component in the remaining two flow segments.

5.5. UT Inspection Data

UT inspection files may contain grid readings for a main component and extensions. Inspection files for tees may be present in the following subcomponents: main, branch, main downstream extension, main upstream extension, and branch extension. Inspection files for reducers and expanders may be present in the following subcomponents: large end of main, small end of main, main downstream extension, and main upstream extension. For all others, inspection files may be present in the following subcomponents: main, main downstream extension, and main upstream extension.

Once imported to CHECWORKS, the inspection files for the main runs of tees were partitioned into upstream main and downstream main portions. The inspection files for the large end and small end for any reducer or expander are partitioned into large end and small end. All importation was done in accordance with the CHECWORKS User Guide [7.2].

Appendix F contains a listing of all UT inspection data that has been imported. UT inspection data was received as UT examination reports [7.14] and electronic UT grid files [7.15]. For each inspection the following data is listed:

- Line Name
- Component Name
- Period inspection was taken
- Inspection Report Number
- Section of the component that was analyzed
- Wear Method used in analysis
- Tinit value, or Tnom when Tinit was not defined in CHECWORKS
- Measured Wear
- Whether or not the inspection was used in the calculation of the LCF, and the reason it was not used

Note that in cases where a component or subcomponent has UT data from

multiple outages, only one wear value for that component or subcomponent (if any) is used in the calculation of the LCF. The wear data used comes from the most recent inspection available. For example, consider an elbow that was inspected in RFO8 and RFO9, and both inspections were available for use in the LCF. In this case, only the wear from RFO9 would be used. Since the RFO8 inspection is technically still “available” for use in the calculation of the LCF, the decision was made to label the table in Appendix F with “Yes” in the Used in the LCF column for both inspections.

5.5.1. CHECMATE Measured Wear Data

CHECWORKS stores measured data as a grid of wall thickness measurements. However, CHECMATE stores only the initial thickness (T_{init}) and the minimum measured wall thickness (T_{DAT}). During the CHECMATE conversion process, values of measured thickness (T_{DAT}) and initial thickness (T_{init}) were transferred to CHECWORKS. Where CHECMATE had a single field, “ T_{nom} ”, to account for both the initial thickness and the nominal thickness, CHECWORKS has separate fields for both. Therefore, for components with T_{init} in CHECMATE, the values were imported to the T_{init} field in CHECWORKS, and the nominal wall thickness was entered to the T_{nom} field. T_{DAT} was converted to measured wear by subtracting T_{DAT} from T_{init} , the resulting value was automatically imported to the “Measured Wear” field in CHECWORKS during importation, and manually checked to ensure accuracy. Inspected components with imported T_{DAT} values are listed in Appendix F.

5.5.2. UT Inspection Data

UT inspections in the CHECWORKS database were reviewed for correct importation. The grid data manipulation options of transpose, reverse rows, partition, offset, and clockwise/counterclockwise were used to manipulate the CHECWORKS UT grid to match the hardcopy packets as needed. All grid data manipulation techniques were used in accordance with EPRI guidelines [7.7].

5.5.2.1. Upstream and Branch Extensions

In some cases, UT data was taken on an upstream extension or branch extension. Inspection data was imported to the appropriate component section. However, since CHECWORKS FAC does not use these subcomponents in the calculation of an LCF, the “Do Not Use MW” option is not required to be selected for these subcomponents and the data is stored for archival purposes only.

5.5.2.2. Downstream Extensions

Downstream extensions are used in the calculation of an LCF. The fourth WRA option on the Component Data Form, “Use D/S Ext. from Prev. Comp” was selected for instances where both of the following were true:

- Wear calculation data was available for the downstream pipe extension of a particular main component; and
- The downstream pipe extension is represented in the CHECWORKS FAC model by a piping component immediately following the main component.

This option is selected for the pipe component downstream of the main component containing the UT data.

5.5.3. Single Outage Wear Calculation

Single outage wear is used for components with only one outage of inspection data, for the first outage of components with multiple outage inspection files but no baseline file, for components with multiple outage inspection files without the same grid structure, or based on engineering judgment. The CHECWORKS Wear Calculation Module is accessible from the UT Analysis Form and allows single outage wear to be calculated by three different methods. In the model, single outage wear is calculated by all three available single outage methods. Note, however, that the result of only one of the methods, if any, is used to calculate the LCF during WRA.

5.5.3.1. Band Method

The Band Method calculates the wear for each circumferential band of a component in the range specified. The wear for the entire component is set equal to the maximum value calculated in the range. By default, the range is equal to the entire component, but the range may be altered if regions of the grid are seen to contain questionable or inaccurate readings. For a particular band, wear is calculated as the difference between the minimum thickness and either the maximum thickness or the initial thickness, whichever is larger. If initial thickness is not entered, the greater of maximum thickness or nominal thickness (T_{nom}) is used.

5.5.3.2. Area Method

The Area Method calculates the wear for a rectangular range specified for a component. The wear for the entire component is set equal to the wear calculated for the area. By default, the area is equal to the entire component, but the range may be altered if regions of the grid are seen to contain questionable or inaccurate readings. For the area, wear is calculated as the difference between the minimum thickness and either the maximum thickness or the initial thickness, whichever was larger. If initial thickness is not entered, the greater of maximum thickness or nominal thickness (T_{nom}) is used.

5.5.3.3. Moving Blanket Method

The Blanket Method repeatedly calculates the wear for a rectangular region, called a blanket. The blanket is first located at the “upper left” corner of the grid. The blanket is then moved one grid step at a time down the grid. Having reached the bottom of the grid, the blanket returns to the top, one grid step to the right. This motion continues until the entire grid has been blanketed. At each position of the blanket, wear is calculated as the difference between the greater of the average of the two highest readings or Tinit and the average of the two lowest readings. By default, the blanket size is three grid steps in the longitudinal direction and one third of the component diameter in the circumferential direction. Calculated wear for the component is determined by the greatest blanket wear.

5.5.4. Multiple Outage Wear Calculation

Multiple outage wear, also known as Point-to-Point wear, can be calculated for a component between the inspections from two outages, or between baseline data and the first outage inspection. For components with multiple outage wear calculations, two methods are available in CHECWORKS FAC for calculating the component’s lifetime wear. “Max. Point to Point + Past Wear” combines the lifetime wear calculated upon the first selected outage and the maximum measured difference between the two selected outages. “Avg. Point to Point + Past Wear”, on the other hand, combines the lifetime wear calculated upon the first selected outage and the average measured difference between the two selected outages. The “Max. Point to Point + Past Wear” method was generally used in multiple outage wear calculations.

The option “Treat Neg. Wear as Zero” was selected to eliminate calculated negative wear caused by variances in measurements.

5.5.5. Exclusion of Measured Wear

The option “Do Not Use MW” or “Do Not Use Measured Wear” was selected given any of the conditions in the list below. A complete list of reasons appears in Appendix F.

- The component was not an elbow, bend, reducer, expander, tee, nozzle, or pipe.
- Measured Wear was less than or equal to 0.030” or 5% of nominal thickness.
- Measured wear was not representative of actual FAC wear.
- The component material was not susceptible to FAC wear.
- Inspection removed based on engineering judgment.

- The component operated at non-susceptible conditions (no flow).
- The component was small bore.
- Inspection was performed on a nozzle or tee and there was not sufficient correlation between these data points and those of components with other geometry types.

Nozzles and tees were examined on a case-by-case basis to determine whether they should be included in the calculation of the LCF. If there is sufficient correlation between these data points and those of components with other geometry types, the measured wear was used. Otherwise, the “Do Not Use Any Measured Wear” option was selected on the Component Data Form.

5.5.6. Minimum Measured Thickness (T_{meas})

The Minimum Measured Thickness (T_{meas}) value is involved in predicting thickness and remaining service life. A lower value results in a shorter remaining service life.

CHECWORKS SFA allows a number of options to determine the value of the minimum measured thickness (T_{meas}) of an inspected component. “Min. Meas Thickness from Region of Max. Wear” (GW) uses the smallest thickness value from the region that has the highest wear. This option is selected by default if the wear calculation uses the band, blanket, or area methods. The second option used, “Minimum Measured Thickness” (MT), uses the smallest thickness value from any region. MT was chosen for subcomponents that had counterbore, for baseline inspections, when wear was calculated using the point-to-point method, and when the MT value was over 0.040” less than the GW value.

Since the MT method uses the minimum reading from the entire UT inspection grid and the GW method uses the minimum reading from the region where wear is maximum, the T_{meas} value calculated by MT will be less than or equal to the value calculated by GW in all cases. Thus MT is the more conservative method. However, conservatism is not always the best option in the CHECWORKS model. Because the CHECWORKS model contains many components, using an overly conservative method to calculate the remaining life of one component may cause that component to be selected for inspection at the expense of another. Therefore, the method used was to model components as realistically as possible. See Section 4.1.1 for further discussion on conservatism in the CHECWORKS model.

For inspected components, the T_{meas} value listed in the “Wear Rate Analysis: Wear Predictions Report” in the Pass 2 Analysis, Appendix I, may not match the measured minimum thickness from the UT readings. In all cases, the T_{meas} values should not conflict by more than 0.040”. Note that the “Wear Rate Analysis: Wear Predictions Report” in Appendix I lists the T_{meas} method, MT or GW, that was used.

5.5.7. Pass 2 Wear Rate Analyses (WRA) and Line Correction Factor (LCF)

Pass 2 Wear Rate Analysis was performed on the Wear Rate Analysis Runs as defined with one change: the Analysis Option, “Do Not Use Measured Wear” was deselected. As in Pass 1 WRA, Pass 2 WRA will generate for each component a predicted wear rate, and a predicted remaining service life. During Pass 2 WRA, CHECWORKS also generates a Line Correction Factor (LCF) for each WRA Run in the following way. For each inspected component in the run where the option “Do Not Use for LCF” is not chosen, CHECWORKS generates a ratio of the calculated wear to the predicted wear. The LCF for a run is defined as the median value of these ratios. CHECWORKS multiplies the Pass 1 wear predictions by the LCF to generate the Pass 2 wear predictions.

The LCF indicates the degree to which CHECWORKS over or under-predicts wear. A reasonable LCF should be between 0.5 and 2.5 [7.7]. An LCF outside this range may be the result of inaccuracies in the model (e.g., incomplete chemistry history) or non-representative inspection data.

5.6. Network Flow Analysis

Network Flow Analysis (NFA) is a module within CHECWORKS that can be used to calculate pressure, flow rate, enthalpy, and quality at each component. If used, the results of the analysis are available for access by CHECWORKS during the Wear Rate Analysis to predict corrosion rates.

NFA should be used where a thermodynamic quantity of interest is unknown or unavailable. For example, if flashing across a control valve or orifice is considered possible; NFA can be used to calculate the steam quality at each component. This is necessary for accurate prediction of the FAC wear rate. For lines where thermodynamic conditions are known and the potential for flashing is small, NFA is not needed because the results would not increase the accuracy of the Wear Rate Analysis.

Three NFA Runs were added after RO16 for the newly-modeled 31 Feedwater Heater Drains. Details of these runs can be found in Appendix A.

5.7. Water Chemistry Analysis

Water Chemistry Analysis uses the Plant Global Data (Heat Balance Diagram, Power Level Data, Steam Cycle Data, Water Chemistry Data, and Plant Period Data) to determine the pH levels and chemical concentrations at various locations around the steam cycle. These values strongly affect FAC rates.

The Water Chemistry Analysis calculates the pH levels and constituent concentrations, for each line on the Heat Balance Diagram. The appropriate values are then used in the calculation of predicted wear rates for each component through the association of its database line to the HBD.

Water Chemistry Analysis can also be performed independently from Wear Rate Analysis. The resulting chemistry levels around the HBD are the same as they are

when calculated as part of the Wear Rate Analysis. However, when the Water Chemistry Analysis is run alone, CHECWORKS also generates a report displaying the water chemistry results, as well as critical global data. A Water Chemistry Analysis was performed on every Water Chemistry Period in order to review the results to ensure that they are reasonable; the reports are presented in Appendix G.

5.8. Wear Rate Analysis

Wear Rate Analysis (WRA) calculates a predicted wear rate for each component as well as the predicted time before the component wall thins to T_{crit} . WRA automatically takes into account all global input through the use of the Water Chemistry Analysis results.

5.8.1. Run Name and Title

Wear Rate Analysis Runs were given a Name and a Title as listed in Appendix B.

5.8.2. Ending Period

The ending period is used by CHECWORKS to calculate the current wear rates based on current conditions. The ending period selected was the next scheduled outage, RO17.

5.8.3. Lines to Analyze

Each run was composed of lines from the CHECWORKS model. Every line was included in a run. The runs and lines defined for this CHECWORKS model are presented in Appendix D.

5.8.4. Analysis Options

The CHECWORKS model allows the user to specify the source of component operating conditions. Component operating conditions can come from one of four locations: the CHECWORKS HBD, the Component form, an NFA, or the ARD. During wear rate analysis, CHECWORKS can use the operating conditions stored at the component level ("COMP"), determine the operating conditions based upon steam cycle data and Advanced Run Definition Flow Factors ("HBD"), use the operating conditions entered on the Advanced Run Definition form only ("ARD"), or to use the operating conditions calculated using an NFA ("NFA"). For all cases, the option "NFA->HBD->ARD->COMP" was selected. This directs CHECWORKS to preferentially use Network Flow Analysis first (if it exists for the line), followed by the ARD (for Z-type lines), the HBD (for all remaining lines), and finally the component. The option "NFA->HBD->ARD->COMP" was selected for all lines since the model includes multiple power levels.

5.8.5. Duty Factor

The duty factor is used to specify the fraction of the total plant operating hours that a given line was in operation. For full-time lines, the duty factor is 1.0. For part-time lines, the duty factor is set to a value less than one based on operation. For example, if a line has full flow half of the time and zero flow half of the time, then the lines would be modeled with full flow and the duty factor would be set to 0.5. Use of the duty factor is in accordance with the recommendations of the EPRI Guidelines for Plant Modeling and Evaluation of Component Inspection Data [7.7].

Duty factors were taken from the input CHECWORKS model [7.8]. Duty factors for each line appear in Appendix D.

5.8.6. Advanced Run Definition

The Advanced Run Definition (ARD) function allows operating conditions to be entered at different times throughout plant history. Use of this function is necessary for plants operating with more than one power level (see Section 5.1.2). In addition, the ARD allows for entry of operating and chemistry conditions for lines not modeled on the heat balance diagram (COLA and Z-type lines), as well as part-time lines and parallel trains. The operating conditions listed below (flow factors, duty factors, pressure, temperature, enthalpy, quality, flow rate, and chemistry conditions) can change from cycle to cycle.

- **Flow Factor:** On the CHECWORKS SFA HBD level, flow rates are expressed in totals rather than for each train. For example, feedwater flow rate might be entered as 10 million pounds per hour, where each train of a three train system sees 3.33 million pounds per hour. As a result, flow multipliers had to be entered to the lines so that the actual flow rate is used to calculate wear rate at the component level. Thus for each flow segment a flow multiplier, or flow factor, was calculated. The flow factor is used to adjust the CHECWORKS SFA HBD calculated flow rate. The calculated flow factor for each flow segment was entered on the ARD form.

There are some possible exceptions to the use of flow factors. The first is for lines and flow segments where NFA or the Component form would be used to calculate operating conditions and flow rate. For these the train flow is directly entered in the NFA definitions or the Component form. Therefore, for these lines the assigned flow factor is 1.0. Other exceptions are made for some lines and flow segments where the ARD form is used as the source of operating conditions. If the input source (PEPSE or HBD) already listed flow rate per train, then the flow factor is set to 1.0 and the train flow rate is entered.

Flow factors were calculated by consulting the CHECWORKS SFA HBD, the plant heat balance diagrams [7.6], and the flow diagrams [7.11].

If the ARD is not used, the flow factor is 1.0 by default.

- **Duty Factor:** The duty factor is used to specify the fraction of the total plant operating hours the lines in this run were in operation. For full-time lines, the duty factor is 1.0. For part-time lines, the duty factor is set to a value less than one based on operation. For example, if a line has full flow half of the time and zero flow half of the time, then the lines would be modeled with full flow and the duty factor would be set to 0.5. Use of the duty factor is in accordance with the recommendations of the EPRI Guidelines for Plant Modeling and Evaluation of Component Inspection Data [7.7].

If the ARD is not used, the Global Duty factor is used.

- **Thermodynamic Data:** Thermodynamic data (operating pressure, enthalpy, temperature, and quality) were entered on the ARD form for Z-type lines (see Section 5.8.7) and COLA lines (see Section 5.8.8) only. These fields were left blank for all other cases. Only two out of four values are needed to define the thermodynamic conditions (pressure and enthalpy preferred) [7.7]. Data entered in these fields is used as a priority over the CHECWORKS SFA HBD.
- **Flow:** Flow rate was entered on the ARD form for Z-type lines (see Section 5.8.7) and COLA lines (see Section 5.8.8) only. These fields were left blank for all other cases. Data entered in this field is used as a priority over the CHECWORKS SFA HBD.
- **Chemistry Data:** Chemistry data (cold pH, oxygen concentration, and hydrazine concentration) was entered for Z-type lines only. These fields were left blank for all other cases. Data entered in this field is used as a priority over chemistry conditions calculated during Water Chemistry Analysis.

5.8.7. Z-Type Lines

Lines not associated to the CHECWORKS SFA heat balance diagram are called Z-type lines. Because they are not associated to the HBD, CHECWORKS SFA cannot automatically calculate chemistry and operating conditions for these lines. Therefore, when using the ARD function, the user must input not only flow factors and duty factors but also thermodynamic conditions, flow rate, and chemistry conditions for each operating cycle.

Z-type lines are used when the site has chemistry data for a specific line that is more accurate than the chemistry data calculated by CHECWORKS SFA.

5.8.8. Chemistry Only Line Association (COLA)

Chemistry Only Line Association (COLA) lines were created due to limitations in the CHECWORKS SFA HBD. In these cases, the computer model does not obtain the data from the correct location on the HBD, or the CHECWORKS SFA program did not allow the correct data to be entered.

COLA lines are associated to the CHECWORKS SFA HBD, like all other non Z-type lines in the model, but this association is to obtain chemistry data only. The values of pressure, temperature, enthalpy, quality, and flow rate were entered on the ARD form directly.

6. Results

6.1. Water Chemistry Analysis Results

The results of the Water Chemistry Analysis are presented in Appendix G. A report was generated for each combination of power level and water treatment that the plant was operated. Water Chemistry Analysis results were input to Wear Rate Analysis.

6.2. Pass 1 Analysis Results

The results of the Pass 1 WRA are presented in Appendix H. For each WRA Run, the following reports are presented:

- Wear Rate Report (sorted by average wear rate)
- Wear Rate Report (sorted by flow order)
- Service Life Report (sorted by remaining service life)
- Service Life Report (sorted by flow order)

6.3. Pass 2 Analysis Results

A summary of the results of the Pass 2 WRA is presented in Appendix B. The Pass 2 reports appear in Appendix I with the exception of the Wear Plots which are located in Appendix J. For each WRA Run, the following reports are presented:

- Wear Rate Report (sorted by average wear rate)
- Wear Rate Report (sorted by flow order)
- Service Life Report (sorted by remaining service life)
- Service Life Report (sorted by flow order)
- Wear Report (sorted by flow order)
- Wear Plot (Comparison of Wear Predictions)

6.4. Discussion of Pass 2 Results

A CHECWORKS predictive model was developed. Input was performed in accordance with the CHECWORKS User Guide [7.7] and the latest EPRI recommendations. No error messages were encountered during the execution of the Wear Rate Analysis, and the output was reviewed and found to be reasonable.

The Pass 2 Wear Rate Analysis results of each WRA run were reviewed to determine the relationship between measured wear and predicted wear. Based on this relationship, a WRA run was classified as Calibrated or Not Calibrated. For Calibrated WRA runs, the Pass 2 Wear Rate Analysis results of predicted wear rate and remaining service life can be used with reasonable confidence. For runs classified as Not Calibrated, Pass 2 Wear Rate Analysis results should not be used. Instead, Pass 1 Wear Rate Analysis results should be used to determine

relative rankings only. In particular, remaining service life (Time to T_{crit}) should not be used as an estimate of remaining component life.

The criterion used to classify a WRA run as Calibrated or Not Calibrated is discussed in the sections below. No single criterion is definitive in classifying a WRA run as either Calibrated or Not Calibrated. Instead, engineering judgment was used to weigh each criterion to determine calibration status.

A summary of the Pass 2 evaluation for each WRA run appears in Appendix B.

- **Number of Inspection Locations:** EPRI recommends that at least three to five locations be included in a Pass 2 Analysis to provide reasonable confidence in the results [7.7 & 7.15]. In this context, a “location” is a CHECWORKS component and all of its component sections. Thus an inspection on an elbow and the downstream extension of the elbow would count as a single inspection location, even though two components were inspected. Note that this inspection location would be represented by two points on the Wear Plot, one per section.

The more inspections used in calculating the LCF, the more likely that the run can be considered properly calibrated. For runs in which less than three locations have been included in the calculation of the LCF, the results should be considered preliminary and used with caution because there is insufficient UT data to provide high confidence in the Pass 2 results. Therefore, for all runs identified below as requiring additional inspections, the lines in the run should not be considered properly calibrated Pass 2 models, and the results should be used as relative rankings only. In particular, Time to T_{crit} should not be used as an estimate of remaining life until properly calibrated Pass 2 analyses are complete.

- **Line Correction Factor (LCF) Value:** If perfect agreement between the CHECWORKS Pass 2 predictions and measured wall thickness existed, the analysis of each run would result in an LCF of 1. The range considered reasonable for LCFs is from 0.5 to 2.5 [7.7]. If the LCF is outside this range, additional attention should be paid to the results to understand why there is such a significant difference between predictions and measurements.
- **Wear Plot Correlation:** The plot scatter or the correlation between predicted and measured wear is generally the most important factor when determining calibration status. Good correlation will allow a run with a low number of inspection points and/or a poor LCF to be considered properly calibrated. Generally, a run with a poor LCF should not be considered a properly calibrated Pass 2 analysis. However, a high number of inspection points, a good correlation, and a low percentage of outliers may allow the run to be considered calibrated.

Correlation was determined by using the Normalized Mean of the Average Error (NMAE) approach described in CHUG Position Paper No. 9 [7.31].

Poor: The inspection data exhibits significant scatter that does not adhere to the 45° line or a significant number of outliers are present. The NMAE is greater than 30%.

Moderate: The inspections points are within the $\pm 50\%$ wear boundaries with few outliers, but the inspection points do not form tight clusters around the 45° LCF line. The NMAE is between 20% and 30%

Good: The inspection points adhere well to the 45° LCF line. There are very few outliers present. The NMAE is less than 20%.

- **Parallel Train Coverage:** EPRI's "Recommendations for an Effective Flow-Accelerated Corrosion Program" advises that inspections be performed on parallel trains [7.7]. As a consequence, there must be adequate train coverage to categorize a run as calibrated.
- **Inspections on Control Valves and Orifices:** NSAC-202L states that special consideration should be given to locations immediately downstream of orifices and control valves [7.15]. Thus for a line to be calibrated, an inspection must be performed immediately downstream of these locations.
- **Number of Outliers:** The number of outliers (points on the Wear Plot that fall outside the lines 50% above and below the central diagonal) is generally considered on a percentage basis in relation to the number of inspections. If a relatively large percentage of the inspections are outliers, then the CHECWORKS results should not be considered properly calibrated. In general, the number of outliers should not exceed 25%.
- **Geometry Coverage:** Finally, for a run to be considered calibrated, there should be a representative sample of the different geometries in the run. For example, a run that was calibrated with inspections on 90° elbows may correctly predict the wear for other elbows, but it may do a poor job of predicting the wear for a reducer.

The specific results obtained for each Wear Rate Analysis run are discussed in Appendix B. The results of the Pass 2 Analysis should be used to pick inspections for calibrated runs only. Runs not calibrated should use the results of the Pass 1 Analysis to pick inspections based on relative ranking.

6.5. Discussion of Negative Times to Tcrit

The Service Life Report for each run in Appendix I gives a calculated value for remaining service life for each component. This value is shown in the

“Component Time to Tcrit (hrs)” column. When this value is negative, it indicates that the calculated component wear is greater than the allowed wear. In some cases, this value is accurate, and the component should be inspected to ensure the component still meets industry standards. Other times, the wear can be understood in other ways. Often times, negative times to Tcrit occur on components that cannot be accurately inspected with UT methods, for example, valves and orifices. If UT cannot be taken on a component, CHECWORKS cannot use an inspection to adjust the calculated wear of a component. Wear in valves and orifices with a carbon steel downstream pipe, elbow, tee, or nozzle can be approximated by inspecting the downstream component. When this is not possible, inspections should be handled with alternate inspection methods as per plant procedure. In some cases, an inspected component will show a negative time to Tcrit because inspections on the component have been omitted from the Pass 2 calculation. This occurs for various reasons given in Appendix F. If an inspection exists on one of these components, the wear in that component is assumed to be understood, and reinspections should be driven through analysis of previous inspections.

Appendix K lists the components in the Indian Point Unit 3 CHECWORKS model that have a negative time to Tcrit. Components with an understood wear should be inspected based on analysis of previous inspections. Components where wear is not understood should be prioritized and inspected when possible using the appropriate methods.

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 - 7.2.6. “Indian Point Unit 3 Heater Drains CHECWORKS Model”, Report No. IP3-RPT-HD-00979, Revision 4, 5/6/2004.
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 - 7.6.1. Original HBD, 3045.3 MWt: New York Power Authority Indian Point 3 Nuclear Power Plant Heat Balance “F”, 5/29/90.

- 7.6.2. Appendix K HBD, 3079.4 MWt: Indian Point 3 Nuclear Power Plant “Benchmark tuned to 3-19-03 Plant Data”, Sheets 1-6, Run date 1/10/2005.
- 7.6.3. Stretch Power Uprate HBD, 3196 MWt: Indian Point 3 Nuclear Power Plant “Uprate 3168 Core Power w/ 0.5% Margin”, Sheets 1-6, S&W Calc 59379-HU(S)-001 Rev. 0, Attachment 8.15.
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- 7.8. Indian Point 3 CHECWORKS FAC model, the (as-transmitted) SPU update project model, the transmittal date of the model was March 23, 2005, Document No. 0507 14c02.
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Dwg No. EC-H-5000, Rev. 3	Dwg No. EC-H-50038, Rev. 2
Dwg No. EC-H-5001, Rev. 4	Dwg No. EC-H-50039, Rev. 3
Dwg No. EC-H-5002, Rev. 1	Dwg No. EC-H-50040, Rev. 3
Dwg No. EC-H-5004, Rev. 2	Dwg No. EC-H-50041, Rev. 3
Dwg No. EC-H-5005, Rev. 2	Dwg No. EC-H-50042, Rev. 2
Dwg No. EC-H-5006, Rev. 1	Dwg No. EC-H-50045, Rev. 1
Dwg No. EC-H-5007, Rev. 2	Dwg No. EC-H-50046, Rev. 2
Dwg No. EC-H-5008, Rev. 2	Dwg No. EC-H-50047, Rev. 2
Dwg No. EC-H-50061, Rev. 1	Dwg No. EC-H-50048, Rev. 2
Dwg No. EC-H-50062, Rev. 1	Dwg No. EC-H-50060, Rev. 1
Dwg No. EC-H-50064, Rev. 1	Dwg No. EC-H-50072, Rev. 1
Dwg No. EC-H-50071, Rev. 2	Dwg No. EC-H-50074, Rev. 1
Dwg No. EC-H-50081, Rev. 2	Dwg No. EC-H-50075, Rev. 1
Dwg No. EC-H-50082, Rev. 3	Dwg No. EC-H-50076, Rev. 1
Dwg No. EC-H-50082, Rev. 3	Dwg No. EC-H-50077, Rev. 1
Dwg No. EC-H-50009, Rev. 1	Dwg No. EC-F-50078, Rev. 1
Dwg No. EC-H-50010, Rev. 2	Dwg No. EC-H-50079, Rev. 2
Dwg No. EC-H-50011, Rev. 1	Dwg No. EC-H-50080, Rev. 2
Dwg No. EC-H-50012, Rev. 2	Dwg No. EC-H-50084, Rev. 3
Dwg No. EC-H-50014, Rev. 1	Dwg No. EC-H-50085, Rev. 1
Dwg No. EC-H-50015, Rev. 2	Dwg No. EC-H-50086, Rev. 1
Dwg No. EC-H-50016, Rev. 2	Dwg No. EC-H-50087, Rev. 1

Dwg No. EC-H-50017, Rev. 2	Dwg No. EC-H-50088, Rev. 1
Dwg No. EC-H-50018, Rev. 2	Dwg No. A-
Dwg No. EC-H-50020, Rev. 2	Dwg No. A-
Dwg No. EC-H-50021, Rev. 2	Dwg No. A-
Dwg No. EC-H-50022, Rev. 2	Dwg No. A-2021
Dwg No. EC-H-50029, Rev. 1	Dwg No. A-2021
Dwg No. EC-H-50030, Rev. 1	Dwg No. A-2021
Dwg No. EC-H-50031, Rev. 2	Dwg No. A-
Dwg No. EC-H-50035, Rev. 2	Dwg No. 9321-F-22253
Dwg No. 9321-F-20773	Dwg No. 9321-F-20793

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Condensate & Boiler Feed Pump Suction, Dwg No. EC-F-20 183 Sh. 2, Rev. 2
Boiler Feedwater, Dwg No. EC-F-20193, Rev. 2
Extraction Steam, Dwg No. EC-F-20203 Sh. 1, Rev. 1
Extraction Steam, Dwg No. EC-F-20203 Sh. 2, Rev. 1
Heater Drains & Vents, Dwg No. EC-F-20223 Sh. 1, Rev. 1
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Moisture Separator and Reheater Drains & Vents, Dwg No. EC-F-20233 Sh. 1, Rev.
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- 7.30. MSD Piping Replacement Isometric Drawings (for information only):
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 - 7.30.2. Turbine Building & Heater Bay Replace Piping From MSD Tanks 31A&B, 32A&B, and 33A&B Spool Piece Location Isometric From MSD

Tank 31B, 32B, & 33B to Heater Drain Tank, NYPA Drawing No. SK-98-3-051-002, Rev. 0.

- 7.31. CHUG Position Paper No. 9, Development of a Figure of Merit for Evaluating CHECWORKS SFA Pass 2 Results, December 2010.

Appendix A
CHECWORKS Model Change History

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Updates prior to 3R014

Global

- The steam lines between the preseparators and the separators were represented on the CHECWORKS Heat Balance Diagram (HBD) as a dummy high-pressure extraction line, as recommended in the Guidelines for Plant Modeling and Evaluation of Component Inspection Data [7.6]. The enthalpy for this CHECWORKS HBD line was assumed to be the same as the line from the preseparator, as shown on the heat balance diagrams [7.5].
- For MSEP 1 on the CHECWORKS HBD, the steam cycle enthalpy was entered as the combination of the preseparator and the separator drains to the drain tank. The steam cycle pressure was taken from the previously verified CHECMATE model, and translated to psia from psig.
- For RHTR 1 on the CHECWORKS HBD, the steam cycle pressure was taken from the previously verified CHECMATE model, and translated to psia from psig.
- The blowdown rate for the steam generator operated at 0.1000 Mlb/hr for the majority of plant life. However, after refueling outage 9 the rate was cut to 0.0750 Mlb/hr.
- The blowdown pressure was assumed to be equal to the pressure at the outlet of the steam generator. The blowdown enthalpy was assumed to be the enthalpy of saturated water at this pressure.
- The Steam Generator Moisture Carryover Percentage was left at the default value of 0.25%.
- The Blowdown Tank venting rate was entered as 0% [7.5.1].
- The Heater Drain Tank venting rate was entered as 0%. This does not necessarily represent actual operating conditions but is used to obtain reasonable oxygen concentration values.

Condensate

- For component CD-06.2-01R, the design pressure was reduced to 625 psig. This was done to reduce the value of T_{crit} so that it is less than the value for T_{nom} . This is acceptable since the operating pressure is 156.4 psig.
- The sketch for components CD-02.8B-03P, CD-02.6-03T, and CD-02.8B-02E for the 1997 outage is unclear. It was assumed that these components were inspected in a manner similar to components CD-02.7-02T, CD-02.8A-03P, and CD-02.8A-02E for the 1997 outage, which is of a similar configuration.
- CD-02.5-04T has downstream pipe inspected for the 1992 refueling outage. However, CD-02.6-01T is a fabricated tee immediately downstream of CD-02.5-04T. Therefore, the first 5

rows of data from file CD254TDP.dat were imported to the main of CD-02.6-01T, and the remaining three rows were imported as its downstream extension. A 180 degree offset was used for the downstream tee since both tees were inspected using the same grid even though their branches are 180 degrees opposed.

- The initial thickness of 0.845 inches imported from CHECMATE for CD-5.1C-10T was significantly greater than the nominal thickness of 0.688 inches. This would have resulted in CHECWORKS over-predicting the wear since CHECWORKS calculates wear based upon initial thickness versus measured thickness. Therefore, this value was removed from the model.
- Point (J,2) was deleted from the refueling outage 9 inspection of CD-02.12-05P (report 97UT101), imported as the D/S extension of CD-02.12-04V, since this point was obviously inaccurate.
- CHECWORKS point (L,4), which corresponds to point (L,9) in report 97UT044, was removed from the branch of CD-02.6-03T for refueling outage 9 since the reading was unrealistically high.
- CD-02.5-04T's branch was not used in the calculation of the LCF since the measurements are not due to actual wear for both refueling outage 8 and 9.
- Point (F,4) was removed from the refueling outage 9 inspection of CD-02.1A-13R (report 97UT053) due to an unrealistically high reading.
- The initial thicknesses of 0.678 and 0.671 inches, respectively, imported from CHECMATE for CD-02.8B-02E and CD-02.8C-02E were significantly greater than the nominal thickness of 0.438 inches. This would have resulted in CHECWORKS over-predicting the wear since CHECWORKS calculates wear based upon initial thickness versus measured thickness. Therefore, this value was removed from the model.
- Point (F,1) was deleted from the Cycle 10B inspection of CD-02.1C-12T (report 99UT074), imported as the U/S Main, since this point was determined to be inaccurate by engineering judgment.

Extraction Steam

- The orientation angle of component EX-04.1-07P was changed to 180 degrees.
- Expansion joints were modeled as orifices with the component number that was next in the series. An orifice diameter equal to 90% of the inside diameter of the pipe was used. Specifically, the components added were as follows:

EX-03.1A-42X	EX-03.1B-37X	EX-03.1C-41X
EX-04.1-08X	EX-04.8-08X	EX-04. 15-08X
EX-04.2- 10X	EX-04.9-10X	EX-04. 16-10X

- The following components were changed to geometry code 3, 45 degree elbow, and, where applicable, their downstream pipe was changed to geometry code 53:

EX-05.1A-03E	EX-05.1B-03E	EX-05.1C-03E
EX-05.2A-03E	EX-05.2B-03E	EX-05.2C-03E
EX-06.4A-02E	EX-06.4B-02E	EX-06.4C-02E

- The following components were changed to geometry code 1, 45 degree elbow:

EX-05.2A-05E	EX-05.2B-05E	EX-05.2C-05E
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- The following components were changed to long radius elbows:

EX-04.2-07E	EX-04.9-07E	EX-04.16-07E
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- The orientation angle of component EX-01.3-21E was changed to 90 degrees.
- Components EX-02.13-04E, EX-03.1A-20E, and EX-03.1A-24E were assumed to be short radius elbows based on overall line configuration.
- An orientation angle of 90 degrees was added for component EX-01.3-21E
- Components EX-01.5A-03E and EX-01.5A-09E were changed to geometry code 102, 90 degree elbow with counterbore.
- Lines ES: PRESEP 1A TO HDR 35, ES: PRESEP 2A TO HDR 35, ES: PRESEP 1B TO HDR 35, and ES: PRESEP 2B TO HDR 35 were newly installed during refueling outage 5, RO5 [7.29]. Therefore, the installation date for the components within these lines was set to the start date of RO5, 05/02/87.
- During Refueling Outage 9, all piping between the High Pressure Turbine and the 6 Heaters was replaced with the exception of the turbine exit nozzles, the feedwater heaters inlet nozzles, and all the valves. The replacement date used was the first day of Refueling Outage 9 or 5/14/97. The feedwater heaters inlet nozzles were internally given a stainless steel weld overlay. In order to accurately model the existing weld overlay within CHECWORKS, the feedwater inlet nozzles were also replaced. The valves and turbine exit nozzles were left as is.
- Components EX-02.16-08E, EX-02.17-05E, and EX-02.18-05E were replaced with carbon steel in 1985. Therefore, the material and WRA Option for these components were changed to A234/WPB and "Use Measured Wear for LCF", respectively.
- Type 12 tees with no flow in the upstream or downstream main and their corresponding downstream pipes were changed to the proper geometry code. The table below lists the component, current geometry code, applicable downstream pipe, and current geometry code for downstream pipe.

Tee Component Name	Current Geometry Code	D/S Pipe Component Name	Current Geometry Code
EX-02.1-06T	10	EX-02.5-01P	60
EX-02.8-08T	10	N/A	N/A
EX-04.1-06T	10	EX-04.3-01P	60
EX-04.8-06T	10	EX-04.10-01P	60
EX-04.15-06T	10	EX-04.17-01P	60

- Components EX-02.4-01T and EX-02.11-01T were removed from the model since the main run of these tees are on non-modeled lines.
- Component EX-01.3-18P was deleted from the model since the 1992 inspection of adjacent components revealed that no pipe actually exists.
- The original material of components EX-01.3-23T and EX-01.4-02T was A234 Grade WPB. This material was changed to A106 Grade B since tees were assumed fabricated.
- Piping specifications were unavailable for LP extraction lines to Heaters 31 and 32. These lines were assumed to have the same design pressure and temperature as well as piping schedule and material as the lines to the 33 Heaters.
- New material A691 EFW Grade 2 ¼ CR Class 22 was added as having 2.25% chrome and 0.70% molybdenum with an allowable stress of 15,000 psi. This material, A691/EFW/22, was used for replaced piping to the 35 Heaters.
- All components that were replaced during Refueling Outage 9 from the HP Turbine to the 6 Heaters have a current material of A-213/TP304L/TP3. This material is comparable in composition to the actual material installed. Since the current material is non-susceptible to FAC, all replaced components were selected as “Do Not Use Any Measured Wear”.
- The following components were replaced with chrome-moly during RO11. The replacement date for these components was assumed to be 04/28/01.

EX-02.16-02P	EX-02.16-06E	EX-02.17-03E
EX-02.16-03E	EX-02.16-07P	EX-02.17-04P
EX-02.16-04P		

- Components EX-01.1-03P and EX-01.2-10L had two inspections during RO8. The later of the two was imported.
- Component EX-02.3-03T is not in the model, therefore its RO8 inspection data could not be imported.
- In some cases, inspection data files did not match the hard copies. This data was not

imported. Affected components were EX-04.6-05E and, EX-02.14-32T for RO9.

- Data file EX042102.DAT was not imported for RO9 because it is an expanded view of the EX-04.21-04P that is already associated with inspection file EX042 1 00.DAT.
- The following data points were removed from RO8 on component EX-01.1-03P, the downstream extension of EX-01.1-02E, because of high readings: (H,3&4), (I,3&4), (M,3&4), (N,3&4), and (O,3&4).
- For component EX-01.1-08R in RO8 the data point (O,9) was removed from the downstream main section and rows 3 & 4 were excluded from the wear calculation for the upstream main section.
- For component EX-03.1C-13E in RO9 the data point (I,1) was removed from the main section.
- Data file EX 02.16 03EMICR was not imported for RO10 because it is an expanded view of elbow EX-02.16-03E that is already associated with inspection file EX02 1603 .DAT.
- Hot UT inspections taken on components EX-04.4-22T, EX-04.4-21P, and EX-04.6-01R during RO10P were repeated during RO10 to measure the difference between hot versus ambient temperature UT data. The RO10 UT data was not imported due to the lack of inspection data sheets.
- Data file EX 02.17 03E SUP was not imported for R10 because it is an expanded view of elbow EX-02.17-03E that is already associated with inspection file EX021701 .DAT.
- For Cycle 10B inspections of tee branches EX-04.20-16T and EX-04.4-22T blank UT data columns N-R were deleted and readings were assumed to be taken clockwise against flow (counterclockwise with flow). For component EX-04.4-22T the data point (K,3) was removed from the branch section.
- For component EX-02.16-06E data points (AA,1), (AB,1), (Y,2), and (AB,3) were removed from the downstream extension analysis.
- For component EX-03.1B-05T, the inspection was a partial grid on one section of the main. The grid was imported to CHECWORKS for historical purposes only and was therefore excluded from the calculation of the LCF.
- UT inspection data for component EX-02.7-02T for RO9 was not imported due to questionable readings and the component was only partially gridded.
- A number of inspections revealed piping components that had not been modeled previously. In each case, the component was added to the model in the correct location. The component name was obtained from the inspection packet. Pipe material and schedule was assumed to be identical as other piping components nearby. The following table lists the components that were added to the model.

Component	Inspection Report Number	Location
EX-02.9-07P	03UT141	Upstream of EX-02.9-07E
EX-02.9-10P	03UT141	Downstream of EX-02.9-09E
EX-02.13-03P	03UT086	Downstream of EX-02. 1 3-03E

- The table below lists Extraction Steam components which were replaced during this outage. These replacements are documented in inspection report number 03UT1 51. Line scan readings were performed prior to installation to obtain the minimum and maximum thickness of these components; however, no inspection was imported to the model as line scan readings cannot be used as a baseline exam by CHECWORKS.

EX-02.9-02P	EX-02.9-04P	EX-02.9-06P
EX-02.9-03E	EX-02.9-05E	

- The geometry code of components EX-02.13-04E and EX-02.13-05P was changed to 3 and 53, respectively.
- The nominal thickness of over fifty components was updated based on documentation from the Extraction Steam modification of 1987.
- Component EX-01.1-08R had no file or data for the downstream extension in RO8.

Feedwater

- The feedwater heaters inlet nozzles were internally given a stainless steel weld overlay. In order to accurately model the existing weld overlay within CHECWORKS, the feedwater inlet nozzles were also replaced. The valves and turbine exit nozzles were left as is.
- A straight pipe exists between components FW-03.1C-04B and FW-03.1C-05B. Therefore, components FW-03.1C-16P_1 and FW-03.1C-16P_2 were inserted as type 51 and type 9 respectively between those components.
- Component FW-02.5-05P was deleted from the CHECWORKS database. The inspection report 99UT269 shows that there is no pipe between tees FW-02.4-19T and FW-02.5-01T.
- Components FW-02.8A-25R, FW-02.8B-25R, FW-02.8D-24R, and FW-02.8C-24R were changed from Geometry Code 17 to Geometry Code 7.
- Component FW-03.1A-08B was changed to Geometry Code 4 from Geometry Code 3.
- Component FW-03.1C-05B was changed to Geometry Code 2 from Geometry Code 3.
- Tinit was deleted from component FW-02.8B-22T since it resulted in an unrealistic value for

calculated wear.

- Tinit was deleted from the small end of component FW-01.2B-27R since it resulted in an unrealistic value for calculated wear.
- The datasheet for the outage 9 inspection of component FW-01.3-09P listed FW013001.dat as the data file. However, file FW013001.dat was used for component FW-01.3-06E. File FW013001.dat was used instead. File FW013001.dat was slightly different than the datasheet and was modified to match by moving one data point and deleting another. To summarize, the data files for outage 9 were imported as follows:

Component	DAT File
FW-01.3-06E	FW013001
FW-01.3-05P	FW013002
FW-01.3-09P	FW013001
FW-01.3-18P	FW01310B
FW-01.3-08E	FW013001
FW-01.3-07E	FW013002

- The first and last bands were excluded from the analysis of component FW-03.1A-08B's outage 9 inspection due to counterbore. Point (I,15) was also removed from this component since it was unrealistically low and provided an unrealistic value for measured wear.
- Tinit was removed from the downstream main of component FW-02.8B-26R since it provided unrealistic calculated wear.
- Point (N,8) was removed from component FW-02.8B-26R's RO9 inspection since it was unrealistically low and provided an unrealistic value for measured wear
- Point (F,7) was removed from component FW-01.3-03E's outage 8 inspection since it was unrealistically low and provided an unrealistic value for measured wear.
- Component FW-02.5-0 1T's branch is actually an elbow, which is not modeled in CHECWORKS. The outage 10 inspection data was imported to the branch of FW-02.5-01T, however it was not used in the calculation of the LCF.
- The outage 10 sketch for the branch extension of component FW-02.4-19T is unclear as to which end of pipe the rows begin. It was assumed that the inspection rows begin downstream of flow and move towards the tee.
- Tinit was changed to 1.372 for the U/S and D/S Main of tee FW-02.5-01T to match with pipe FW-02.5-05P.
- Inspection report number 03UT123 revealed a piping component that had not been modeled previously. This pipe was named FW-01.6B-07P and was located downstream of FW-01.6B-

06E.

- The component name was obtained from the inspection packet. Pipe material and schedule was assumed to be identical as other piping components nearby.
- The initial thickness (Tinit) value of 1.3 12” was deleted for reducers FW-02.8C-25R and FW-02.8C-24R. The Tinit value was approximately 0.5” greater than Tnom. Removal of the Tinit value resulted in a significant reduction in calculated wear, around 0.3” less, and a more realistic calculated wear for the RO11 inspections.
- Component FW-02.4-15E showed high wear due to a cluster of low readings caused by a lamination. These low readings were deleted to give a more accurate wear value and minimum thickness value. The deleted readings were: (C8, 0.513); (C9, 0.539); (C10, 0.668); (C11, 0.815); (D8, 0.582); (D10, 0.751); (D11, 0.837); (D12, 0.906); (E9, 0.759); and (E10, 0.811).

Heater Drains

- Components HD-6.1A-35N, HD-6.1A-36N, HD-6.1B-30N, HD-6.1B-31N, HD-6.1C-26N, and HD-6.1C-27N were removed from the model. The isometric drawings change sheets at this location. The continuation symbol was mistakenly labeled as a nozzle.
- The 1997 inspection of component HD-01.2B-01R shows that there is no pipe between the elbow and reducer. Therefore, component HD-01.1B-08P was removed from the model.
- The expansion joints in the heater drain pump suction lines were modeled as orifices with the component number that was next in the series. An orifice diameter equal to 90% of the inside diameter of the pipe was used. Specifically, the components added were HD-10.2A-07X and HD-10.2B-06X.
- The IP3 P&IDs show a “Temporary Strainer” in the heater drain pump suction lines. This was not modeled previously. Therefore, it was assumed that it was not installed and does not significantly affect wear rates.
- Component HD-10.2B-01E was changed to Geometry Code 16 from Geometry Code 4.
- Component HD-12.4-19T was removed from the model since it was previously modeled in the Condensate system as component CD-06.1-01T.

Moisture Preseparator Drains

- The following is a list of components that required a material change:

Line Name	Component Name	Old Material	New Material
PD: DRNS FROM PRESEP 1B	PD-01.2-02B	A106/B/B	A53/B/S
	PD-01.2-03P	A106/B/B	A53/B/S
	PD-01.2-05P	A106/B/B	A53/B/S
	PD-01.2-07P	A106/B/B	A53/B/S
	PD-01.2-10O	A106/B/B	A53/B/S
PD: DRNS FROM PRESEP 1A	PD-01.4-02B	A106/B/B	A53/B/S
	PD-01.4-03P	A106/B/B	A53/B/S
	PD-01.4-05P	A106/B/B	A53/B/S
	PD-01.4-07P	A106/B/B	A53/B/S
	PD-01.4-10O	A106/B/B	A53/B/S
PD: DRNS FROM PRESEP 2B	PD-01.6-02B	A106/B/B	A53/B/S
	PD-01.6-03P	A106/B/B	A53/B/S
	PD-01.6-05P	A106/B/B	A53/B/S
	PD-01.6-07P	A106/B/B	A53/B/S
	PD-01.6-09P	A106/B/B	A53/B/S
	PD-01.6-11P	A106/B/B	A53/B/S
	PD-01.6-14O	A106/B/B	A53/B/S
PD: DRNS FROM PRESEP 2A	PD-01.8-02B	A106/B/B	A53/B/S
	PD-01.8-03P	A106/B/B	A53/B/S
	PD-01.8-05P	A106/B/B	A53/B/S
	PD-01.8-07P	A106/B/B	A53/B/S
	PD-01.8-09P	A106/B/B	A53/B/S
	PD-01.8-11P	A106/B/B	A53/B/S
	PD-01.8-14O	A106/B/B	A53/B/S
PD: DRAINS TO HTR DRN	PD-02.1-01T	A106/B/B	A53/B/S
	PD-02.2-01T	A106/B/B	A53/B/S
	PD-02.4-22T	A106/B/B	A53/B/S
	PD-02.3-01T	A106/B/B	A53/B/S
	PD-02.4-01T	A106/B/B	A53/B/S
	PD-02.4-03P	A106/B/B	A53/B/S
	PD-02.4-05P	A106/B/B	A53/B/S
	PD-02.4-07P	A106/B/B	A53/B/S
	PD-02.4-09P	A106/B/B	A53/B/S
	PD-02.4-11P	A106/B/B	A53/B/S
	PD-02.4-13P	A106/B/B	A53/B/S
	PD-02.4-15P	A106/B/B	A53/B/S
	PD-02.4-17P	A106/B/B	A53/B/S
PD-02.4-19P	A106/B/B	A53/B/S	
PD-02.4-20P	A106/B/B	A53/B/S	

- Tinit was removed from component PD-02.4-02E since it provided unrealistic calculated

wear. Points (B,13) and (K,6) were also removed from the outage 8 inspection data because they were unrealistically high, and provided an unrealistic calculated wear.

- The table below lists the Preseparator Drain components in line PD: DRAINS TO HTR DRN TANK that were replaced or installed during the RO12 MOPS/SCRUPS Modification DCP 01-3-072.

Component	Status Due to RO12 Design Modification
PD-02.4-02E	Replaced (component ID number re-assigned)
PD-02.4-03P	Replaced (component ID number re-assigned)
PD-02.4-04E	Replaced (component ID number re-assigned)
PD-02.4-05P	Replaced (component ID number re-assigned)
PD-02.4-22E	Initial Installation
PD-02.4-23R	Initial Installation
PD-02.4-24P	Initial Installation
PD-02.4-25T	Initial Installation
PD-02.4-26P	Initial Installation
PD-02.4-27P	Initial Installation
PD-02.4-28E	Initial Installation
PD-02.4-06E	Replaced (component ID number re-assigned)
PD-02.4-29R	Initial Installation
PD-02.4-30V	Initial Installation
PD-02.4-31R	Initial Installation
PD-02.4-32P	Initial Installation

Moisture Separator Drains

- The Moisture Separator Drains from the Drain Tanks to the Heater Drain Tank were updated to reflect piping replacements during RO10. The installation date was entered as 10/1/99. Certain sections of piping were divided to reflect the changes in material. In such cases, the existing component name was changed, with a “_1”, “_2”, or “_3” suffix added as needed. Piping tolerances were ignored when calculating pipe lengths for use in CHECWORKS.
- The nozzles attached to the Moisture Separators are all at the same elevation according to the isometric drawings. However, the center tee is at a lower elevation than the outside tees. Therefore, a pup piece of pipe was added to the CHECWORKS model between the center nozzle and the center tee to account for this. The component was named with the next sequential number in the series.
- Pipe MSD-01.5B-32P was added to the model to reflect the installation of a new pup piece with the elbow. No length was entered, since the length was unknown.
- The inspection information on the D/S extension of MSD-0 1.1 5A- 1 7E was imported to component MSD-01.15A-18P since the pipe was inspected, replaced, and baselined.

- Tinit for component MSD-01.5A-01E was causing over-calculation of wear and was thus deleted.
- Point (L-11) was removed from the 1994 inspection of component MSD-01.5A-01E. This point was unrealistically high, and was providing inaccurate wear calculations.
- Point (D-1) was removed from component MSD-01.8B-07P's 1997 Refueling
- Outage inspection, since it was providing an unrealistic value for measured wear.
- Tinit for component MSD-01.15A-01E was removed since it was forcing an over-calculation of measured wear.
- The first and last bands were excluded from the analysis of component MSD-01.7A-01T's Cycle 10B inspection due to counterbore.
- The first and last bands were excluded from the analysis of component MSD-01.8A-01T's Cycle 10B inspection due to counterbore.
- The first and 7th band was excluded from the analysis of component MSD-01.8B-0 1T's Cycle 11 inspection due to counterbore.

Reheater Drains

- Component RHD02.5B-02R was replaced during refueling outage 10. Therefore, this component was replaced with an installation date of 10/18/99. This component was inspected during refueling outage 10 and the inspection was assumed to be prior to the replacement.
- Component RHD01.12A-01T, which is actually an elbow, was modeled as a Type 15 tee in CHECMATE. It was changed to a Type 12 tee, since flow is through the elbow.
- Points (A-4) and (M-6) were removed from the 1992 Refueling Outage inspection for component RHD01.8A-01R since they were obviously inaccurate.
- Row 3 was excluded from the analysis of the 1997 Refueling Outage inspection on component RHD01.3B-01N since it was obviously a counterbore and provided an unrealistic value of wear.
- Tinit for component RHD02.4B-02E was deleted since it provided an inaccurate value for measured wear using the 1992 Refueling Outage inspection data.
- Column J was removed from the downstream extension of the 1992 Refueling Outage inspection on component RHD02.3B-02R since it provided unrealistic values for measured wear.

- The 1999 Refueling Outage inspection data downstream of pipe RHD01.8A-02P was imported to the U/S Extension of Valve RHD02.3A-01V because the inspection data upstream of component RHD-02.3A-02R was previously imported to the Valve Main.
- Counterbore was excluded from the analysis of the D/S Main of component RHD02.5A-02R in RO11.
- Point (P2, 0.342) was deleted from the U/S Main of RHD-02.5B-02R in RO11. Counterbore was excluded from the analysis of the U/S Main as well.

Update for 3R014

The model was updated with all information necessary to run Wear Rate Analysis (WRA) for plant conditions through Refuel Outage 14 (3R014), such as updates to the plant period table, water chemical treatments, WRA run definitions, replacements, UT inspection data, etc.

Global Data Updates

- Operating Cycle 14 water chemistry was updated to reflect actual measured concentrations. This data appears in Appendix C.
- The plant period table was updated with the actual Operating Cycle 14 start date, end date, and operating hours. Refuel 14 outage actual start and end dates were updated. Operating Cycle 15 was updated with the actual start date, estimated end date, operating hours and water chemistry. This data appears in Appendix C.

UT Data Updates

- All 3R014 FAC inspections were imported to the appropriate component from FAC Manager. These inspections are listed in Appendix F. Only those components that were in the official CHECWORKS model were imported from FAC Manager.

Line and Component Data Updates

- The model was updated with the following 3R014 component replacements. The components were all replaced as-is.

System	Component	Geometry	Size
Reheater Drains	RHD02.15A-02E	Elbow	6"
Reheater Drains	RHD02.14B-14P	Pipe	6"
Reheater Drains	RHD02.6A-05P	Pipe	6"
Reheater Drains	RHD02.14B-02E	Elbow	6"
Reheater Drains	RHD02.15A-13P	Pipe	6"
Reheater Drains	RHD02.15A-11T	Tee	6"

In addition, the model was updated with replacements for the following components in RO13:

System	Component	Geometry	Size
Extraction Steam	EX-02.9-10P	Pipe	10"
Extraction Steam	EX-02.13-03P	Pipe	18"

- The following components were added to the model based on an email sent to CSI from Harry Hartjen at Indian Point Unit 3. The email can be found in its entirety in Attachment A. The component data was assumed to be the same as the components found elsewhere in the same flow segment.

Line Name	Component	Geometry	Size
RHD-02.14B B HDR to FWH 36C	RHD02.14B-14P	Pipe	6"
RHD-02.15A A HDR to FWH 36C	RHD02.15A-13P	Pipe	6"
EX-02.4 PSEP2A 14" to 35 HDR	EX-02.4-07P	Pipe	14"
EX-02.11 PSEP1B 14" to 35 HDR	EX-02.11-07P	Pipe	14"
EX-02.8 PSEP 2B 10" to 35 HDR	EX-02.8-09P	Pipe	10"

- The following components had their materials updated to a carbon steel material similar to other components. In the previous outage, the data was incorrectly set and are now set correctly as carbon steel.

EX-02.14-02E	EX-02.14-06E	EX-02.14-08E
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- Wear Rate Analysis run HD: HD PMP TO BFP HDR was changed to take advantage of the Advanced Run Definition due to incorrect values obtained from the HBD during analysis. Pressure, temperature and flow information were obtained from the three power level HBDs [7.5].
- The following table displays the lines had their component flow orders changed. It also includes components that were created

Component	Geometry	Size	Isometric Number
Transport steam from Preseparator 2A Xunder			
EX-02.4-02P	PIPE	14	EC-H-50071
EX-02.4-03E	ELBOW	14	EC-H-50071
EX-02.4-04P	PIPE	14	EC-H-50071
EX-02.4-06O	ORIFICE	14	EC-H-50071
EX-02.4-07P	PIPE	14	EC-H-50071
EX-02.4-05T	TEE	14 / 18	EC-H-50071
Transport steam from Preseparator 1B			
EX-02.9--02P	PIPE	10	EC-H-50081
EX-02.9-03E	ELBOW	10	EC-H-50081
EX-02.9-04P	PIPE	10	EC-H-50081
EX-02.9-05E	ELBOW	10	EC-H-50081
EX-02.9-06P	PIPE	10	EC-H-50081
EX-02.9-11O	ORIFICE	10	EC-H-50081
EX-02.9-7P	PIPE	10	EC-H-50081
EX-02.9-07E	ELBOW	10	EC-H-50081
EX-02.9-08P	PIPE	10	EC-H-50081
EX-02.9-09E	ELBOW	10	EC-H-50081
EX-02.9-10P	PIPE	10	EC-H-50081
EX-02.9-10T	TEE	10 / 18	EC-H-50081
Transport steam from Preseparator 2B			
EX-02.8-02E	ELBOW	10	EC-H-50081
EX-02.8-03P	PIPE	10	EC-H-50081
EX-02.8-04E	ELBOW	10	EC-H-50081
EX-02.8-05P	PIPE	10	EC-H-50081

Component	Geometry	Size	Isometric Number
EX-02.8-07O	ORIFICE	10	EC-H-50081
EX-02.8-06E	ELBOW	10	EC-H-50081
EX-02.8-09P	PIPE	10	EC-H-50081
EX-02.8-08T	TEE	10 / 18	EC-H-50081
Transport steam from Preseparator 1B Xunder			
EX-02.11-02P	PIPE	14	EC-H-50081
EX-02.11-03E	ELBOW	14	EC-H-50081
EX-02.11-04P	PIPE	14	EC-H-50081
EX-02.11-06O	ORIFICE	14	EC-H-50081
EX-02.11-07P	PIPE	14	EC-H-50081
EX-02.11-05T	TEE	14 / 18	EC-H-50081
Steam from Preseparator 1B and 2B			
EX-02.12-01P	PIPE	18	EC-H-50082
EX-02.13-01P	PIPE	18	EC-H-50082
EX-02.13-02B	BEND	18	EC-H-50082
EX-02.13-03E	ELBOW	18	EC-H-50082
EX-02.13-03P	ELBOW	18	EC-H-50082
EX-02.13-04E	ELBOW	18	EC-H-50082
EX-02.13-05P	PIPE	18	EC-H-50082
EX-02.13-06R	ELBOW	18	EC-H-50082

Update for 3RO15

The model was updated with all information necessary to run Wear Rate Analysis (WRA) for plant conditions through Refuel Outage 15 (3RO15), such as updates to the plant period table, water chemical treatments, WRA run definitions, replacements, UT inspection data, etc.

Global Data Updates

- Operating Cycle 15 water chemistry was updated to reflect actual measured concentrations. This data appears in Appendix C.
- The plant period table was updated with the actual Operating Cycle 15 start date, end date, and operating hours. Refuel 15 outage actual start and end dates were updated. Operating Cycle 16 was updated with the actual start date, estimated end date, operating hours and water chemistry. This data appears in Appendix C.
- For Cycles 1-6, the Ammonia input was moved from the Complex Chemistry input to the Hydrazine Treatment input as per the CHECWORKS Modeling Guidelines.

UT Data Updates

- UT exams taken during 3RO15 were input to the model. All inputs were documented and appear in Appendix F.
- UT data for the U/S Main of EX-02.14-26P for RO12 and RO15 was removed because it was already in the model as the D/S Extension of EX-02.14-25E.
- UT data from RO8 for the D/S Extension of EX-01.2-10L was moved to the downstream pipe, EX-01.3-01P.
- UT data from RO15 for the D/S Extension of EX-02.16-01R was moved to the downstream pipe, EX-02.16-02P.
- UT data from RO9 and RO10 for the D/S Extension of MSD-01.10B-02E was moved to the downstream pipe, MSD-01.10B-03P.
- UT data from RO8 and RO10 for the D/S Extension of MSD-01.10B-07E was moved to the downstream pipe, MSD-01.10B-08P.
- The analysis method for RHD02.2A-02E for RO14 was changed from Max. Delta to Blanket. The new calculated wear is 0.098.
- The analysis method for RHD01.9B-01R was changed from Max. Delta to Band for both the U/S Main and D/S Main. The new calculated wear is 0.056 inches for the U/S Main

and 0.081 inches for the D/S Main.

- Several components imported measured wear from FAC Manager in 3RO14 were removed from CHECWORKS due to a measured wear that cannot be used in the LCF Calculation. These changes are reflected in the updated Pass 2 Results as well as Appendix F.
- Several changes were made to increase the quality of the Pass 2 Results. These changes are outlined in the table below:

WRA Run	Component	Changes Made	Reason
CD: HDR TO HTR 33	CD-02.8C-02E	Changed analysis method in FACManager from point to point to blanket for U/S Main.	Point to Point method did not show FAC wear. The grid appeared to show pitting.
CD: HDR TO HTR 33	CD-02.8C-02E	Changed analysis method in FACManager from point to point to band for D/S Extension.	Point to Point method did not show FAC wear. The grid appeared to show pitting.
CD: HTR 32 TO 33 HDR	CD-02.4-04E	Removed D/S Main inspection wear from RF08 (0.125").	There is no evidence of an inspection on the main of this component. The note in FACManager states that only extensions have been inspected.
CD: HTR 32 TO 33 HDR	CD-02.5-01P	Removed U/S Main inspection wear from RF08 (0.125").	No grid data exists for latest inspection in FAC Manager, thus wear cannot be verified. Used U/S Ext of elbow (downstream component) to estimate wear. Calculated wear is lower than 0.030 inches and should not be used in LCF.
CD: HTR 32 TO 33 HDR	CD-02.5-02E	Checked "Do Not Use MW" for U/S Extension to exclude from LCF.	Calculated wear was less than 0.030 inches.
CD: HTR 34 TO HTR 35	CD-04.1C-01N	Removed U/S Main inspection wear from RO14 (0.060").	Only one row of UT data. Calculated wear likely due to manufacturing variance.
CD: HTR 35 TO BFT HDR	CD-05.4-02P	Removed U/S Main inspection wear from RF08 (0.089")	No grid data exists for the latest inspection in FACManager, thus wear cannot be verified. Notes in FAC Manager state Tmin value is invalid. Data is not reliable and cannot be confirmed
CD: S/B BLWDN HX OUT	CD-02.11-04P	Changed analysis method of DSE from point to point to band	Point to point method is not reliable. Comparison of grid data showed significant changes in values that are not typical of FAC wear.

WRA Run	Component	Changes Made	Reason
ES: LP TO 32 HEATERS	EX-05.2C-06N	Removed U/S Main inspection wear from RO14 (0.032").	FACManager is unclear as to how wear was calculated. Wear value is unreliable.
ES: LP to 33 HEATERS	EX-04.13-01R	Checked "Do Not Use MW" for U/S and D/S Main to remove inspection wear from LCF calc.	Removed wear from LCF. Point to point showed wear less than 0.030 inches on the U/S Main and unrealistic wear on the D/S Main. The band method cannot be used due to differences in delta readings that are probably caused by manufacturing differences.
ES: PRESEP TO 35 HDR	EX-02.14-20E	Changed D/S Extension to read from RO15 data instead of RO12 data.	Current data is more reliable.
ES: PRESEP TO 35 HDR	EX-02.2-01N	Checked "Do Not Use MW" for D/S Main.	Component is Stainless Steel and should not be used to calibrate a Wear Rate Analysis run.
FW: BFP to 36 HTR	FW-01.1B-03R	Checked "Do Not Use MW" for U/S and D/S Main for RO15.	Only three rows of data exist on elbow. The grid is suspect because there are more grid rows on previous inspections.
FW: BFP to 36 HTR	FW-01.6A-01R	Checked "Do Not Use MW" for U/S Main.	The first two of the three rows are counterbore, leading to an unreliable wear calculation.
FW: SG HEADERS	FW-02.8B-26R	Checked "Do Not Use MW" for U/S Main.	Only two rows of data. Measured wear not indicative of FAC.
HD: HD PMP TO BFP HDR	HD-11.2B-01R	Checked "Do Not Use MW" for U/S Main.	Only two rows of data. Measured wear not indicative of FAC.
HD: HD PMP TO BFP HDR	HD-12.2B-04T	Removed USM and DSM from LCF calculation	Data shows manufacturing variances, not FAC.
HD: HTR 32 TO HTR 31	HD-09.1C-02R	Checked "Do Not Use MW" for U/S and D/S Main.	Only two rows of data. Measured wear not indicative of FAC.
HD: HTR 34 TO HTR 33	HD-05.1B-02R	Checked "Do Not Use MW" for U/S and D/S Main.	Calculated wear is not indicative of FAC due to extensive machining in this component.
MSD: MS 32 TO MSDT	MSD-01.6B-03P	Removed U/S Main inspection wear from RO8 (0.079").	No grid data exists for the latest inspection in FACManager, thus wear cannot be verified. Notes in FAC Manager state Tmin value is invalid. Data is not reliable and cannot be confirmed
MSD: MS 32 TO MSDT	MSD-01.7A-01T	Recalculated wear excluding first row of UT data.	This component is counterbored on the first row giving an unrealistic wear value.
MSD: MSDT 33 TO HDT	MSD-01.15A-01E	Recalculated wear excluding first row of UT data.	This component is counterbored on the first row giving an unrealistic wear value.

WRA Run	Component	Changes Made	Reason
RHD: RH 31 TO HDR	RHD01.1A-04N	Checked "Do Not Use MW" for U/S Main.	Only one row of UT data. Calculated wear likely due to manufacturing variance.
RHD: RH 31 TO HDR	RHD02.1A-02R	Recalculated wear excluding the counterbore for the U/S and D/S Main.	Wear calculations on machined areas yield unrealistic results.
RHD: RH 32A TO HDR	RHD01.3A-03N	Removed inspection wear from RO14 for U/S Main.	Unrealistic wear calculation due to manufacturing variances.
RHD: RH 32A TO HDR	RHD01.5A-01R	Checked "Do Not Use MW" for U/S and D/S Main.	Unrealistic wear calculation due to manufacturing variances.
RHD: RH 32A TO HDR	RHD02.3A-02R	Removed inspection wear from RO14 for U/S and D/S Main.	Unrealistic wear calculation due to manufacturing variances.
RHD: RH 32A TO HDR	RHD02.4A-02E	Checked "Do Not Use MW" for U/S Main.	This component has an incomplete grid that results in an unrealistic wear calculation.
RHD: RH 32B TO HDR	RHD02.3B-02R	Checked "Do Not Use MW" for U/S and D/S Main.	Unrealistic wear calculation due to manufacturing variances.
RHD: RH 32B TO HDR	RHD02.4B-01P	Checked "Do Not Use MW" for U/S Main.	Unreliable wear calculation due to questionable Tnom associated with downstream half of UT Data.
RHD: RH 33 TO HDR	RHD02.5A-02R	Checked "Do Not Use MW" for U/S Main.	Data shows manufacturing variances, not FAC.
RHD: RHD HDR TO HTRS	RHD02.11A-17T	Checked "Do Not Use MW" for Branch.	Only one row of UT data. Calculated wear likely due to manufacturing variance.
RHD: RHD HDR TO HTRS	RHD02.2B-06L	Checked "Do Not Use MW" for D/S Main and Branch.	Unrealistic wear calculation due to manufacturing variances.

Line and Component Data Updates

- The model was updated with the following 3RO15 component replacements. The components were all replaced with like for like components.

System	Component	Geometry	Size
Extraction Steam	EX-02.14-06E	Elbow	28"
Extraction Steam	EX-02.14-08E	Elbow	28"

- In addition, the model was updated with replacements for the following components in order to reflect the weld build-up repairs during 3RO15.

System	Component	Geometry	Size
Feedwater	FW-02.8A-25R	Reducer	18"

Feedwater	FW-02.8B-26R	Reducer	18"
Reheater Drains	RHD02.14B-10T	Tee	6.625"
Reheater Drains	RHD02.1A-02R	Reducer	6.625"

- As per the updated SSE, extraction steam lines to the #34 Feedwater Heaters were removed from the Wear Rate Analysis. These lines are superheated and non-susceptible to FAC [7.30]. The lines and flow segments were renamed with an "x" preceding the old name.
- Modelable lines found in the updated SSE [7.30] that were not previously modeled were placed in the model with temporary components. These lines do not have isometrics and could not be fully modeled. They should be walked down, modeled, and inspected to obtain the information needed to create an accurate prediction with CHECWORKS. The new lines are as follows:

WRA Run Name	Line Name	Comp. Name
HD: HTR 31 TO COND	HD-FWH 31A to Condenser 33	TEMP01
	HD-FWH 31B to Condenser 32	TEMP02
	HD-FWH 31C to Condenser 31	TEMP03
ES: BFPT DRN TO COND	EX-BFPT #31 Drain to Condenser	TEMP04
	EX-BFPT #32 Drain to Condenser	TEMP05
MS: HPTURB TO PRESEPS	MS-HP Turbine to Presep 1A	TEMP06
	MS-HP Turbine to Presep 1B	TEMP07
	MS-HP Turbine to Presep 2A	TEMP08
	MS-HP Turbine to Presep 2B	TEMP09
MS: PRESEPS TO MSR	MS-Presep 1A to "A" MSR Header	TEMP10
	MS-Presep 1B to "B" MSR Header	TEMP11
	MS-Presep 2A to "A" MSR Header	TEMP12
	MS-Presep 2B to "B" MSR Header	TEMP13
	MS-"A" MSR Header	TEMP14
	MS-"B" MSR Header	TEMP15
	MS-"A" Header to MSR 31A & 32A	TEMP16
	MS-"B" Header to MSR 31B & 32B	TEMP17
	MS-"A" Header to MSR 31A	TEMP18
	MS-"A" Header to MSR 32A	TEMP19
	MS-"A" Header to MSR 33A	TEMP20
	MS-"B" Header to MSR 31B	TEMP21
	MS-"B" Header to MSR 32B	TEMP22
MS-"B" Header to MSR 33B	TEMP23	
MSD: MSDT TO DCT	MSD-MS Drain Tank 31A to DCT	TEMP24
	MSD-MS Drain Tank 32A to DCT	TEMP25
	MSD-MS Drain Tank 33A to DCT	TEMP26
	MSD-MS Drain Tank 31B to DCT	TEMP27
	MSD-MS Drain Tank 32B to DCT	TEMP28
	MSD-MS Drain Tank 33B to DCT	TEMP29

Update for 3RO16

The model was updated with all information necessary to run Wear Rate Analysis (WRA) for plant conditions through Refuel Outage 16 (3RO16), such as updates to the plant period table, water chemical treatments, WRA run definitions, replacements, UT inspection data, etc.

Global Data Updates

- Operating Cycle 16 water chemistry was updated to reflect actual measured concentrations. This data appears in Appendix C.
- The plant period table was updated with the actual Operating Cycle 16 start date, end date, and operating hours. Refuel 16 outage actual start and end dates were updated. Operating Cycle 17 was updated with the actual start date, estimated end date, operating hours and water chemistry. This data appears in Appendix C.
- Added material A672 A55 10 and 54" pipe size to library per Pipe Class A-6 for the Steam Generator Feed Pump Turbine discharge lines to the Condensers. The allowable stress for A672 A55 10 was assumed to be 15,000 psi. This matches the allowable stress for the fittings material in the piping specification and is common for carbon steels.

WRA Run Updates

- WRA Run "MSD: MS 31 to HDT" was separated into "MSD: MS 31 TO MSDT" and "MSD: MSDT 31 TO HDT" to separate the two phase conditions upstream of the Moisture Separator Drain Tank from the single phase conditions downstream.

UT Data Updates

- UT exams results from 3RO16 were input to the model. All inputs were documented and appear in Appendix F.
- Several changes were made to increase the quality of the Pass 2 Results. These changes are outlined in the table below:

WRA Run	Component	Changes Made	Reason
CD: HDR TO BFP	CD-06.2B-09P	Removed the high point, E2 (0.711), from the grid and reanalyzed.	High point caused an unrealistically high wear that was not consistent throughout the grid.
CD: HTR 32 TO 33 HDR	CD-02.3-15T (US Main & BR)	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the tee.
CD: HTR 32 TO 33 HDR	CD-02.5-04T (US Main & BR)	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the tee.

WRA Run	Component	Changes Made	Reason
CD: HTR 32 TO 33 HDR	CD-02.6-02P	Removed the high point, L6 (0.730), from the grid and reanalyzed.	High point caused an unrealistically high wear that was not consistent throughout the grid.
CD: HTR 32 TO HDR	CD-02.1A-01N	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the nozzle.
CD: HTR 32 TO HDR	CD-02.1B-01N	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the nozzle.
CD: HTR 32 TO HDR	CD-02.1C-01N	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the nozzle.
CD: HTR 35 TO HDR	CD-05.1C-01N	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the nozzle.
ES: HDR TO 35 HTRS	EX-02.18-06N	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the nozzle.
ES: LP TO 32 HEATERS	EX-05.1B-02P	Excluded from LCF calculation.	This pipe is cut at an angle. Low points may be indicative of heavy machining instead of FAC wear.
ES: LP TO 33 HEATERS	EX-04.2-09T (US Main)	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the tee.
ES: LP TO 33 HEATERS	EX-04.13-07T (US Main)	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the tee.
ES: LP TO 33 HEATERS	EX-04.13-01R (DS Main)	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the reducer.
ES: LP TO 33 HEATERS	EX-04.22-03N	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the nozzle.
ES: PRESEP TO 35 HDR	EX-02.14-21P	Excluded from LCF calculation.	Wear is < 30 mils.
ES: PRESEP TO 35 HDR	EX-02.14-31P	Excluded from LCF calculation.	Wear is < 30 mils.
ES: PRESEP TO 35 HDR	EX-02.14-07P	Excluded from LCF calculation.	Calculated wear may be due to counterbore. The other 13 rows of the grid have a wear \leq 12 mils.

WRA Run	Component	Changes Made	Reason
ES: PRESEP TO 35 HDR	EX-02.14-17P	Removed the high point, E9 (0.483), from the grid and reanalyzed. Excluded from LCF calculation.	Recalculated wear is < 30 mils.
ES: PRESEP TO 35 HDR	EX-02.2-01N	Excluded from LCF calculation.	Component is stainless steel.
FW: 36 HTR TO SG HDR	FW-02.1A-13R (DS Main)	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the reducer.
FW: BFP TO 36 HTR	FW-01.5-01T (US Main)	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the tee.
FW: BFP TO 36 HTR	FW-01.6C-10N	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the nozzle.
FW: BFP TO 36 HTR	FW: 01.2A-03T (Branch)	Excluded from LCF calculation.	There is no normal flow through the branch of this tee.
FW: SG HEADERS	FW-02.1C-11T (All Sections)	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the tee.
FW: SG HEADERS	FW-02.8A-26R (US Main)	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the reducer.
FW: SG HEADERS	FW-02.8C-25R (All Sections)	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the reducer.
FW: SG HEADERS	FW-02.8C-24R (US Main)	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the reducer.
FW: SG HEADERS	FW-03.1C-14E	Excluded from LCF calculation.	Low point on grid may not be indicative of FAC wear.
FW: SG HEADERS	FW-02.8A-25R (US Main)	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the reducer.
MSD: MS 33 TO MSDT	MSD-01.13A-01T (All Sections)	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the tee.
MSD: MS 33 TO MSDT	MSD-01.10A-25N	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the nozzle.
RHD: RH 31 TO HDR	RHD02.1A-02R (DS Main)	Excluded from LCF calculation.	Measured wear is from the counterbore region of the reducer.

WRA Run	Component	Changes Made	Reason
RHD: RH 32A TO HDR	RHD01.3A-04N	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the nozzle.
RHD: RH 33 TO HDR	RHD01.13A-01R (All Sections)	Excluded from LCF calculation.	High velocity through small end is not comparable to other components in run.
RHD: RH 33 TO HDR	RHD01.10A-04N	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the nozzle.
RHD: RH 33 TO HDR	RHD01.10B-03N	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the nozzle.
RHD: RH 33 TO HDR	RHD02.5A-02R (US Main)	Excluded from LCF calculation.	High velocity through small end is not comparable to other components in run.
RHD: RH 33 TO HDR	RHD01.10A-20R (DS Main)	Excluded from LCF calculation.	Wear calculated with single-outage methods is likely due to manufacturing variance of the reducer.

- In addition to the changes in the table above, any component section with a calculated wear of < 30 mils or 5% of Tnom was excluded from the LCF calculation.

Line and Component Data Updates

- The model was updated with the following 3RO16 component replacement. The component was replaced in kind.

System	Component	Geometry	Size
Extraction Steam	EX-02.14-25E	Elbow	28"

- During an inspection in 3RO16, components “CD-02.1A-06E” and “CD-02.1A-07E”, previously modeled as adjacent 90° elbows, were found to be one 180° return. “CD-02.1A-07E” was deleted from the model, and “CD-02.1A-06E” was changed to a geometry code of 5 for a 180° return.
- During an inspection in 3RO16, “CD-05.1B-08P” was found to not exist in the plant and was deleted from the model.
- Line 'EX-BFPT #31 Drain to Condenser' was renamed to 'EX-07.1 BFPT 31 Drain to Cond'.
- Line 'EX-BFPT #32 Drain to Condenser' was renamed to 'EX-07.2 BFPT 32 Drain to Cond'.
- Line 'HD-FWH 31A to Condenser 33' was renamed to 'HD-13.1 FWH 31A to Cond 33'.
- Line 'HD-FWH 31B to Condenser 32' was renamed to 'HD-13.2 FWH 31B to Cond 32'.
- Line 'HD-FWH 31C to Condenser 31' was renamed to 'HD-13.3 FWH 31C to Cond 31'.

- The following lines were determined to be Susceptible Non-Modeled (SNM) and were removed from the CHECWORKS model:

Line Name	Line Name
MS-"A" Header to MSR 31A	MS-"B" MSR Header
MS-"A" Header to MSR 31A & 32A	MS-HP Turbine to Presep 1A
MS-"A" Header to MSR 32A	MS-HP Turbine to Presep 1B
MS-"A" Header to MSR 33A	MS-HP Turbine to Presep 2A
MS-"A" MSR Header	MS-HP Turbine to Presep 2B
MS-"B" Header to MSR 31B	MS-Presep 1A to "A" MSR Header
MS-"B" Header to MSR 31B & 32B	MS-Presep 1B to "B" MSR Header
MS-"B" Header to MSR 32B	MS-Presep 2A to "A" MSR Header
MS-"B" Header to MSR 33B	MS-Presep 2B to "B" MSR Header

- The following lines were determined to be Non-Susceptible and were removed from the CHECWORKS model:

Line Name
MSD-MS Drain Tank 31A to DCT
MSD-MS Drain Tank 31B to DCT
MSD-MS Drain Tank 32A to DCT
MSD-MS Drain Tank 32B to DCT
MSD-MS Drain Tank 33A to DCT
MSD-MS Drain Tank 33B to DCT

- In accordance with the System Susceptibility Evaluation, the following components were added to the model:

WRA Run Name	Line Name	Comp. Name
ES: BFPT DRN TO COND	EX-07.1 BFPT 31 Drain to Cond	EX-07.1-01N
ES: BFPT DRN TO COND	EX-07.1 BFPT 31 Drain to Cond	EX-07.1-02E
ES: BFPT DRN TO COND	EX-07.1 BFPT 31 Drain to Cond	EX-07.1-03EJ
ES: BFPT DRN TO COND	EX-07.1 BFPT 31 Drain to Cond	EX-07.1-04P
ES: BFPT DRN TO COND	EX-07.1 BFPT 31 Drain to Cond	EX-07.1-05E
ES: BFPT DRN TO COND	EX-07.1 BFPT 31 Drain to Cond	EX-07.1-06P
ES: BFPT DRN TO COND	EX-07.1 BFPT 31 Drain to Cond	EX-07.1-07E
ES: BFPT DRN TO COND	EX-07.1 BFPT 31 Drain to Cond	EX-07.1-08EJ
ES: BFPT DRN TO COND	EX-07.1 BFPT 31 Drain to Cond	EX-07.1-09P
ES: BFPT DRN TO COND	EX-07.1 BFPT 31 Drain to Cond	EX-07.1-10EJ
ES: BFPT DRN TO COND	EX-07.1 BFPT 31 Drain to Cond	EX-07.1-11R
ES: BFPT DRN TO COND	EX-07.1 BFPT 31 Drain to Cond	EX-07.1-12N
ES: BFPT DRN TO COND	EX-07.2 BFPT 32 Drain to Cond	EX-07.2-01N
ES: BFPT DRN TO COND	EX-07.2 BFPT 32 Drain to Cond	EX-07.2-02E
ES: BFPT DRN TO COND	EX-07.2 BFPT 32 Drain to Cond	EX-07.2-03EJ
ES: BFPT DRN TO COND	EX-07.2 BFPT 32 Drain to Cond	EX-07.2-04P

WRA Run Name	Line Name	Comp. Name
ES: BFPT DRN TO COND	EX-07.2 BFPT 32 Drain to Cond	EX-07.2-05E
ES: BFPT DRN TO COND	EX-07.2 BFPT 32 Drain to Cond	EX-07.2-06P
ES: BFPT DRN TO COND	EX-07.2 BFPT 32 Drain to Cond	EX-07.2-07E
ES: BFPT DRN TO COND	EX-07.2 BFPT 32 Drain to Cond	EX-07.2-08EJ
ES: BFPT DRN TO COND	EX-07.2 BFPT 32 Drain to Cond	EX-07.2-09P
ES: BFPT DRN TO COND	EX-07.2 BFPT 32 Drain to Cond	EX-07.2-10EJ
ES: BFPT DRN TO COND	EX-07.2 BFPT 32 Drain to Cond	EX-07.2-11R
ES: BFPT DRN TO COND	EX-07.2 BFPT 32 Drain to Cond	EX-07.2-12N
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-01N
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-02P
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-03E
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-04P
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-05E
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-06P
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-07T
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-08E
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-09V
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-10E
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-11E
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-12E
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-13P
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-14E
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-15P
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-16E
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-17P
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-18E
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-19V
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-20R
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-21V
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-22P
HD: HTR 31 TO COND	HD-13.1 FWH 31A to Cond 33	HD-13.1-23N
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-01N
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-02P
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-03E
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-04P
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-05E
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-06P
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-07T
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-08V
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-09E
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-10E

WRA Run Name	Line Name	Comp. Name
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-11P
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-12E
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-13P
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-14E
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-15P
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-16E
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-17V
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-18R
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-19V
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-20P
HD: HTR 31 TO COND	HD-13.2 FWH 31B to Cond 32	HD-13.2-21N
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-01N
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-02P
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-03E
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-04P
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-05E
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-06P
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-07T
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-08V
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-09E
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-10E
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-11P
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-12E
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-13P
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-14E
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-15P
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-16E
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-17V
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-18R
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-19V
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-20P
HD: HTR 31 TO COND	HD-13.3 FWH 31C to Cond 31	HD-13.3-21N

Appendix B
Pass 2 Wear Rate Analysis Summary

B.1 Pass 2 Wear Rate Analysis Summary

The Pass 2 Wear Rate Analysis results of each WRA run were reviewed to determine the relationship between measured wear and predicted wear. Based on this relationship, a WRA run was classified as Calibrated or Not Calibrated. For Calibrated WRA runs, the Pass 2 analysis results of predicted wear rate and remaining service life can be used with reasonable confidence. For runs classified as Not Calibrated, Pass 2 Wear Rate Analysis results should not be used. Instead, Pass 1 Wear Rate Analysis results should be used to determine relative rankings only. In particular, remaining service life (Time to Tcrit) should not be used as an estimate of remaining component life.

The criterion used to classify a WRA run as Calibrated or Not Calibrated is discussed Section 6.4 for the report. No single criterion is definitive in classifying a WRA run as either Calibrated or Not Calibrated. Instead, engineering judgment was used to weigh each criterion to determine calibration status.

These results can be found in Table B.1.

Table B.1 Pass 2 Wear Rate Analysis Summary

WRA Run Name	Is Run Calibrated?	Inspection Locations	Outliers	Correlation (Scatter)	LCF	Average Current Wear Rate (mils/yr)	Geometry Coverage	Parallel Train Coverage	Insp. D/S of Offices	Insp. D/S of Cvs	Run Notes
CD: HDR TO BFP	Yes	12	5	Moderate	1.119	2.932	Good	Good	2 of 2	N/A	B 2.01
CD: HDR TO HTR 33	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B 2.02
CD: HTR 31 TO HTR 32	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B 2.03
CD: HTR 32 TO 33 HDR	Yes	10	6	Good	0.808	1.764	Moderate	Good	N/A	N/A	B 2.04

WRA Run Name	Is Run Calibrated?	Inspection Locations	Outliers	Correlation (Scatter)	LCF	Average Current Wear Rate (mils/yr)	Geometry Coverage	Parallel Train Coverage	Insp. D/S of Orifices	Insp. D/S of CVS	Run Notes
CD: HTR 32 TO HDR	Yes	7	2	Good	0.990	2.484	Good	Good	N/A	N/A	B 2.05
CD: HTR 33 TO HTR 34	Yes	9	0	Good	0.601	2.171	Moderate	Good	N/A	N/A	B 2.06
CD: HTR 34 TO HTR 35	Yes	9	0	Moderate	0.452	2.131	Moderate	Good	N/A	N/A	B 2.07
CD: HTR 35 TO BFP HDR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B 2.08
CD: HTR 35 TO HDR	Yes	10	0	Good	0.655	2.401	Good	Good	N/A	N/A	B 2.09
CD: S/G BLWDN HX IN	No	3	0	Moderate	1.754	1.111	Moderate	Good	N/A	N/A	B 2.10
CD: S/G BLWDN HX OUT	No	7	5	Moderate	3.247	2.485	Good	Good	N/A	N/A	B 2.11
ES: BFPT DRN TO COND	No ¹	0	N/A	N/A	N/A	0.172	N/A	N/A	0 of 6*	N/A	B 2.12
ES: HDR TO 35 HTRS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B 2.13
ES: HDR TO 36 HTRS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B 2.14
ES: HTR 36 HEADER	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B 2.15
ES: LP TO 31 HEATERS	No	2	0	Good	0.811	3.640	Poor	Poor	N/A	N/A	B 2.16

WRA Run Name	Is Run Calibrated?	Inspection Locations	Outliers	Correlation (Scatter)	LCF	Average Current Wear Rate (mils/yr)	Geometry Coverage	Parallel Train Coverage	Insp. D/S of Orifices	Insp. D/S of CVS	Run Notes
ES: LP TO 32 HEATERS	No	8	3	Moderate	0.318	2.633	Good	Poor	N/A	N/A	B 2.17
ES: LP TO 33 HEATERS	No	17	2	Moderate	1.383	5.180	Moderate	Poor	0 of 6*	N/A	B 2.18
ES: PRESEP TO 35 HDR	Yes	21	8	Good	2.229	1.754	Good	Good	0 of 6	N/A	B 2.19
FW: 36 HTR TO SG HDR	Yes	12	5	Moderate	3.451	4.573	Good	Good	N/A	N/A	B 2.20
FW: BFP TO 36 HTR	No	27	15	Poor	0.893	3.113	Good	Good	N/A	N/A	B 2.21
FW: FW RECIRC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B 2.22
FW: SG HEADERS	Yes	36	22	Good	3.162	3.262	Good	Good	4 of 4	3 of 4	B 2.23
HD: HD PMP TO BFP HDR	Yes	13	3	Good	0.733	2.372	Moderate	Good	2 of 2	2 of 2	B 2.24
HD: HTR 31 TO COND	No ¹	0	N/A	N/A	N/A	0.636	N/A	N/A	N/A	0 of 3	B 2.25
HD: HTR 32 TO HTR 31	No	2	0	Good	1.863	0.712	Poor	Poor	N/A	3 of 3	B 2.26
HD: HTR 33 TO HTR 32	Yes	12	2	Moderate	1.045	1.120	Moderate	Good	N/A	3 of 3	B 2.27
HD: HTR 34 TO HTR 33	Yes	7	2	Good	0.911	1.956	Poor	Good	N/A	3 of 3	B 2.28

WRA Run Name	Is Run Calibrated?	Inspection Locations	Outliers	Correlation (Scatter)	LCF	Average Current Wear Rate (mils/yr)	Geometry Coverage	Parallel Train Coverage	Insp. D/S of Orifices	Insp. D/S of Cvs	Run Notes
HD: HTR 35 TO HDT	Yes	7	1	Good	1.487	1.544	Moderate	Good	N/A	N/A	B 2.29
HD: HTR 36 TO HDT	Yes	11	3	Good	1.405	1.869	Good	Good	N/A	3 of 3	B 2.30
HD: HTR DN TO PUMPS	No	2	0	Good	1.912	2.804	Moderate	Poor	0 of 2	N/A	B 2.31
MSD: MS 31 TO MSDD	No	5	1	Moderate	12.299	1.607	Poor	Poor	N/A	N/A	B 2.32
MSD: MS 32 TO MSDD	Yes	11	2	Good	12.801	1.662	Good	Poor	N/A	N/A	B 2.33
MSD: MS 33 TO MSDD	No	7	1	Moderate	8.046	1.056	Good	Poor	N/A	N/A	B 2.34
MSD: MSDD 31 TO HDT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B 2.35
MSD: MSDD 32 TO HDT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B 2.36
MSD: MSDD 33 TO HDT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B 2.37
PD: PRESEPRTR DRAINS	No	6	1	Moderate	3.643	1.912	Poor	Poor	5 of 5	N/A	B 2.38
RHD: RH 31 TO HDR	Yes	15	4	Moderate	2.091	1.626	Good	Good	2 of 2	2 of 2	B 2.39
RHD: RH 32A TO HDR	Yes	10	4	Good	2.356	1.633	Good	Good	1 of 1	1 of 1	B 2.40

WRA Run Name	Is Run Calibrated?	Inspection Locations	Outliers	Correlation (Scatter)	LCF	Average Current Wear Rate (mils/yr)	Geometry Coverage	Parallel Train Coverage	Insp. D/S of Orifices	Insp. D/S of Cvs	Run Notes
RHD: RH 32B TO HDR	No	19	21	Moderate	3.055	1.487	Moderate	Good	2 of 2	2 of 2	B 2.41
RHD: RH 33 TO HDR	Yes	12	4	Good	3.596	2.889	Good	Good	2 of 2	2 of 2	B 2.42
RHD: RHD HDR TO HTRS	No	26	13	Moderate	3.184	2.900	Moderate	Poor	N/A	N/A	B 2.43

1. Lines in this run were newly modeled after 3R16. Predicted wear rates are very low.

* Expansion Joints are modeled and counted as orifices in this run.

B.2 Pass 2 Wear Rate Analysis Results

As each of the WRA Runs was analyzed, the results were reviewed and the conclusions for each run, as well as any pertinent information, are listed below.

B 2.01 CD: HDR TO BFP

This run consists of 58 components, of which there are 17 inspected components. Twelve (12) inspection locations are used in the calculation of the LCF. Five (5) component sections lie outside of the 50% error boundaries. The LCF for the run is 1.119, which is inside the EPRI recommended range. The run has a moderate correlation, with a Normalized Mean of the Average Error (NMAE) of 20.9%. The geometry coverage is good with most geometries having been inspected. All 3 lines have been inspected, giving the run good parallel train coverage. This run can be considered calibrated. More focus can be concentrated on other areas or wear rate analysis runs where less confidence in the predictive rates is exhibited.

B 2.02 CD: HDR TO HTR 33

Every component in this run has been inspected. Future inspections on all components in this run should be determined by the trending analysis of inspection data, and CHECWORKS predictions for this run are no longer applicable.

B 2.03 CD: HTR 31 TO HTR 32

The lines in this run operate below 200°F and are non-susceptible to FAC. No inspections are necessary.

B 2.04 CD: HTR 32 TO 33 HDR

This run consists of 33 components, of which there are 17 inspected components. Ten (10) inspection locations are used in the calculation of the LCF. Six (6) component sections lie outside of the 50% error boundaries. The LCF for the run is 0.808, which is inside the EPRI recommended range. The run has a good correlation, with an NMAE of 19.4%. This run has moderate geometry coverage because only one of the eight elbows has been inspected. Geometry coverage could be upgraded to “good” by inspecting a straight 90° elbow; however, this is not necessary for calibration of the run, and all elbows in the run have long remaining service lives. All 5 lines have been inspected, giving the run good parallel train coverage. This run can be considered calibrated. Further inspections could be used to enhance the run’s geometry coverage, but, due to the long remaining service lives, more focus can be concentrated on other areas or wear rate analysis runs where less confidence in the predictive rates is exhibited.

B 2.05 CD: HTR 32 TO HDR

This run consists of 34 components, of which there are 15 inspected components. Seven (7) inspection locations are used in the calculation of the LCF. Two (2) component sections lie outside of the 50% error boundaries. The LCF for the run is 0.990, which is inside the EPRI recommended range. The run has a good correlation, with an NMAE of 19.7%. The run has good geometry coverage. All 3 lines have been inspected, giving the run good parallel train coverage. This run can be considered calibrated. More focus can be concentrated on other areas or wear rate analysis runs where less confidence in the predictive rates is exhibited.

B 2.06 CD: HTR 33 TO HTR 34

This run consists of 39 components, of which there are 12 inspected components. Nine (9) inspection locations are used in the calculation of the LCF. Zero (0) component sections lie outside of the 50% error boundaries. The LCF for the run is 0.601, which is inside the EPRI recommended range. The run has a good correlation, with an NMAE of 14.4%. This run has moderate geometry coverage because none of the five (5) 45° elbows or three (3) inlet nozzles have been inspected. Geometry coverage could be upgraded to “good” by inspecting an inlet nozzle and a 45° elbow; however, this is not necessary for calibration of the run, and all inlet nozzles and 45° elbows in the run have long remaining service lives. All 3 lines have been inspected, giving the run good parallel train coverage. This run can be considered calibrated. Further inspections could be used to enhance the run’s geometry coverage, but, due to the long remaining service lives, more focus can be concentrated on other areas or wear rate analysis runs where less confidence in the predictive rates is exhibited.

B 2.07 CD: HTR 34 TO HTR 35

This run consists of 46 components, of which there are 15 inspected components. Nine (9) inspection locations are used in the calculation of the LCF. Zero (0) component sections lie outside of the 50% error boundaries. The LCF for the run is 0.452, which is slightly below the EPRI recommended range. The run has a moderate correlation, with an NMAE of 22.7%. This run has moderate geometry coverage because none of the five (5) 45° elbows have been inspected. Geometry coverage could be upgraded to “good” by inspecting a 45° elbow; however, this is not necessary for calibration of the run, and all 45° elbows in the run have long remaining service lives. All 3 lines have been inspected, giving the run good parallel train coverage. This run can be considered calibrated. Further inspections could be used to enhance the run’s geometry coverage, but, due to the long remaining service lives, more focus can be

concentrated on other areas or wear rate analysis runs where less confidence in the predictive rates is exhibited.

B 2.08 CD: HTR 35 TO BFP HDR

Every component in this run has been inspected. Future inspections on all components in this run should be determined by the trending analysis of inspection data, and CHECWORKS predictions for this run are no longer applicable.

B 2.09 CD: HTR 35 TO HDR

This run consists of 28 components, of which there are 12 inspected components. Ten (10) inspection locations are used in the calculation of the LCF. Zero (0) component sections lie outside of the 50% error boundaries. The LCF for the run is 0.655, which is within the EPRI recommended range. The run has a good correlation, with an NMAE of 16.9%. The run has good geometry coverage, with all geometries having been inspected except the one expander. All 3 lines have been inspected, giving the run good parallel train coverage. This run can be considered calibrated. More focus can be concentrated on other areas or wear rate analysis runs where less confidence in the predictive rates is exhibited.

B 2.10 CD: S/G BLWDN HX IN

This run consists of 27 components, of which there are 6 inspected components. Three (3) inspection locations are used in the calculation of the LCF. Zero (0) component sections lie outside of the 50% error boundaries. The LCF for the run is 1.754, which is within the EPRI recommended range. The run has a moderate correlation, with an NMAE of 26.3%. The run has moderate geometry coverage, as the line is composed mostly of elbows and straight pipes but the nozzle and tee in the line have not been inspected. There is only one line, so the run has good parallel train coverage. This run needs more inspections to be considered calibrated.

B 2.11 CD: S/G BLWDN HX OUT

This run consists of 23 components, of which there are 13 inspected components. Seven (7) inspection locations are used in the calculation of the LCF. Five (5) component sections lie outside of the 50% error boundaries. The LCF for the run is 3.247, which is outside of the EPRI recommended range. The run has a moderate correlation, with an NMAE of 24.5%. The run has good geometry coverage, with the exit nozzle being the only geometry not having been inspected. There is only one line, so the run has good parallel train coverage. This run has a high outlier to inspection location ratio, a heavily vertical distribution on the scatter plot, and an LCF that is outside the recommended range. This run cannot be considered calibrated.

B 2.12 ES: BFPT DRN TO COND

The lines in this run were modeled after 3R16 with the effort to update CHECWORKS to account for the most recent revision of the System Susceptibility Evaluation. This run contains no inspections and cannot be considered calibrated. Inspections are necessary to calibrate the run, though predicted wear rates are very low.

B 2.13 ES: HDR TO 35 HTRS

All carbon steel components in this run, excluding valves, have been inspected. Future inspections on all components in this run should be determined by the trending analysis of inspection data, and CHECWORKS predictions for this run are no longer applicable.

B 2.14 ES: HDR TO 36 HTRS

All of the components in this run, except the 3 valves, have been replaced with A-213 TP304L TP3, a non-susceptible material. Because valves inspections are handled under a separate program, CHECWORKS predictions are no longer applicable for this run.

B 2.15 ES: HTR 36 HEADER

All components, except for valves, have been replaced with or coated with stainless steel. Because valves inspections are handled under a separate program, CHECWORKS predictions are no longer applicable for this run.

B 2.16 ES: LP TO 31 HEATERS

This run consists of 54 components, of which there are 2 inspected components. Two (2) inspection locations are used in the calculation of the LCF. Zero (0) component sections lie outside of the 50% error boundaries. The LCF for the run is 0.811, which is within the EPRI recommended range. The run has a good correlation, with an NMAE of 16.5%. The run has poor geometry coverage, with the inlet nozzle being the only geometry type having been inspected. Only two of the twelve lines have been inspected, so the run has poor parallel train coverage. This run cannot be considered calibrated. More inspections are required for the calibration of this line.

B 2.17 ES: LP TO 32 HEATERS

This run consists of 30 components, of which there are 11 inspected components. Eight (8) inspection locations are used in the calculation of the LCF. Three (3) component sections lie outside of the 50% error boundaries. The LCF for the run is 0.318, which is outside of the EPRI recommended range. The run has a moderate correlation, with an NMAE of 24.2%. The run has good geometry coverage, with every geometry

type having been inspected. Only three of the six lines have been inspected, so the run has poor parallel train coverage. Due to the poor parallel train coverage and the low LCF, this run cannot be considered calibrated.

B 2.18 ES: LP TO 33 HEATERS

This run consists of 155 components, of which there are 28 inspected components. Seventeen (17) inspection locations are used in the calculation of the LCF. Two (2) component sections lie outside of the 50% error boundaries. The LCF for the run is 1.383, which is within the EPRI recommended range. The run has a moderate correlation, with an NMAE of 20.5%. The run has moderate geometry coverage, with no inspections on 45° elbows, expanders, or exit nozzles. Only nine of the fifteen lines have been inspected, so the run has poor parallel train coverage. Due to the poor parallel train coverage and the moderate correlation and geometry coverage, this run cannot be considered calibrated.

B 2.19 ES: PRESEP TO 35 HDR

This run consists of 89 components, of which there are 44 inspected components. Twenty-one (21) inspection locations are used in the calculation of the LCF. Eight (8) component sections lie outside of the 50% error boundaries. The LCF for the run is 2.229, which is within the EPRI recommended range. The run has a good correlation, with an NMAE of 18.1%. The run has good geometry coverage, with inspections on every susceptible geometry type. Of the 12 lines in this run, only one line is carbon steel and susceptible to FAC, “EX-02.14 FWH 35 HEADER”, and it has been inspected, giving this run good parallel train coverage. None of the 6 orifices have been inspected, but all are made of non-susceptible material. This run can be considered calibrated.

B 2.20 FW: 36 HTR TO SG HDR

This run consists of 33 components, of which there are 18 inspected components. Twelve (12) inspection locations are used in the calculation of the LCF. Five (5) component sections lie outside of the 50% error boundaries. The LCF for the run is 3.451, which is outside of the EPRI recommended range. The run has a moderate correlation, with an NMAE of 29.8%. The run has good geometry coverage, with every geometry type having been inspected. All three of the lines have been inspected, so the run has good parallel train coverage. This run can be considered calibrated.

B 2.21 FW: BFP TO 36 HTR

This run consists of 105 components, of which there are 50 inspected components. Twenty-seven (27) inspection locations are used in the

calculation of the LCF. Fifteen (15) component sections lie outside of the 50% error boundaries. The LCF for the run is 0.893, which is outside of the EPRI recommended range. The run has a poor correlation, with an NMAE of 33.1%. The run has good geometry coverage, with every geometry type having been inspected except the single reducer. All of the lines have been inspected, so the run has good parallel train coverage. Due to the poor correlation, this run cannot be considered calibrated.

B 2.22 FW: FW RECIRC

All components in this run are non-susceptible to FAC. CHECWORKS predictions are not applicable to these components.

B 2.23 FW: SG Headers

This run consists of 190 components, of which there are 70 inspected components. Thirty-six (36) inspection locations are used in the calculation of the LCF. Twenty-two (22) component sections lie outside of the 50% error boundaries. The LCF for the run is 3.162, which is outside of the EPRI recommended range. The run has a good correlation, with an NMAE of 20.0%. The run has good geometry coverage, with every geometry type being used in the LCF calculation except nozzles, though 2 nozzles have been inspected. All of the lines have been inspected, so the run has good parallel train coverage. Despite the high LCF, this run can be considered calibrated.

B 2.24 HD: HD PMP TO BFP HDR

This run consists of 45 components, of which there are 19 inspected components. Thirteen (13) inspection locations are used in the calculation of the LCF. Three (3) component sections lie outside of the 50% error boundaries. The LCF for the run is 0.733, which is within the EPRI recommended range. The run has a good correlation, with an NMAE of 14.5%. The run has moderate geometry coverage, with every geometry type being used in the LCF calculation except nozzles and the lone 45° elbow, though one nozzle has been inspected. Geometry coverage could be upgraded to “good” by inspecting the 45° elbow; however, this is not necessary for calibration of the run, and all inlet nozzles and elbows in the run have long remaining service lives. All of the lines have been inspected, so the run has good parallel train coverage. This run can be considered calibrated. Further inspections could be used to enhance the run’s geometry coverage, but, due to the long remaining service lives, more focus can be concentrated on other areas or wear rate analysis runs where less confidence in the predictive rates is exhibited.

B 2.25 HD: HTR 31 TO COND

The lines in this run were modeled after 3R16 with the effort to update CHECWORKS to account for the most recent revision of the System

Susceptibility Evaluation. This run contains no inspections and cannot be considered calibrated. Inspections are necessary to calibrate the run, though predicted wear rates are very low.

B 2.26 HD: HTR 32 to HTR 31

This run consists of 66 components, of which there are 5 inspected components. Two (2) inspection locations are used in the calculation of the LCF. Zero (0) component sections lie outside of the 50% error boundaries. The LCF for the run is 1.863, which is within the EPRI recommended range. The run has a good correlation, with an NMAE of 12.2%. The run has poor geometry coverage, with only nozzles and expanders having been inspected. Inspections from only 2 of the 3 trains are used in the calculation of the LCF, giving the run poor parallel train coverage. Due to the poor geometry coverage and poor parallel train coverage, this run cannot be considered calibrated. Further inspections could be used to enhance the run's geometry coverage, but, due to the long remaining service lives, more focus can be concentrated on other areas or wear rate analysis runs where less confidence in the predictive rates is exhibited.

B 2.27 HD: HTR 33 TO HTR 32

This run consists of 148 components, of which there are 12 inspected components. Twelve (12) inspection locations are used in the calculation of the LCF. Two (2) component sections lie outside of the 50% error boundaries. The LCF for the run is 1.045, which is within the EPRI recommended range. The run has a moderate correlation, with an NMAE of 26.4%. The run has moderate geometry coverage, with no inspections on 45° elbows or nozzles. Geometry coverage could be upgraded to “good” by inspecting a nozzle and a 45° elbow; however, this is not necessary for calibration of the run, and all nozzles and elbows in the run have long remaining service lives. Inspections from all 3 trains are used in the calculation of the LCF, giving the run good parallel train coverage. This run can be considered calibrated. More focus can be concentrated on other areas or wear rate analysis runs where less confidence in the predictive rates is exhibited.

B 2.28 HD: HTR 34 TO HTR 33

This run consists of 91 components, of which there are 14 inspected components. Seven (7) inspection locations are used in the calculation of the LCF. Two (2) component sections lie outside of the 50% error boundaries. The LCF for the run is 0.911, which is within the EPRI recommended range. The run has a good correlation, with an NMAE of 17.7%. The run has poor geometry coverage, with no inspections on nozzles or 90° or 45° elbows. Geometry coverage could be upgraded to “good” by inspecting nozzles and elbows; however, this is not necessary

for calibration of the run, and all nozzles and elbows in the run have long remaining service lives. Inspections from all 3 trains are used in the calculation of the LCF, giving the run good parallel train coverage. Despite the poor geometry coverage, this run can be considered calibrated. Further inspections could be used to enhance the run's geometry coverage, but, due to the long remaining service lives, more focus can be concentrated on other areas or wear rate analysis runs where less confidence in the predictive rates is exhibited.

B 2.29 HD: HTR 35 TO HDT

This run consists of 48 components, of which there are 11 inspected components. Seven (7) inspection locations are used in the calculation of the LCF. One (1) component section lies outside of the 50% error boundaries. The LCF for the run is 1.487, which is within the EPRI recommended range. The run has a good correlation, with an NMAE of 19.6%. The run has moderate geometry coverage, with no inspections on nozzles being used in the LCF calculation, though one nozzle has been inspected. Geometry coverage could be upgraded to "good" by inspecting a nozzle that can be used in the LCF calculation; however, this is not necessary for calibration of the run, and all nozzles in the run have long remaining service lives. Inspections from all 3 trains are used in the calculation of the LCF, giving the run good parallel train coverage. This run can be considered calibrated. More focus can be concentrated on other areas or wear rate analysis runs where less confidence in the predictive rates is exhibited.

B 2.30 HD: HTR 36 TO HDT

This run consists of 43 components, of which there are 13 inspected components. Eleven (11) inspection locations are used in the calculation of the LCF. Three (3) component sections lie outside of the 50% error boundaries. The LCF for the run is 1.405, which is within the EPRI recommended range. The run has a good correlation, with an NMAE of 18.5%. The run has good geometry coverage. Inspections from all 3 trains are used in the calculation of the LCF, giving the run good parallel train coverage. This run can be considered calibrated. More focus can be concentrated on other areas or wear rate analysis runs where less confidence in the predictive rates is exhibited.

B 2.31 HD: HTR DN TO PUMPS

This run consists of 17 components, of which there are 4 inspected components. Two (2) inspection locations are used in the calculation of the LCF. Zero (0) component sections lie outside of the 50% error boundaries. The LCF for the run is 1.912, which is within the EPRI recommended range. The run has a good correlation, with an NMAE of 18.9%. The run has moderate geometry coverage with no inspections on

the nozzles. Only 1 of the 2 trains has been inspected, giving the run poor parallel train coverage. This run cannot be considered calibrated due to the lack of inspection locations.

B 2.32 MSD: MS 31 TO MSDT

This run consists of 30 components, of which there are 9 inspected components. Five (5) inspection locations are used in the calculation of the LCF. One (1) component section lies outside of the 50% error boundaries. The LCF for the run is 12.299, which is outside of the EPRI recommended range. The run has a moderate correlation, with an NMAE of 29.7%. The run has poor geometry coverage with no inspections on tees or exit nozzles used in the calculation of the LCF, though three tees have been inspected. Only 3 of the 9 lines have inspections used in the LCF calculation, giving the run poor parallel train coverage. This run cannot be considered calibrated due to the high LCF, poor geometry coverage and poor parallel train coverage.

B 2.33 MSD: MS 32 TO MSDT

This run consists of 32 components, of which there are 17 inspected components. Eleven (11) inspection locations are used in the calculation of the LCF. Two (2) component sections lie outside of the 50% error boundaries. The LCF for the run is 12.801, which is outside of the EPRI recommended range. The run has a good correlation, with an NMAE of 18.4%. The run has good geometry coverage with inspections on every geometry type except exit nozzles. None of the lines upstream of the headers have inspections used in the LCF calculation, so only 4 of the 10 lines are represented in the WRA run, giving the run poor parallel train coverage. Inspections on these lines could improve the parallel train coverage to “good”; however, this is not necessary for calibration, and the components in these lines have long remaining service lives. Despite the poor parallel train coverage and the high LCF, this run can be considered calibrated.

B 2.34 MSD: MS 33 TO MSDT

This run consists of 36 components, of which there are 11 inspected components. Seven (7) inspection locations are used in the calculation of the LCF. One (1) component section lies outside of the 50% error boundaries. The LCF for the run is 8.046, which is outside of the EPRI recommended range. The run has a moderate correlation, with an NMAE of 23.5%. The run has good geometry coverage with inspections on every geometry type except exit nozzles. Only 2 of the 10 lines have inspections used in the calculation of the LCF, giving the run poor parallel train coverage. Due to the poor parallel train coverage and the moderate correlation, this run cannot be considered calibrated.

B 2.35 MSD: MSDT 31 TO HDT

Most of the components in this run are CrMo. The components that remain carbon steel are localized into small regions throughout the run. Due to the localized FAC-susceptibility of the lines, calibration of this run would be difficult, even if all susceptible locations were inspected. CHECWORKS predictions for this run are no longer applicable.

B 2.36 MSD: MSDT 32 TO HDT

Most of the components in this run are CrMo. The components that remain carbon steel are localized into small regions throughout the run. Due to the localized FAC-susceptibility of the lines, calibration of this run would be difficult, even if all susceptible locations were inspected. CHECWORKS predictions for this run are no longer applicable.

B 2.37 MSD: MSDT 33 TO HDT

Most of the components in this run are CrMo. The components that remain carbon steel are localized into small regions throughout the run. Due to the localized FAC-susceptibility of the lines, calibration of this run would be difficult, even if all susceptible locations were inspected. CHECWORKS predictions for this run are no longer applicable.

B 2.38 PD: PRESEPRTR DRAINS

This run consists of 87 components, of which there are 16 inspected components. Six (6) inspection locations are used in the calculation of the LCF. One (1) component section lies outside of the 50% error boundaries. The LCF for the run is 3.643, which is outside of the EPRI recommended range. The run has a moderate correlation, with an NMAE of 20.9%. The run has poor geometry coverage with no inspections on expanders, exit nozzles, or tees being used in the calculation of the LCF, though three tees have been inspected. All 7 lines have been inspected, but only 3 of the 7 are represented in the calculation of the LCF, giving the run poor parallel train coverage. This run cannot be considered calibrated due to the combination of poor parallel train coverage, poor geometry coverage, and moderate correlation.

B 2.39 RHD: RH 31 TO HDR

This run consists of 128 components, of which there are 29 inspected components. Fifteen (15) inspection locations are used in the calculation of the LCF. Four (4) component sections lie outside of the 50% error boundaries. The LCF for the run is 2.091, which is within the EPRI recommended range. The run has a moderate correlation, with an NMAE of 23.3%. The run has good geometry coverage with inspections on every geometry type except the 2 tees. Only 3 of the 4 lines have been inspected, but the remaining line only has 3 components, so the parallel

train coverage can be considered good. This run can be considered calibrated. More focus can be concentrated on other areas or wear rate analysis runs where less confidence in the predictive rates is exhibited.

B 2.40 RHD: RH 32A TO HDR

This run consists of 54 components, of which there are 18 inspected components. Ten (10) inspection locations are used in the calculation of the LCF. Four (4) component sections lie outside of the 50% error boundaries. The LCF for the run is 2.356, which is within the EPRI recommended range. The run has a good correlation, with an NMAE of 18.8%. The run has good geometry coverage with inspections on every geometry type except the 45° elbow and the 3 nozzles being used in the LCF calculation, though one nozzle has been inspected. Both lines have been inspected, giving the run good parallel train coverage. This run can be considered calibrated.

B 2.41 RHD: RH 32B TO HDR

This run consists of 73 components, of which there are 35 inspected components. Nineteen (19) inspection locations are used in the calculation of the LCF. Twenty-one (21) component sections lie outside of the 50% error boundaries. The LCF for the run is 3.055, which is outside of the EPRI recommended range. The run has a moderate correlation, with an NMAE of 27.9%. The run has moderate geometry coverage with inspections on every geometry type except the 45° elbows and tees. Both lines have been inspected, giving the run good parallel train coverage. Due to the moderate correlation, high LCF, and moderate geometry coverage, this run cannot be considered calibrated.

B 2.42 RHD: RH 33 TO HDR

This run consists of 120 components, of which there are 30 inspected components. Twelve (12) inspection locations are used in the calculation of the LCF. Four (4) component sections lie outside of the 50% error boundaries. The LCF for the run is 3.596, which is outside of the EPRI recommended range. The run has a good correlation, with an NMAE of 19.9%. The run has good geometry coverage with inspections used in the LCF calculation from every geometry type except the two reducers, though one reducer has been inspected. Only 3 of the 4 lines have been inspected, but the uninspected line only has 3 components, so parallel train coverage can be considered good. Despite the high LCF, this run can be considered calibrated.

B 2.43 RHD: RHD HDR to HTRS

This run consists of 148 components, of which there are 37 inspected components. Twenty-six (26) inspection locations are used in the calculation of the LCF. Thirteen (13) component sections lie outside of

the 50% error boundaries. The LCF for the run is 3.184, which is outside of the EPRI recommended range. The run has a moderate correlation, with an NMAE of 20.4%. The run has a moderate geometry coverage with no inspections on 45° elbows or reducers. Only 9 of the 12 lines inspections used in the LCF calculation, giving the run poor parallel train coverage. Due to the poor parallel train coverage and high LCF, this run cannot be considered calibrated.

Appendix C
CHECWORKS Global Data

Table C.1 Original Power Level Input Data

CHECWORKS Field	Power Level 100.0%	Reference
Steam Rate (Mlb/hr)	13.024152	7.6.1
Pressure (psia)	779.0	7.6.1
Temp (F)	515.2	7.6.1
Blowdown Rate (Mlb/hr)	0.100000	7.6.1
Carryover (%)	0.01	7.6.1
Feedwater Vent Rate (%)	x	CW User Guide
Reheater Vent Rate(%)	x	CW User Guide
Moisture Separator Carryunder (%)	x	CW User Guide
Notes: Original Power Level 3045.3 MWt		

x - Field should be left blank for a PWR.

Table C.2 Appendix K Power Level Input Data

CHECWORKS Field	Power Level 101.12%	Reference
Steam Rate (Mlb/hr)	13.186870	7.6.2
Pressure (psia)	774.4	7.6.2
Temp (F)	514.5	7.6.2
Blowdown Rate (Mlb/hr)	0.057785	7.6.2
Carryover (%)	0.08	7.6.2
Feedwater Vent Rate (%)	x	CW User Guide
Reheater Vent Rate(%)	x	CW User Guide
Moisture Separator Carryunder (%)	x	CW User Guide
Notes: Appendix K Uprate. 3079.4 MWt		

x - Field should be left blank for a PWR.

Table C.3 SPU Power Level Input Data

CHECWORKS Field	Power Level 104.95%	Reference
Steam Rate (Mlb/hr)	13.783800	7.6.3
Pressure (psia)	760.4	7.6.3
Temp (F)	512.4	7.6.3
Blowdown Rate (Mlb/hr)	0.057785	7.6.3
Carryover (%)	0.08	7.6.3
Feedwater Vent Rate (%)	x	CW User Guide
Reheater Vent Rate(%)	x	CW User Guide
Moisture Separator Carryunder (%)	x	CW User Guide
Notes: Stretch Power Uprate. 3196.0 MWt		

x - Field should be left blank for a PWR.

Table C.4 Original Power Level Steam Cycle Input Data

HBD Item ¹	Location	Flow Rate (Mlb/hr)	Enthalpy (Btu/lbm)	Pressure (psia)	Temp (F)	Reference
FWHTR 1	Tube side outlet	x	x	x	423.2	7.6.1
FWHTR 2	Tube side outlet	x	x	x	371.6	7.6.1
FWHTR 3	Tube side outlet	x	x	x	293.6	7.6.1
FWHTR 4	Tube side outlet	x	x	x	243.8	7.6.1
FWHTR 5	Tube side outlet	x	x	x	191.8	7.6.1
FWHTR 6	Tube side outlet	x	x	x	155.7	7.6.1
SPUMP 1	Driven steam and drain enthalpy and pressure	0.116701	974.8	1.0	x	7.6.1
MSEP 1	Moist Sep & Moist PreSep Drains ²	0.942923	364.8	221.9	x	7.6.1
TANK 1	Heater Drain Tank exiting steam	0	x	185.6	x	Note 4
TANK 2	Blowdown tank exiting steam	0	506.1	779.0	x	Note 4
RHTR 1	Reheater Drain	0.795863	495.3	644.7	x	7.6.1
HPEXTLINE 1	Conditions in line (Presep Outlet to FWH 5) ₃	0.929080	1136.9	185.6	x	7.6.1
HPEXTLINE 2	Conditions in line to FWH 6	0.706255	1136.9	340.4	x	7.6.1
LPEXTLINE 1	Conditions in line to FWH 4	0.502856	1177.4	64.98	x	7.6.1
LPEXTLINE 2	Conditions in line to FWH 3	0.475653	1120.6	27.85	x	Note 5
LPEXTLINE 3	Conditions in line to FWH 2	0.408297	815.4	10.72	x	Note 5
LPEXTLINE 4	Conditions in line to FWH 1	0.667055	858.0	5.04	x	Note 5

x = No value entered (not required by CHECWORKS).

(1) The HBD Item name is automatically generated by CHECWORKS. Feedwater heaters are numbered sequentially in reverse flow order. Feedwater Heater 1 is the feedwater heater closest to the steam generator (equivalent to heater 36 at Indian Point 3). Extraction lines are numbered sequentially in order of decreasing pressure.

(2) MSEP 1 represents the conditions in both the moisture separator and moisture pre-separator drain lines as recommended by EPRI Guidelines [7.7].

(3) HPEXTLINE 1 is a fictitious high-pressure extraction line representing the steam lines between the pre-separator and main separator as recommended by EPRI Guidelines [7.7].

(4) Flow rate is for exiting steam flow was entered as zero as recommended by EPRI Guidelines [7.7]. Pressure and enthalpy were obtained from the HBD "F" [7.6.1].

(5) Enthalpy calculated as the weighted average of the steam and liquid phases. Steam phase enthalpy was obtained directly from the PEPSE diagram as the enthalpy after moisture removal in the LP Turbine. Liquid phase enthalpy was calculated as the enthalpy of saturated liquid at the pressure given on the PEPSE diagram. [7.6.1]

Table C.5 Appendix K Steam Cycle Input Data

HBD Item ¹	Location	Flow Rate (Mlb/hr)	Enthalpy (Btu/lbm)	Pressure (psia)	Temp (F)	Reference
FWHTR 1	Tube side outlet	x	x	x	425.0	7.6.2
FWHTR 2	Tube side outlet	x	x	x	374.7	7.6.2
FWHTR 3	Tube side outlet	x	x	x	296.6	7.6.2
FWHTR 4	Tube side outlet	x	x	x	243.0	7.6.2
FWHTR 5	Tube side outlet	x	x	x	196.4	7.6.2
FWHTR 6	Tube side outlet	x	x	x	155.3	7.6.2
SPUMP 1	Driven steam and drain enthalpy and pressure	0.147147	976.3	1.0	x	7.6.2
MSEP 1	Moist Sep & Moist PreSep Drains ²	0.922509	355.9	199.8	x	7.6.2
TANK 1	Heater Drain Tank exiting steam	0	338.7	197.7	x	Note 4
TANK 2	Blowdown tank exiting steam	0	502.9	761.2	x	Note 4
RHTR 1	Reheater Drain	0.954357	506.5	623.3	x	7.6.2
HPEXTLINE 1	Conditions in line (Presep Outlet to FWH 5) ³	0.935949	1148.2	200.9	x	7.6.2
HPEXTLINE 2	Conditions in line to FWH 6	0.751563	1138.6	361.4	x	7.6.2
LPEXTLINE 1	Conditions in line to FWH 4	0.531280	1197.4	74.54	x	7.6.2
LPEXTLINE 2	Conditions in line to FWH 3	0.447417	1075.7	31.29	x	Note 5
LPEXTLINE 3	Conditions in line to FWH 2	0.458881	906.1	12.80	x	Note 5
LPEXTLINE 4	Conditions in line to FWH 1	0.771656	907.0	5.55	x	Note 5

x = No value entered (not required by CHECWORKS).

(1) The HBD Item name is automatically generated by CHECWORKS. Feedwater heaters are numbered sequentially in reverse flow order. Feedwater Heater 1 is the feedwater heater closest to the steam generator (equivalent to heater 36 at Indian Point 3). Extraction lines are numbered sequentially in order of decreasing pressure.

(2) MSEP 1 represents the conditions in both the moisture separator and moisture pre-separator drain lines as recommended by EPRI Guidelines [7.7].

(3) HPEXTLINE 1 is a fictitious high-pressure extraction line representing the steam lines between the pre-separator and main separator as recommended by EPRI Guidelines [7.7].

(4) Flow rate is for exiting steam flow and was entered as zero as recommended by EPRI Guidelines [7.7]. Pressure and enthalpy were obtained from the Appendix K PEPSE model [7.6.2].

(5) Enthalpy was calculated as the weighted average of the steam and liquid phases. Steam phase enthalpy was obtained directly from the PEPSE diagram as the enthalpy after moisture removal in the LP Turbine. Liquid phase enthalpy was calculated as the enthalpy of saturated liquid at the pressure given on the PEPSE diagram [7.6.2].

Table C.6 SPU Steam Cycle Input Data

HBD Item ¹	Location	Flow Rate (Mlb/hr)	Enthalpy (Btu/lbm)	Pressure (psia)	Temp (F)	Reference
FWHTR 1	Tube side outlet	x	x	x	430.4	7.6.3
FWHTR 2	Tube side outlet	x	x	x	377.3	7.6.3
FWHTR 3	Tube side outlet	x	x	x	298.3	7.6.3
FWHTR 4	Tube side outlet	x	x	x	245.2	7.6.3
FWHTR 5	Tube side outlet	x	x	x	198.0	7.6.3
FWHTR 6	Tube side outlet	x	x	x	156.9	7.6.3
SPUMP 1	Driven steam and drain enthalpy and pressure	0.160926	974.8	1.0	x	7.6.3
MSEP 1	Moist Sep & Moist PreSep Drains ²	1.097732	358.7	207.2	x	7.6.3
TANK 1	Heater Drain Tank exiting steam	0	342.5	203.3	x	Note 4
TANK 2	Blowdown tank exiting steam	0	502.8	760.4	x	Note 4
RHTR 1	Reheater Drain	0.870169	504.5	620.3	x	7.6.3
HPEXTLINE 1	Conditions in line (Presep Outlet to FWH 5) ³	0.984482	1147.3	208.3	x	7.6.3
HPEXTLINE 2	Conditions in line to FWH 6	0.852604	1155.1	388.6	x	7.6.3
LPEXTLINE 1	Conditions in line to FWH 4	0.548842	1197.6	77.28	x	7.6.3
LPEXTLINE 2	Conditions in line to FWH 3	0.472533	1076.5	32.42	x	Note 5
LPEXTLINE 3	Conditions in line to FWH 2	0.475753	905.9	13.27	x	Note 5
LPEXTLINE 4	Conditions in line to FWH 1	0.790585	905.2	5.76	x	Note 5

x = No value entered (not required by CHECWORKS).

(1) The HBD Item name is automatically generated by CHECWORKS. Feedwater heaters are numbered sequentially in reverse flow order. Feedwater Heater 1 is the feedwater heater closest to the steam generator (equivalent to heater 36 at Indian Point 3). Extraction lines are numbered sequentially in order of decreasing pressure.

(2) MSEP 1 represents the conditions in both the moisture separator and moisture pre-separator drain lines as recommended by EPRI Guidelines [7.7].

(3) HPEXTLINE 1 is a fictitious high-pressure extraction line representing the steam lines between the pre-separator and main separator as recommended by EPRI Guidelines [7.7].

(4) Flow rate is for exiting steam flow and was entered as zero as recommended by EPRI Guidelines [7.7]. Pressure and enthalpy were obtained from the SPU PEPSE model [7.6.3].

(5) Enthalpy was calculated as the weighted average of the steam and liquid phases. Steam phase enthalpy was obtained directly from the PEPSE diagram as the enthalpy after moisture removal in the LP Turbine. Liquid phase enthalpy was calculated as the enthalpy of saturated liquid at the pressure given on the PEPSE diagram [7.6.3].

Table C.7 Cycle 1 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	15.67	ppb	7.2.2
Ammonia	Final Feed Water	0.680	ppm	7.2.2
Hydrazine	Final Feed Water	20.000	ppb	7.2.2
Hydrazine	SG Outlet	12.000	ppb	7.2.2
Hydrazine	MSR Drain	24.000	ppb	7.2.2

Table C.8 Cycle 2 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	16.43	ppb	7.2.2
Ammonia	Final Feed Water	0.480	ppm	7.2.2
Hydrazine	Final Feed Water	20.000	ppb	7.2.2
Hydrazine	SG Outlet	12.000	ppb	7.2.2
Hydrazine	MSR Drain	24.000	ppb	7.2.2

Table C.9 Cycle 3 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	11.72	ppb	7.2.2
Ammonia	Condensate	0.760	ppm	7.2.2
Hydrazine	Final Feed Water	25.000	ppb	7.2.2
Hydrazine	SG Outlet	15.000	ppb	7.2.2
Hydrazine	MSR Drain	30.000	ppb	7.2.2

Table C.10 Cycle 4 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	9.13	ppb	7.2.2
Ammonia	Final Feed Water	1.260	ppm	7.2.2
Hydrazine	Final Feed Water	40.000	ppb	7.2.2
Hydrazine	SG Outlet	24.000	ppb	7.2.2
Hydrazine	MSR Drain	48.000	ppb	7.2.2

Table C.11 Cycle 5 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	2.83	ppb	7.2.2
Ammonia	Final Feed Water	1.290	ppm	7.2.2
Hydrazine	Final Feed Water	40.000	ppb	7.2.2
Hydrazine	SG Outlet	24.000	ppb	7.2.2
Hydrazine	MSR Drain	48.000	ppb	7.2.2

Table C.12 Cycle 6 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	2.53	ppb	7.2.2
Ammonia	Final Feed Water	1.290	ppm	7.2.2
Hydrazine	Final Feed Water	40.000	ppb	7.2.2
Hydrazine	SG Outlet	24.000	ppb	7.2.2
Hydrazine	MSR Drain	48.000	ppb	7.2.2

Table C.13 Cycle 7 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	3.00	ppb	7.2.2
Morpholine	Final Feed Water	4.500	ppm	7.2.2
Hydrazine	Final Feed Water	58.000	ppb	7.2.2
Ammonia	Final Feed Water	0.060	ppm	7.2.2
Hydrazine	SG Outlet	34.800	ppb	7.2.2
Hydrazine	MSR Drain	69.600	ppb	7.2.2

Table C.14 Cycle 8 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	4.00	ppb	7.2.2
Morpholine	Final Feed Water	4.500	ppm	7.2.2
Hydrazine	Final Feed Water	190.000	ppb	7.2.2
Ammonia	Final Feed Water	0.200	ppm	7.2.2
Hydrazine	SG Outlet	114.000	ppb	7.2.2
Hydrazine	MSR Drain	228.000	ppb	7.2.2

Table C.15 Cycle 9 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	9.00	ppb	7.2.2
Morpholine	Final Feed Water	4.500	ppm	7.2.2
Hydrazine	Final Feed Water	225.000	ppm	7.2.2
Ammonia	Final Feed Water	0.680	ppb	7.2.2
Hydrazine	SG Outlet	135.000	ppb	7.2.2
Hydrazine	MSR Drain	270.000	ppb	7.2.2

Table C.16 Cycle 10A Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	1.80	ppb	7.2.2
Morpholine	Final Feed Water	4.500	ppm	7.2.2
Hydrazine	Final Feed Water	180.000	ppb	7.2.2
Ammonia	Condensate	2.000	ppb	7.2.2
Hydrazine	SG Outlet	108.000	ppb	7.2.2
Hydrazine	MSR Drain	216.000	ppb	7.2.2

Table C.17 Cycle 10B Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	2.50	ppb	7.2.2
Ethanolamine	Final Feed Water	2.000	ppm	7.2.2
Hydrazine	Final Feed Water	225.000	ppb	7.2.2
Ammonia	Condensate	2.000	ppb	7.2.2
Hydrazine	SG Outlet	135.000	ppb	7.2.2
Hydrazine	MSR Drain	270.000	ppb	7.2.2

Table C.18 Cycle 11 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	3.3	ppb	7.2.2
Ethanolamine	Final Feed Water	2.400	ppm	7.2.2
Hydrazine	Final Feed Water	190.000	ppb	7.2.2
Ammonia	Final Feed Water	5.285	ppm	7.2.2
Hydrazine	SG Outlet	114.000	ppb	7.2.2
Hydrazine	MSR Drain	228.000	ppb	7.2.2

Table C.19 Cycle 12 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	0.69	ppb	7.2.2
Ethanolamine	Final Feed Water	3.558	ppm	7.2.2
Hydrazine	Final Feed Water	104.657	ppb	7.2.2
Ammonia	Final Feed Water	5.830	ppm	7.2.2
Hydrazine	SG Outlet	62.794	ppb	7.2.2
Hydrazine	MSR Drain	125.589	ppb	7.2.2

Table C.20 Cycle 13 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	3.34	ppb	7.12.7
Ethanolamine	Final Feed Water	3.423	ppm	7.12.7
Hydrazine	Final Feed Water	98.400	ppb	7.12.7
Ammonia	Final Feed Water	4.886	ppm	7.12.7
Hydrazine	SG Outlet	58.100	ppb	7.12.7
Hydrazine	MSR Drain	116.200	ppb	7.12.7

Table C.21 Cycle 14 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	2.987	ppb	7.28.1
Ethanolamine	Final Feed Water	4.808	ppm	7.28.1
Hydrazine	Final Feed Water	53.730	ppb	7.28.1
Ammonia	Final Feed Water	3.600	ppm	7.28.1
Hydrazine	SG Outlet	33.440	ppb	7.28.1
Hydrazine	MSR Drain	66.880	ppb	7.28.1

Table C.22 Cycle 15 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	2.820	ppb	7.28.2
Ethanolamine	Final Feed Water	4.360	ppm	7.28.2
Hydrazine	Final Feed Water	61.000	ppb	7.28.2
Ammonia	Final Feed Water	3.620	ppm	7.28.2
Hydrazine	SG Outlet	36.600	ppb	7.28.2
Hydrazine	MSR Drain	73.200	ppb	7.28.2

Table C.23 Cycle 16 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	2.860	ppb	7.28.3
Ethanolamine	Final Feed Water	4.890	ppm	7.28.3
Hydrazine	Final Feed Water	69.000	ppb	7.28.3
Ammonia	Final Feed Water	4.386	ppm	7.28.3
Hydrazine	SG Outlet	41.000	ppb	7.28.3
Hydrazine	MSR Drain	83.000	ppb	7.28.3

Note: This water treatment was used for Cycles 16-17.
See Assumption 4.1.5 concerning this water treatment.

Table C.23 Plant Period Input Data

Period	Start Date	End Date	Type	Water Treatment	Power Level	Operating Hours	Reference
Cycle 1	6/27/1976	6/7/1978	Operating	Cycle 1	100	12117.6	7.2.2
RO1	6/7/1978	8/25/1978	Maintenance	----	----	----	7.2.2
Cycle 2	8/25/1978	9/14/1979	Operating	Cycle 2	100	7874.4	7.2.2
RO2	9/14/1979	2/11/1980	Maintenance	----	----	----	7.2.2
Cycle 3	2/11/1980	3/25/1982	Operating	Cycle 3	100	8944.8	7.2.2
RO3	3/25/1982	6/8/1983	Maintenance	----	----	----	7.2.2
Cycle 4	6/8/1983	6/7/1985	Operating	Cycle 4	100	9854.4	7.2.2
RO4	6/7/1985	10/4/1985	Maintenance	----	----	----	7.2.2
Cycle 5	10/4/1985	5/2/1987	Operating	Cycle 5	100	10012.8	7.2.2
RO5	5/2/1987	9/5/1987	Maintenance	----	----	----	7.2.2
Cycle 6	9/5/1987	2/4/1989	Operating	Cycle 6	100	10461.6	7.2.2
RO6	2/4/1989	6/25/1989	Maintenance	----	----	----	7.2.2
Cycle 7	6/25/1989	9/15/1990	Operating	Cycle 7	100	9463.2	7.2.2
RO7	9/15/1990	12/23/1990	Maintenance	----	----	----	7.2.2
Cycle 8	12/23/1990	4/18/1992	Operating	Cycle 8	100	9916.8	7.2.2
RO8	4/18/1992	7/2/1995	Maintenance	----	----	----	7.2.2
Cycle 9A	7/2/1995	9/14/1995	Operating	Cycle 9	100	1852.2	7.2.2
Winter 1995	9/15/1995	4/13/1996	Maintenance	----	----	----	7.2.2
Cycle 9B	4/14/1996	5/14/1997	Operating	Cycle 9	100	11703.0	7.2.2
RO9	5/14/1997	9/12/1997	Maintenance	----	----	----	7.2.2
Cycle 10A	9/12/1997	3/20/1998	Operating	Cycle 10A	100	3864.0	7.2.2
Cycle 10B	3/20/1998	9/10/1999	Operating	Cycle 10B	100	11841.6	7.2.2
RO10	9/10/1999	10/19/1999	Maintenance	----	----	----	7.2.2
Cycle 11	10/19/1999	4/27/2001	Operating	Cycle 11	100	13113.8	7.2.2
RO11	4/28/2001	5/23/2001	Maintenance	----	----	----	7.2.2
Cycle 12A	5/24/2001	12/21/2002	Operating	Cycle 12	100	13848.0	7.2.2
Cycle 12B	12/22/2002	3/28/2003	Operating	Cycle 12	101.12	2328.0	7.2.2
RO12	3/29/2003	4/23/2003	Maintenance	----	----	----	7.2.2
Cycle 13	4/24/2003	3/11/2005	Operating	Cycle 13	101.12	16268.0	7.2.2
RO13	3/11/2005	4/6/2005	Maintenance	----	----	----	7.2.2
Cycle 14	4/7/2005	3/6/2007	Operating	Cycle 14	104.95	16654.0	7.28.1
RO14	3/7/2007	3/31/2007	Maintenance	----	----	----	7.28.1
Cycle 15	4/1/2007	3/10/2009	Operating	Cycle 15	104.95	16469.0	7.28.2
RFO 15	3/11/2009	4/1/2009	Maintenance	----	----	----	7.28.2
Cycle 16	4/2/2009	3/8/2011	Operating	Cycle 16	104.95	16205	7.28.3
RO16	3/9/2011	4/8/2011	Maintenance	----	----	----	7.28.3
Cycle 17	4/9/2011	3/1/2013	Operating	Cycle 16	104.95	17520	See Note
RO17	3/2/2013	4/1/2013	Maintenance	----	----	----	See Note

Note: Cycle 17 and RO17 dates, operating hours, and water treatment are estimated based on previous operating conditions.

Appendix D
CHECWORKS Modeled Lines

CHECWORKS Line Name		Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
CD-01.1A FWH 31A to FWH 32A	Cond: FW Heater 31A to FW Heater 32A	EC-F-20183 SH. 1	HBD	FWH Tube Side Line 6	0.333	1	CD: HTR 31 TO HTR 32	
CD-01.1B FWH 31B to FWH 32B	Cond: FW Heater 31B to FW Heater 32B	EC-F-20183 SH. 1	HBD	FWH Tube Side Line 6	0.333	1	CD: HTR 31 TO HTR 32	
CD-01.1C FWH 31C to FWH 32C	Cond: FW Heater 31C to FW Heater 32C	EC-F-20183 SH. 1	HBD	FWH Tube Side Line 6	0.333	1	CD: HTR 31 TO HTR 32	
CD-02.11 SGBD HX3 to FWH HDR	Cond: FW Heaters 32 Outlet Header to SG Blowdown HX 3	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 5	0.038	1	CD: S/G BLWDN HX OUT	
CD-02.1A FWH 32A to HDR	Cond: FW Heater 32A to Header	EC-F-20183 SH. 1	HBD	FWH Tube Side Line 5	0.333	1	CD: HTR 32 TO HDR	
CD-02.1B FWH 32B to HDR	Cond: FW Heater 32B to Header	EC-F-20183 SH. 1	HBD	FWH Tube Side Line 5	0.333	1	CD: HTR 32 TO HDR	
CD-02.1C FWH 32C to HDR	Cond: FW Heater 32C to Header	EC-F-20183 SH. 1	HBD	FWH Tube Side Line 5	0.333	1	CD: HTR 32 TO HDR	
CD-02.2 FWH 32 OUT HDR	Cond: FW Heaters 32 Outlet Header Between 32B Connection and 32C Connection	EC-F-20183 SH. 1	HBD	FWH Tube Side Line 5	0.667	1	CD: HTR 32 TO 33 HDR	
CD-02.3 FWH 32 OUT HDR	Cond: FW Heaters 32 Outlet Header Between 32C Connection and Takeoff to SG Blowdown HX 3	EC-F-20183 SH. 1	HBD	FWH Tube Side Line 5	1	1	CD: HTR 32 TO 33 HDR	

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
CD-02.4 FWH 32 OUT HDR	Cond: FW Heaters 32 Outlet Header Between Takeoff to SG Blowdown HX 3 and Return from SG Blowdown HX 3	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 5	0.962	1	CD: HTR 32 TO 33 HDR
CD-02.5 FWH 32 OUT HDR	Cond: FW Heaters 32 Outlet Header Between Return from SG Blowdown HX 3 and 33C Takeoff	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 5	0.962	1	CD: HTR 32 TO 33 HDR
CD-02.6 FWH 32 OUT HDR	Cond: FW Heaters 32 Outlet Header Between 33C Takeoff and 33B Takeoff	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 5	0.667	1	CD: HTR 32 TO 33 HDR
CD-02.8A HDR to FWH 33A	Cond: FW Heaters 32 Outlet Header to FW Heater 33A	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 5	0.333	1	CD: HDR TO HTR 33
CD-02.8B HDR to FWH 33B	Cond: FW Heaters 32 Outlet Header to FW Heater 33B	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 5	0.333	1	CD: HDR TO HTR 33
CD-02.8C HDR to FWH 33C	Cond: FW Heaters 32 Outlet Header to FW Heater 33C	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 5	0.333	1	CD: HDR TO HTR 33
CD-02.9 FWH HDR to SGBD HX3	Cond: SG Blowdown HX 3 to FW Heaters 32 Outlet Header	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 5	0.038	1	CD: S/G BLWDN HX IN
CD-03.1A FWH 33A to FWH 34A	Cond: FW Heater 33A to FW Heater 34A	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 4	0.333	1	CD: HTR 33 TO HTR 34

CHECWORKS Line Name		Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
CD-03.1B FWH 33B to FWH 34B	Cond: FW Heater 33B to FW Heater 34B	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 4	0.333	1	CD: HTR 33 TO HTR 34	
CD-03.1C FWH 33C to FWH 34C	Cond: FW Heater 33C to FW Heater 34C	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 4	0.333	1	CD: HTR 33 TO HTR 34	
CD-04.1A FWH 34A to FWH 35A	Cond: FW Heater 34A to FW Heater 35A	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 3	0.333	1	CD: HTR 34 TO HTR 35	
CD-04.1B FWH 34B to FWH 35B	Cond: FW Heater 34B to FW Heater 35B	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 3	0.333	1	CD: HTR 34 TO HTR 35	
CD-04.1C FWH 34C to FWH 35C	Cond: FW Heater 34C to FW Heater 35C	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 3	0.333	1	CD: HTR 34 TO HTR 35	
CD-05.1A FWH 35A to HDR	Cond: FW Heater 35A to Header	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 2	0.333	1	CD: HTR 35 TO HDR	
CD-05.1B FWH 35B to HDR	Cond: FW Heater 35B to Header	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 2	0.333	1	CD: HTR 35 TO HDR	
CD-05.1C FWH 35C to HDR	Cond: FW Heater 35C to Header	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 2	0.333	1	CD: HTR 35 TO HDR	
CD-05.3 FWH 35 OUT HDR	Cond: FW Heaters 35 Outlet Header Between 35B Connection and 35C Connection	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 2	0.667	1	CD: HTR 35 TO BFP HDR	
CD-05.4 FWH 35 OUT HDR	Cond: FW Heaters 35 Outlet Header Between 35C Connection and Heater Drain Pump Discharge Connection	EC-F-20183 SH. 2	HBD	FWH Tube Side Line 2	1	1	CD: HTR 35 TO BFP HDR	

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
CD-06.1 FWH 35 OUT HDR	Cond: FW Heaters 35 Outlet Header Between Heater Drain Pump Discharge Connection and Boiler Feed Pump Inlet Tee	EC-F-20183 SH. 2	ARD	FWH Tube Side Line 2 (MIXED)	1	1	CD: HDR TO BFP
CD-06.2A HDR to BFP 31	Cond: FW Heaters 35 Outlet Header to Boiler Feed Pump 31	EC-F-20183 SH. 2	ARD	FWH Tube Side Line 2 (MIXED)	1	1	CD: HDR TO BFP
CD-06.2B HDR to BFP 32	Cond: FW Heaters 35 Outlet Header to Boiler Feed Pump 32	EC-F-20183 SH. 2	ARD	FWH Tube Side Line 2 (MIXED)	1	1	CD: HDR TO BFP
EX-01.1 HP EXT to FWH 36 HDR	Ext Steam: HP Extraction from HP Turbine to FW Heater 36 Inlet Header (Line 1 of 2)	EC-F-20203 Sh. 1	HBD	HP Extraction Steam Line 2	0.5	1	ES: HTR 36 HEADER
EX-01.2 HP EXT to FWH 36 HDR	Ext Steam: HP Extraction from HP Turbine to FW Heater 36 Inlet Header (Line 2 of 2)	EC-F-20203 Sh. 1	HBD	HP Extraction Steam Line 2	0.5	1	ES: HTR 36 HEADER
EX-01.3 HP EXT FWH 36 HEADER	Ext Steam: HP Extraction Header Between HP Turbine Outlet Tee and FW Heater 36C Takeoff	EC-F-20203 Sh. 1	HBD	HP Extraction Steam Line 2	1	1	ES: HTR 36 HEADER

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
EX-01.4 HP EXT FWH 36 HEADER	Ext Steam: HP Extraction Header Between FW Heater 36C Takeoff and FW Heater 36B Takeoff	EC-F-20203 Sh. 1	HBD	HP Extraction Steam Line 2	0.667	1	ES: HTR 36 HEADER
EX-01.5A HP EX HDR to FWH 36A	Ext Steam: HP Extraction Header to FW Heater 36A	EC-F-20203 Sh. 1	HBD	HP Extraction Steam Line 2	0.333	1	ES: HDR TO 36 HTRS
EX-01.5B HP EX HDR to FWH 36B	Ext Steam: HP Extraction Header to FW Heater 36B	EC-F-20203 Sh. 1	HBD	HP Extraction Steam Line 2	0.333	1	ES: HDR TO 36 HTRS
EX-01.5C HP EX HDR to FWH 36C	Ext Steam: HP Extraction Header to FW Heater 36C	EC-F-20203 Sh. 1	HBD	HP Extraction Steam Line 2	0.333	1	ES: HDR TO 36 HTRS
EX-02.1 PSEP 2A 10" to 35 HDR	Ext Steam: Moist PreSeparator 2A to Feedwater Heater 35 Inlet Header (10-Inch OD Line)	EC-F-20203 Sh. 1	ARD	HP Extraction Steam Line 1	1	1	ES: PRESEP TO 35 HDR
EX-02.11 PSEP1B 14" to 35 HDR	Ext Steam: Moist PreSeparator 1B to Feedwater Heater 35 Inlet Header (14-Inch OD Line)	EC-F-20203 Sh. 1	ARD	HP Extraction Steam Line 1	1	1	ES: PRESEP TO 35 HDR
EX-02.12 PSEP 1B&2B to 35 HDR	Ext Steam: Moist PreSeparator 1B and 2B Outlet Tee to Feedwater Heater 35 Inlet Header (Upstream of 14" Connection)	EC-F-20203 Sh. 1	ARD	HP Extraction Steam Line 1	1	1	ES: PRESEP TO 35 HDR

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
EX-02.13 PSEP 1B&2B to 35 HDR	Ext Steam: Moist PreSeparator 1B and 2B Outlet Tee to Feedwater Heater 35 Inlet Header (Downstream of 14" Connection)	EC-F-20203 Sh. 1	ARD	HP Extraction Steam Line 1	1	1	ES: PRESEP TO 35 HDR
EX-02.14 FWH 35 HEADER	Ext Steam: FW Heater 35 Inlet Header Between Moist PreSeparator Outlets and FW Heater 35C Takeoff	EC-F-20203 Sh. 1	ARD	HP Extraction Steam Line 1	1	1	ES: PRESEP TO 35 HDR
EX-02.15 FWH 35 HEADER	Ext Steam: FW Heater 35 Inlet Header Between FW Heater 35C Takeoff and FW Heater 35B Takeoff	EC-F-20203 Sh. 1	ARD	HP Extraction Steam Line 1	1	1	ES: PRESEP TO 35 HDR
EX-02.16 HDR 35 to FWH 35A	Ext Steam: FW Heater 35 Inlet Header to Feedwater Heater 35A	EC-F-20203 Sh. 1	ARD	HP Extraction Steam Line 1	1	1	ES: HDR TO 35 HTRS
EX-02.17 HDR 35 to FWH 35B	Ext Steam: FW Heater 35 Inlet Header to Feedwater Heater 35B	EC-F-20203 Sh. 1	ARD	HP Extraction Steam Line 1	1	1	ES: HDR TO 35 HTRS
EX-02.18 HDR 35 to FWH 35C	Ext Steam: FW Heater 35 Inlet Header to Feedwater Heater 35C	EC-F-20203 Sh. 1	ARD	HP Extraction Steam Line 1	1	1	ES: HDR TO 35 HTRS

CHECWORKS Line Name		Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
EX-02.2 PSEP 1A 10" to 35 HDR	Ext Steam: Moist PreSeparator 1A to Feedwater Heater 35 Inlet Header (10-Inch OD Line)	EC-F-20203 Sh. 1	ARD	HP Extraction Steam Line 1	1	1	ES: PRESEP TO 35 HDR	
EX-02.4 PSEP2A 14" to 35 HDR	Ext Steam: Moist PreSeparator 2A to Feedwater Heater 35 Inlet Header (14-Inch OD Line)	EC-F-20203 Sh. 1	ARD	HP Extraction Steam Line 1	1	1	ES: PRESEP TO 35 HDR	
EX-02.6 PSEP 1A&2A to 35 HDR	Ext Steam: Moist PreSeparator 1A and 2A Outlet Tee to Feedwater Heater 35 Inlet Header (Upstream of 14" Connection)	EC-F-20203 Sh. 1	ARD	HP Extraction Steam Line 1	1	1	ES: PRESEP TO 35 HDR	
EX-02.7 PSEP 1A&2A to 35 HDR	Ext Steam: Moist PreSeparator 1A and 2A Outlet Tee to Feedwater Heater 35 Inlet Header (Downstream of 14" Connection)	EC-F-20203 Sh. 1	ARD	HP Extraction Steam Line 1	1	1	ES: PRESEP TO 35 HDR	
EX-02.8 PSEP 2B 10" to 35 HDR	Ext Steam: Moist PreSeparator 2B to Feedwater Heater 35 Inlet Header (10-Inch OD Line)	EC-F-20203 Sh. 1	ARD	HP Extraction Steam Line 1	1	1	ES: PRESEP TO 35 HDR	

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
EX-02.9 PSEP 1B 10" to 35 HDR	Ext Steam: Moist PreSeparator 1B to Feedwater Heater 35 Inlet Header (10-Inch OD Line)	EC-F-20203 Sh. 1	ARD	HP Extraction Steam Line 1	1	1	ES: PRESEP TO 35 HDR
EX-04.1 LPEX14 to FWH33A HDR	Ext Steam: LP Extraction No. 14 from LP Turbine 33 to Header Upstream of FW Heater 33A	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 2	0.167	1	ES: LP TO 33 HEATERS
EX-04.11 LPEX FWH 33B IN HDR	Ext Steam: LP Extraction Header Upstream of FW Heater 33B	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 2	0.333	1	ES: LP TO 33 HEATERS
EX-04.13 LP EXT 32 to FWH 33B	Ext Steam: LP Extraction Header to FW Heater 33B (Line 1 of 2)	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 2	0.167	1	ES: LP TO 33 HEATERS
EX-04.14 LP EXT 32 to FWH 33B	Ext Steam: LP Extraction Header to FW Heater 33B (Line 2 of 2)	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 2	0.167	1	ES: LP TO 33 HEATERS
EX-04.15 LPEX14 to FWH33C HDR	Ext Steam: LP Extraction No. 14 from LP Turbine 31 to Header Upstream of FW Heater 33C	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 2	0.167	1	ES: LP TO 33 HEATERS
EX-04.16 LPEX13 to FWH33C HDR	Ext Steam: LP Extraction No. 13 from LP Turbine 31 to Header Upstream of FW Heater 33C	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 2	0.167	1	ES: LP TO 33 HEATERS

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
EX-04.18 LPEX FWH 33C IN HDR	Ext Steam: LP Extraction Header Upstream of FW Heater 33C	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 2	0.333	1	ES: LP TO 33 HEATERS
EX-04.2 LPEX13 to FWH33A HDR	Ext Steam: LP Extraction No. 13 from LP Turbine 33 to Header Upstream of FW Heater 33A	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 2	0.167	1	ES: LP TO 33 HEATERS
EX-04.21 LP EXT 31 to FWH 33C	Ext Steam: LP Extraction Header to FW Heater 33C (Line 1 of 2)	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 2	0.167	1	ES: LP TO 33 HEATERS
EX-04.22 LP EXT 31 to FWH 33C	Ext Steam: LP Extraction Header to FW Heater 33C (Line 2 of 2)	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 2	0.167	1	ES: LP TO 33 HEATERS
EX-04.4 LPEX FWH 33A IN HDR	Ext Steam: LP Extraction Header Upstream of FW Heater 33A	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 2	0.333	1	ES: LP TO 33 HEATERS
EX-04.6 LP EXT to FWH 33A	Ext Steam: LP Extraction Header to FW Heater 33A (Line 1 of 2)	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 2	0.167	1	ES: LP TO 33 HEATERS
EX-04.7 LP EXT to FWH 33A	Ext Steam: LP Extraction Header to FW Heater 33A (Line 2 of 2)	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 2	0.167	1	ES: LP TO 33 HEATERS

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
EX-04.8 LPEX14 to FWH33B HDR	Ext Steam: LP Extraction No. 14 from LP Turbine 32 to Header Upstream of FW Heater 33B	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 2	0.167	1	ES: LP TO 33 HEATERS
EX-04.9 LPEX13 to FWH33B HDR	Ext Steam: LP Extraction No. 13 from LP Turbine 32 to Header Upstream of FW Heater 33B	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 2	0.167	1	ES: LP TO 33 HEATERS
EX-05.1A LP EXT 16 to FWH 32A	Ext Steam: LP Extraction No. 16 from LP Turbine 33 to FW Heater 32A	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 3	0.167	1	ES: LP TO 32 HEATERS
EX-05.1B LP EXT 16 to FWH 32B	Ext Steam: LP Extraction No. 16 from LP Turbine 32 to FW Heater 32B	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 3	0.167	1	ES: LP TO 32 HEATERS
EX-05.1C LP EXT 16 to FWH 32C	Ext Steam: LP Extraction No. 16 from LP Turbine 31 to FW Heater 32C	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 3	0.167	1	ES: LP TO 32 HEATERS
EX-05.2A LP EXT 15 to FWH 32A	Ext Steam: LP Extraction No. 15 from LP Turbine 33 to FW Heater 32A	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 3	0.167	1	ES: LP TO 32 HEATERS
EX-05.2B LP EXT 15 to FWH 32B	Ext Steam: LP Extraction No. 15 from LP Turbine 32 to FW Heater 32B	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 3	0.167	1	ES: LP TO 32 HEATERS

CHECWORKS		Op.				Duty		WRA Run Name	
Line Name	Line Description	Flow Diagram No.	Source	Steam Cycle Loc.	Flow Factor	Duty Factor			
EX-05.2C LP EXT 15 to FWH 32C	Ext Steam: LP Extraction No. 15 from LP Turbine 31 to FW Heater 32C	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 3	0.167	1		ES: LP TO 32 HEATERS	
EX-06.1A LP EXT 19 to FWH 31A	Ext Steam: LP Extraction No. 19 from LP Turbine 33 to FW Heater 31A	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 4	0.083	1		ES: LP TO 31 HEATERS	
EX-06.1B LP EXT 19 to FWH 31B	Ext Steam: LP Extraction No. 19 from LP Turbine 32 to FW Heater 31B	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 4	0.083	1		ES: LP TO 31 HEATERS	
EX-06.1C LP EXT 19 to FWH 31C	Ext Steam: LP Extraction No. 19 from LP Turbine 31 to FW Heater 31C	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 4	0.083	1		ES: LP TO 31 HEATERS	
EX-06.2A LP EXT 17 to FWH 31A	Ext Steam: LP Extraction No. 17 from LP Turbine 33 to FW Heater 31A	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 4	0.083	1		ES: LP TO 31 HEATERS	
EX-06.2B LP EXT 17 to FWH 31B	Ext Steam: LP Extraction No. 17 from LP Turbine 32 to FW Heater 31B	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 4	0.083	1		ES: LP TO 31 HEATERS	
EX-06.2C LP EXT 17 to FWH 31C	Ext Steam: LP Extraction No. 17 from LP Turbine 31 to FW Heater 31C	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 4	0.083	1		ES: LP TO 31 HEATERS	
EX-06.3A LP EXT 20 to FWH 31A	Ext Steam: LP Extraction No. 20 from LP Turbine 33 to FW Heater 31A	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 4	0.083	1		ES: LP TO 31 HEATERS	

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
EX-06.3B LP EXT 20 to FWH 31B	Ext Steam: LP Extraction No. 20 from LP Turbine 32 to FW Heater 31B	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 4	0.083	1	ES: LP TO 31 HEATERS
EX-06.3C LP EXT 20 to FWH 31C	Ext Steam: LP Extraction No. 20 from LP Turbine 31 to FW Heater 31C	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 4	0.083	1	ES: LP TO 31 HEATERS
EX-06.4A LP EXT 18 to FWH 31A	Ext Steam: LP Extraction No. 18 from LP Turbine 33 to FW Heater 31A	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 4	0.083	1	ES: LP TO 31 HEATERS
EX-06.4B LP EXT 18 to FWH 31B	Ext Steam: LP Extraction No. 18 from LP Turbine 32 to FW Heater 31B	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 4	0.083	1	ES: LP TO 31 HEATERS
EX-06.4C LP EXT 18 to FWH 31C	Ext Steam: LP Extraction No. 18 from LP Turbine 31 to FW Heater 31C	EC-F-20203 Sh. 2	HBD	LP Extraction Steam Line 4	0.083	1	ES: LP TO 31 HEATERS
EX-07.1 BFPT 31 Drain to Cond	Ext Steam: BFPT #31 Drain to Condenser	9321-F-20173	HBD	Feed Pump Steam & Drain Line 1	0.5	1	ES: BFPT DRN TO COND
EX-07.2 BFPT 32 Drain to Cond	Ext Steam: BFPT #32 Drain to Condenser	9321-F-20173	HBD	Feed Pump Steam & Drain Line 1	0.5	1	ES: BFPT DRN TO COND
FW-01.1A BFP 31 to RCIRC T	Feed: Boiler Feed Pump 31 Discharge to Recirculation Takeoff	EC-F-20193	ARD	FWH Tube Side Line 1	1	1	FW: BFP TO 36 HTR

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
FW-01.1B BFP 32 to RCIRC T	Feed: Boiler Feed Pump 32 Discharge to Recirculation Takeoff	EC-F-20193	ARD	FWH Tube Side Line 1	1	1	FW: BFP TO 36 HTR
FW-01.2A BFP31 RCIRC T to HDR	Feed: Boiler Feed Pump 31 Discharge Between Recirculation Takeoff and Boiler Feed Pump Discharge Header	EC-F-20193	ARD	FWH Tube Side Line 1	1	1	FW: BFP TO 36 HTR
FW-01.2B BFP32 RCIRC T to HDR	Feed: Boiler Feed Pump 32 Discharge Between Recirculation Takeoff and Boiler Feed Pump Discharge Header	EC-F-20193	ARD	FWH Tube Side Line 1	1	1	FW: BFP TO 36 HTR
FW-01.3 BFP DISCHARGE HDR	Feed: Boiler Feed Pump Discharge Header Between Pumps Outlet Tee and FW Heater 36C Takeoff	EC-F-20193	ARD	FWH Tube Side Line 1	1	1	FW: BFP TO 36 HTR
FW-01.4 BFP DISCHARGE HDR	Feed: Boiler Feed Pump Discharge Header Between FW Heater 36C Takeoff and FW Heater 36B Takeoff	EC-F-20193	ARD	FWH Tube Side Line 1	1	1	FW: BFP TO 36 HTR

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
FW-01.6A BFP HDR to FWH 36A	Feed: Boiler Feed Pump Discharge Header to Feedwater Heater 36A	EC-F-20193	ARD	FWH Tube Side Line 1	1	1	FW: BFP TO 36 HTR
FW-01.6B BFP HDR to FWH 36B	Feed: Boiler Feed Pump Discharge Header to Feedwater Heater 36B	EC-F-20193	ARD	FWH Tube Side Line 1	1	1	FW: BFP TO 36 HTR
FW-01.6C BFP HDR to FWH 36C	Feed: Boiler Feed Pump Discharge Header to Feedwater Heater 36C	EC-F-20193	ARD	FWH Tube Side Line 1	1	1	FW: BFP TO 36 HTR
FW-02.1A FWH 36A to SG HDR	Feed: Feedwater Heater 36A to SG Inlet Header	EC-F-20193	HBD	FWH Tube Side Line 1	0.333	1	FW: 36 HTR TO SG HDR
FW-02.1B FWH 36B to SG HDR	Feed: Feedwater Heater 36B to SG Inlet Header	EC-F-20193	HBD	FWH Tube Side Line 1	0.333	1	FW: 36 HTR TO SG HDR
FW-02.1C FWH 36C to SG HDR	Feed: Feedwater Heater 36C to SG Inlet Header	EC-F-20193	HBD	FWH Tube Side Line 1	0.333	1	FW: 36 HTR TO SG HDR
FW-02.3 SG INLET HEADER	Feed: SG Inlet Header Between FW Heater 36B Connection and FW Heater 36C Connection	EC-F-20193	HBD	FWH Tube Side Line 1	0.667	1	FW: SG HEADERS

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
FW-02.4 SG INLET HEADER	Feed: SG Inlet Header Between FW Heater 36C Connection and SG 31 Takeoff	EC-F-20193	HBD	FWH Tube Side Line 1	1	1	FW: SG HEADERS
FW-02.5 SG INLET HEADER	Feed: SG Inlet Header Between SG 31 Takeoff and SG 32 Takeoff	EC-F-20193	HBD	FWH Tube Side Line 1	0.75	1	FW: SG HEADERS
FW-02.6 SG INLET HEADER	Feed: SG Inlet Header Between SG 32 Takeoff and SG 34 Takeoff	EC-F-20193	HBD	FWH Tube Side Line 1	0.5	1	FW: SG HEADERS
FW-02.8A SG HDR to SG 31	Feed: SG Inlet Header to SG 31	EC-F-20193	HBD	FWH Tube Side Line 1	0.25	1	FW: SG HEADERS
FW-02.8B SG HDR to SG 32	Feed: SG Inlet Header to SG 32	EC-F-20193	HBD	FWH Tube Side Line 1	0.25	1	FW: SG HEADERS
FW-02.8C SG HDR to SG 34	Feed: SG Inlet Header to SG 34	EC-F-20193	HBD	FWH Tube Side Line 1	0.25	1	FW: SG HEADERS
FW-02.8D SG HDR to SG 33	Feed: SG Inlet Header to SG 33	EC-F-20193	HBD	FWH Tube Side Line 1	0.25	1	FW: SG HEADERS
FW-04.1A BFP 31 RECIRC	Feed: Boiler Feed Pump 31 Recirculation From BFP 31 Discharge Line to Drain Collecting Tank 31	EC-F-20193	ARD	#N/A	1	0.02	FW: FW RECIRC
FW-04.1B BFP 32 RECIRC	Feed: Boiler Feed Pump 32 Recirculation From BFP 32 Discharge Line to Drain Collecting Tank 31	EC-F-20193	ARD	#N/A	1	0.02	FW: FW RECIRC

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
HD-01.1A FWH 36A to HD TK	Heater Dr: FW Heater 36A Drain to Heater Drain Tank	EC-F-20223 Sh. 1	ARD	FWH Shell Side Line 1	1	1	HD: HTR 36 TO HDT
HD-01.1B FWH 36B to HD TK	Heater Dr: FW Heater 36B Drain to Heater Drain Tank	EC-F-20223 Sh. 1	ARD	FWH Shell Side Line 1	1	1	HD: HTR 36 TO HDT
HD-01.1C FWH 36C to HD TK	Heater Dr: FW Heater 36C Drain to Heater Drain Tank	EC-F-20223 Sh. 1	ARD	FWH Shell Side Line 1	1	1	HD: HTR 36 TO HDT
HD-03.1A FWH 35A to HD TK	Heater Dr: FW Heater 35A Drain to Heater Drain Tank	EC-F-20223 Sh. 1	ARD	FWH Shell Side Line 2	1	1	HD: HTR 35 TO HDT
HD-03.1B FWH 35B to HD TK	Heater Dr: FW Heater 35B Drain to Heater Drain Tank	EC-F-20223 Sh. 1	ARD	FWH Shell Side Line 2	1	1	HD: HTR 35 TO HDT
HD-03.1C FWH 35C to HD TK	Heater Dr: FW Heater 35C Drain to Heater Drain Tank	EC-F-20223 Sh. 1	ARD	FWH Shell Side Line 2	1	1	HD: HTR 35 TO HDT
HD-04.1A FWH 34A to FWH 33A	Heater Dr: FW Heater 34A Drain to FW Heater 33A	EC-F-20223 Sh. 2	ARD	FWH Shell Side Line 3	1	1	HD: HTR 34 TO HTR 33
HD-04.1B FWH 34B to FWH 33B	Heater Dr: FW Heater 34B Drain to FW Heater 33B	EC-F-20223 Sh. 2	ARD	FWH Shell Side Line 3	1	1	HD: HTR 34 TO HTR 33
HD-04.1C FWH 34C to FWH 33C	Heater Dr: FW Heater 34C Drain to FW Heater 33C	EC-F-20223 Sh. 2	ARD	FWH Shell Side Line 3	1	1	HD: HTR 34 TO HTR 33

CHECWORKS		Line Description		Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
HD-06.1A FWH 33A to FWH 32A	Heater Dr: FW Heater 33A Drain to FW Heater 32A	EC-F-20223 Sh. 2	ARD	FWH Shell Side Line 4	1	1		HD: HTR 33 TO HTR 32	
HD-06.1B FWH 33B to FWH 32B	Heater Dr: FW Heater 33B Drain to FW Heater 32B	EC-F-20223 Sh. 2	ARD	FWH Shell Side Line 4	1	1		HD: HTR 33 TO HTR 32	
HD-06.1C FWH 33C to FWH 32C	Heater Dr: FW Heater 33C Drain to FW Heater 32C	EC-F-20223 Sh. 2	ARD	FWH Shell Side Line 4	1	1		HD: HTR 33 TO HTR 32	
HD-08.1A FWH 32A to FWH 31A	Heater Dr: FW Heater 32A Drain to Tee Upstream of FW Heater 31A	EC-F-20223 Sh. 2	ARD	FWH Shell Side Line 5	1	1		HD: HTR 32 TO HTR 31	
HD-08.1B FWH 32B to FWH 31B	Heater Dr: FW Heater 32B Drain to Tee Upstream of FW Heater 31B	EC-F-20223 Sh. 2	ARD	FWH Shell Side Line 5	1	1		HD: HTR 32 TO HTR 31	
HD-08.1C FWH 32C to FWH 31C	Heater Dr: FW Heater 32C Drain to Tee Upstream of FW Heater 31C	EC-F-20223 Sh. 2	ARD	FWH Shell Side Line 5	1	1		HD: HTR 32 TO HTR 31	
HD-09.3A FWH 32A to FWH 31A	Heater Dr: FW Heater 32A Drain from Tee Upstream of FW Heater 31A to FW Heater 31A (Line 1 of 2)	EC-F-20223 Sh. 2	ARD	FWH Shell Side Line 5	1	1		HD: HTR 32 TO HTR 31	
HD-09.3B FWH 32B to FWH 31B	Heater Dr: FW Heater 32B Drain from Tee Upstream of FW Heater 31B to FW Heater 31B (Line 1 of 2)	EC-F-20223 Sh. 2	ARD	FWH Shell Side Line 5	1	1		HD: HTR 32 TO HTR 31	

CHECWORKS Line Name		Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
HD-09.3C FWH 32C to FWH 31C	Heater Dr: FW Heater 32C Drain from Tee Upstream of FW Heater 31C to FW Heater 31C (Line 1 of 2)	EC-F-20223 Sh. 2	ARD	FWH Shell Side Line 5	1	1	HD: HTR 32 TO HTR 31	
HD-09.4A FWH 32A to FWH 31A	Heater Dr: FW Heater 32A Drain from Tee Upstream of FW Heater 31A to FW Heater 31A (Line 2 of 2)	EC-F-20223 Sh. 2	ARD	FWH Shell Side Line 5	1	1	HD: HTR 32 TO HTR 31	
HD-09.4B FWH 32B to FWH 31B	Heater Dr: FW Heater 32B Drain from Tee Upstream of FW Heater 31B to FW Heater 31B (Line 2 of 2)	EC-F-20223 Sh. 2	ARD	FWH Shell Side Line 5	1	1	HD: HTR 32 TO HTR 31	
HD-09.4C FWH 32C to FWH 31C	Heater Dr: FW Heater 32C Drain from Tee Upstream of FW Heater 31C to FW Heater 31C (Line 2 of 2)	EC-F-20223 Sh. 2	ARD	FWH Shell Side Line 5	1	1	HD: HTR 32 TO HTR 31	
HD-10.1A HD TK to HD PMP 31	Heater Dr: Heater Drain Tank to Heater Drain Pump 31	EC-F-20223 Sh. 1	HBD	Drain Tank Drain Line 1	0.5	1	HD: HTR DN TO PUMPS	
HD-10.1B HD TK to HD PMP 32	Heater Dr: Heater Drain Tank to Heater Drain Pump 32	EC-F-20223 Sh. 1	HBD	Drain Tank Drain Line 1	0.5	1	HD: HTR DN TO PUMPS	

CHECWORKS		Line Description		Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name		
HD-11.1A HD PMP 31 to HDR	Heater Dr: Heater Drain Pump 31 Discharge to Heater Drain Pump Discharge Header	EC-F-20223 Sh. 1	ARD	Drain Tank Drain Line 1	1	1	HD: HD PMP TO BFP HDR		
HD-11.1B HD PMP 32 to HDR	Heater Dr: Heater Drain Pump 32 Discharge to Heater Drain Pump Discharge Header	EC-F-20223 Sh. 1	ARD	Drain Tank Drain Line 1	1	1	HD: HD PMP TO BFP HDR		
HD-12.2A HD PMP HDR to CD SYS	Heater Dr: Heater Drain Pump Discharge Header to Connection with Condensate System at FW Heater 35 Outlet Header	EC-F-20223 Sh. 1	ARD	Drain Tank Drain Line 1	1	1	HD: HD PMP TO BFP HDR		
HD-13.1 FWH 31A to Cond 33	Heater Dr: Heater Drain from FWH 31A to Condenser 33 via LCV 1124	9321-F-20223 Sh. 2	NFA	FWH Shell Side Line 6	1	1	HD: HTR 31 TO COND		
HD-13.2 FWH 31B to Cond 32	Heater Dr: Heater Drain from FWH 31B to Condenser 32 via LCV 1125	9321-F-20223 Sh. 2	NFA	FWH Shell Side Line 6	1	1	HD: HTR 31 TO COND		
HD-13.3 FWH 31C to Cond 31	Heater Dr: Heater Drain from FWH 31C to Condenser 31 via LCV 1126	9321-F-20223 Sh. 2	NFA	FWH Shell Side Line 6	1	1	HD: HTR 31 TO COND		

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
MSD-01.11A_1 MSEP 33A to HDR	Moist Sep Dr: Moist Separator 33A Drain to Header (Line 1 of 3)	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 33 TO MSDT
MSD-01.11A_2 MSEP 33A to HDR	Moist Sep Dr: Moist Separator 33A Drain to Header (Line 2 of 3)	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 33 TO MSDT
MSD-01.11A_3 MSEP 33A to HDR	Moist Sep Dr: Moist Separator 33A Drain to Header (Line 3 of 3)	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 33 TO MSDT
MSD-01.11B_1 MSEP 33B to HDR	Moist Sep Dr: Moist Separator 33B Drain to Header (Line 1 of 3)	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 33 TO MSDT
MSD-01.11B_2 MSEP 33B to HDR	Moist Sep Dr: Moist Separator 33B Drain to Header (Line 2 of 3)	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 33 TO MSDT
MSD-01.11B_3 MSEP 33B to HDR	Moist Sep Dr: Moist Separator 33B Drain to Header (Line 3 of 3)	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 33 TO MSDT

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
MSD-01.12A MSEP 33A DR HDR	Moist Sep Dr: Moist Separator 33A Drain Header Upstream of Takeoff to Moist Separator Drain Tank	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 33 TO MSDT
MSD-01.12B MSEP 33B DR HDR	Moist Sep Dr: Moist Separator 33B Drain Header Upstream of Takeoff to Moist Separator Drain Tank	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 33 TO MSDT
MSD-01.13A HDR to MSEP TK 33A	Moist Sep Dr: Moist Separator 33A Drain Header to Moist Separator Drain Tank 33A	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 33 TO MSDT
MSD-01.13B HDR to MSEP TK 33B	Moist Sep Dr: Moist Separator 33B Drain Header to Moist Separator Drain Tank 33B	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 33 TO MSDT
MSD-01.14A TK 33A to HD TK	Moist Sep Dr: Moist Separator Drain Tank 33A to Heater Drain Tank	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MSDT 33 TO HDT
MSD-01.14B TK 33B to HD TK	Moist Sep Dr: Moist Separator Drain Tank 33B to Heater Drain Tank	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MSDT 33 TO HDT

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
MSD-01.1A_1 MSEP 31A to HDR	Moist Sep Dr: Moist Separator 31A Drain to Header (Line 1 of 3)	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 31 TO MSDT
MSD-01.1A_2 MSEP 31A to HDR	Moist Sep Dr: Moist Separator 31A Drain to Header (Line 2 of 3)	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 31 TO MSDT
MSD-01.1A_3 MSEP 31A to HDR	Moist Sep Dr: Moist Separator 31A Drain to Header (Line 3 of 3)	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 31 TO MSDT
MSD-01.1B_1 MSEP 31B to HDR	Moist Sep Dr: Moist Separator 31B Drain to Header (Line 1 of 3)	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 31 TO MSDT
MSD-01.1B_2 MSEP 31B to HDR	Moist Sep Dr: Moist Separator 31B Drain to Header (Line 2 of 3)	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 31 TO MSDT
MSD-01.1B_3 MSEP 31B to HDR	Moist Sep Dr: Moist Separator 31B Drain to Header (Line 3 of 3)	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 31 TO MSDT

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
MSD-01.2A MSEP 31A DR HDR	Moist Sep Dr: Moist Separator 31A Drain Header Upstream of Takeoff to Moist Separator Drain Tank	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 31 TO MSDT
MSD-01.2B MSEP 31B DR HDR	Moist Sep Dr: Moist Separator 31B Drain Header Upstream of Takeoff to Moist Separator Drain Tank	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 31 TO MSDT
MSD-01.3A HDR to MSEP TK 31A	Moist Sep Dr: Moist Separator 31A Drain Header to Moist Separator Drain Tank 31A	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 31 TO MSDT
MSD-01.3B HDR to MSEP TK 31B	Moist Sep Dr: Moist Separator 31B Drain Header to Moist Separator Drain Tank 31B	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 31 TO MSDT
MSD-01.4A TK 31A to HD TK	Moist Sep Dr: Moist Separator Drain Tank 31A to Heater Drain Tank	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MSDT 31 TO HDT
MSD-01.4B TK 31B to HD TK	Moist Sep Dr: Moist Separator Drain Tank 31B to Heater Drain Tank	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MSDT 31 TO HDT

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
MSD-01.6A_1 MSEP 32A to HDR	Moist Sep Dr: Moist Separator 32A Drain to Header (Line 1 of 3)	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 32 TO MSDT
MSD-01.6A_2 MSEP 32A to HDR	Moist Sep Dr: Moist Separator 32A Drain to Header (Line 2 of 3)	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 32 TO MSDT
MSD-01.6A_3 MSEP 32A to HDR	Moist Sep Dr: Moist Separator 32A Drain to Header (Line 3 of 3)	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 32 TO MSDT
MSD-01.6B_1 MSEP 32B to HDR	Moist Sep Dr: Moist Separator 32B Drain to Header (Line 1 of 3)	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 32 TO MSDT
MSD-01.6B_2 MSEP 32B to HDR	Moist Sep Dr: Moist Separator 32B Drain to Header (Line 2 of 3)	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 32 TO MSDT
MSD-01.6B_3 MSEP 32B to HDR	Moist Sep Dr: Moist Separator 32B Drain to Header (Line 3 of 3)	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 32 TO MSDT

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
MSD-01.7A MSEP 32A DR HDR	Moist Sep Dr: Moist Separator 32A Drain Header Upstream of Takeoff to Moist Separator Drain Tank	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 32 TO MSDT
MSD-01.7B MSEP 32B DR HDR	Moist Sep Dr: Moist Separator 32B Drain Header Upstream of Takeoff to Moist Separator Drain Tank	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 32 TO MSDT
MSD-01.8A HDR to MSEP TK 32A	Moist Sep Dr: Moist Separator 32A Drain Header to Moist Separator Drain Tank 32A	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 32 TO MSDT
MSD-01.8B HDR to MSEP TK 32B	Moist Sep Dr: Moist Separator 32B Drain Header to Moist Separator Drain Tank 32B	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MS 32 TO MSDT
MSD-01.9A TK 32A to HD TK	Moist Sep Dr: Moist Separator Drain Tank 32A to Heater Drain Tank	EC-F-20233 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1	MSD: MSDT 32 TO HDT
MSD-01.9B TK 32B to HD TK	Moist Sep Dr: Moist Separator Drain Tank 32B to Heater Drain Tank	EC-F-20233 Sh. 2	ARD	Moisture Separator Drain Line 1	1	1	MSD: MSDT 32 TO HDT

CHECWORKS		Op.			Duty		WRA Run Name	
Line Name	Line Description	Flow Diagram No.	Source	Steam Cycle Loc.	Flow Factor	Duty Factor		
PD-01.1 PRESEP 1B DR to HDR	Presep Dr: Moisture Preseparator 1B Drain to Header	EC-F-20223 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1		PD: PRESEPRTR DRAINS
PD-01.3 PRESEP 1A DR to HDR	Presep Dr: Moisture Preseparator 1A Drain to Header	EC-F-20223 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1		PD: PRESEPRTR DRAINS
PD-01.5 PRESEP 2B DR to HDR	Presep Dr: Moisture Preseparator 2B Drain to Header	EC-F-20223 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1		PD: PRESEPRTR DRAINS
PD-01.7 PRESEP 2A DR to HDR	Presep Dr: Moisture Preseparator 2A Drain to Header	EC-F-20223 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1		PD: PRESEPRTR DRAINS
PD-02.2 PRESEP HDR to HD TK	Presep Dr: Moisture Preseparators Drain Header Between 1A Connection and 2B Connection	EC-F-20223 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1		PD: PRESEPRTR DRAINS
PD-02.3 PRESEP HDR to HD TK	Presep Dr: Moisture Preseparators Drain Header Between 2B Connection and 2A Connection	EC-F-20223 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1		PD: PRESEPRTR DRAINS
PD-02.4 PRESEP HDR to HD TK	Presep Dr: Moisture Preseparators Drain Header to Heater Drain Tank	EC-F-20223 Sh. 1	ARD	Moisture Separator Drain Line 1	1	1		PD: PRESEPRTR DRAINS

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
RHD-01.10A_1 RH 33A to TK 33A	Reheater Dr: Reheater 33A Drain to Reheater Drain Tank 33A	EC-F-20233 Sh. 1	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RH 33 TO HDR
RHD-01.10A_2 TK 33A to A HDR	Reheater Dr: Reheater Drain Tank 33A to Reheater Drain Tank "A-Train" Header	EC-F-20233 Sh. 1	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RH 33 TO HDR
RHD-01.10B_1 RH 33B to TK 33B	Reheater Dr: Reheater 33B Drain to Reheater Drain Tank 33B	EC-F-20233 Sh. 2	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RH 33 TO HDR
RHD-01.10B_2 TK 33B to B HDR	Reheater Dr: Reheater Drain Tank 33B to Reheater Drain Tank "B-Train" Header	EC-F-20233 Sh. 2	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RH 33 TO HDR
RHD-01.1A_1 RH 31A to TK 31A	Reheater Dr: Reheater 31A Drain to Reheater Drain Tank 31A	EC-F-20233 Sh. 1	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RH 31 TO HDR
RHD-01.1A_2 TK 31A to A HDR	Reheater Dr: Reheater Drain Tank 31A to Reheater Drain Tank "A-Train" Header	EC-F-20233 Sh. 1	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RH 31 TO HDR
RHD-01.1B_1 RH 31B to TK 31B	Reheater Dr: Reheater 31B Drain to Reheater Drain Tank 31B	EC-F-20233 Sh. 2	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RH 31 TO HDR

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
RHD-01.1B_2 TK 31B to B HDR	Reheater Dr: Reheater Drain Tank 31B to Reheater Drain Tank "B-Train" Header	EC-F-20233 Sh. 2	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RH 31 TO HDR
RHD-01.3A_1 RH 32A to TK 32A	Reheater Dr: Reheater 32A Drain to Reheater Drain Tank 32A	EC-F-20233 Sh. 1	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RH 32A TO HDR
RHD-01.3A_2 TK 32A to A HDR	Reheater Dr: Reheater Drain Tank 32A to Reheater Drain Tank "A-Train" Header	EC-F-20233 Sh. 1	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RH 32A TO HDR
RHD-01.3B_1 RH 32B to TK 32B	Reheater Dr: Reheater 32B Drain to Reheater Drain Tank 32B	EC-F-20233 Sh. 2	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RH 32B TO HDR
RHD-01.3B_2 TK 32B to B HDR	Reheater Dr: Reheater Drain Tank 32B to Reheater Drain Tank "B-Train" Header	EC-F-20233 Sh. 2	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RH 32B TO HDR
RHD-02.10A TK A HDR to FWH 36	Reheater Dr: Reheater Drain Tanks Outlet "A- Train" Header Between FW Heater 36C Takeoff and FW Heater 36B Takeoff	EC-F-20233 Sh. 2	HBD	Reheater Steam & Drain Line 1	0.333	1	RHD: RHD HDR TO HTRS

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
RHD-02.10B B HDR to FWH 36A	Reheater Dr: Reheater Drain Tank "B-Train" Header to FW Heater 36A	EC-F-20233 Sh. 2	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RHD HDR TO HTRS
RHD-02.11A A HDR to FWH 36A	Reheater Dr: Reheater Drain Tank "A-Train" Header to FW Heater 36A	EC-F-20233 Sh. 2	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RHD HDR TO HTRS
RHD-02.12B B HDR to FWH 36B	Reheater Dr: Reheater Drain Tank "B-Train" Header to FW Heater 36B	EC-F-20233 Sh. 2	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RHD HDR TO HTRS
RHD-02.13A A HDR to FWH 36B	Reheater Dr: Reheater Drain Tank "A-Train" Header to FW Heater 36B	EC-F-20233 Sh. 2	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RHD HDR TO HTRS
RHD-02.14B B HDR to FWH 36C	Reheater Dr: Reheater Drain Tank "B-Train" Header to FW Heater 36C	EC-F-20233 Sh. 2	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RHD HDR TO HTRS
RHD-02.15A A HDR to FWH 36C	Reheater Dr: Reheater Drain Tank "A-Train" Header to FW Heater 36C	EC-F-20233 Sh. 2	HBD	Reheater Steam & Drain Line 1	0.167	1	RHD: RHD HDR TO HTRS

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
RHD-02.7B TK B HDR to FWH 36	Reheater Dr: Reheater Drain Tanks Outlet "B- Train" Header Between Tank 33B Connection and Tank 32B Connection	EC-F-20233 Sh. 2	HBD	Reheater Steam & Drain Line 1	0.333	1	RHD: RHD HDR TO HTRS
RHD-02.8A TK A HDR to FWH 36	Reheater Dr: Reheater Drain Tanks Outlet "A- Train" Header Between Tank 33A Connection and Tank 31A Connection	EC-F-20233 Sh. 1	HBD	Reheater Steam & Drain Line 1	0.333	1	RHD: RHD HDR TO HTRS
RHD-02.8B TK B HDR to FWH 36	Reheater Dr: Reheater Drain Tanks Outlet "B- Train" Header Between Tank 32B Connection and FW Heater 36C Takeoff	EC-F-20233 Sh. 2	HBD	Reheater Steam & Drain Line 1	0.5	1	RHD: RHD HDR TO HTRS
RHD-02.9A TK A HDR to FWH 36	Reheater Dr: Reheater Drain Tanks Outlet "A- Train" Header Between Tank 31A Connection and FW Heater 36C Takeoff	EC-F-20233 Sh. 1	HBD	Reheater Steam & Drain Line 1	0.5	1	RHD: RHD HDR TO HTRS

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op. Cond. Source	Steam Cycle Loc.	Flow Factor	Duty Factor	WRA Run Name
RHD-02.9B TK B HDR to FWH 36	Reheater Dr: Reheater Drain Tanks Outlet "B-Train" Header Between FW Heater 36C Takeoff and FW Heater 36B Takeoff	EC-F-20233 Sh. 2	HBD	Reheater Steam & Drain Line 1	0.333	1	RHD: RHD HDR TO HTRS
xEX-03.1A LP EXT 12 to FWH 34A	Ext Steam: LP Extraction No. 12 from LP Turbine 33 to FW Heater 34A	EC-F-20203 Sh. 2	N/A	LP Extraction Steam Line 1	N/A	N/A	N/A
xEX-03.1B LP EXT 12 to FWH 34B	Ext Steam: LP Extraction No. 12 from LP Turbine 32 to FW Heater 34B	EC-F-20203 Sh. 2	N/A	LP Extraction Steam Line 1	N/A	N/A	N/A
xEX-03.1C LP EXT 12 to FWH 34C	Ext Steam: LP Extraction No. 12 from LP Turbine 31 to FW Heater 34C	EC-F-20203 Sh. 2	N/A	LP Extraction Steam Line 1	N/A	N/A	N/A

Appendix E
Component Summary Report

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Company : Entergy Nuclear Operations, Inc.
Plant : Indian Point
Unit : 3
DB Name: IPEC 3 (v4)

Report Date : 21-Jul-2011
Report Time : 14:36:34

CHECWORKS SFA Version: 3.0 SP-2 (build 200)

Component Summary Report
(By Flow Order)

SELECTION CRITERIA:

Line Name: *
Drawing Name: *
Comp. Service Status: *

Table with columns: Component Name, Geom Code, OD Sch, Pipe Size, Torit, Br/Small End OD, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr, Cu, Material, Design Mo. Press., Design Temp, Op. Press., Op. Temp, Op. Enth., Op. Qual, U/S Mn., Flow Rate, Br.

Line Name : CD-01.1A FWH 31A to FWH 32A

Table with 20 columns: Component Name, Geom Code, OD Sch, Pipe Size, Torit, Br/Small End OD, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr, Cu, Material, Design Mo. Press., Design Temp, Op. Press., Op. Temp, Op. Enth., Op. Qual, U/S Mn., Flow Rate, Br.

Line Name : CD-01.1B FWH 31B to FWH 32B

Table with 20 columns: Component Name, Geom Code, OD Sch, Pipe Size, Torit, Br/Small End OD, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr, Cu, Material, Design Mo. Press., Design Temp, Op. Press., Op. Temp, Op. Enth., Op. Qual, U/S Mn., Flow Rate, Br.

Line Name : CD-01.1C FWH 31C to FWH 32C

Table with 20 columns: Component Name, Geom Code, OD Sch, Pipe Size, Torit, Br/Small End OD, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr, Cu, Material, Design Mo. Press., Design Temp, Op. Press., Op. Temp, Op. Enth., Op. Qual, U/S Mn., Flow Rate, Br.

Table with columns: Component Name, Geom Code, OD Sch, Pipe Size (Tnom, Tinit, Torit), Br/Small End OD, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Material (Cr, Cu, Mo), Design Temp/Press, Op. Temp/Press, Op. Enth., Op. Qual., U/S Mh., Flow Rate (D/S Mh., Mlbm/hr), Br.

Line Name : CD-02.11 SGBD HX3 to FWH HDR

Table continuation of line data, including entries for CD-02.11-01N to CD-02.12-11P.

Line Name : CD-02.1A FWH 32A to HDR

Table continuation of line data, including entries for CD-02.1A-01N to CD-02.1A-14P.

Line Name : CD-02.2 FWH 32 OUT HDR

Table continuation of line data, including entry for CD-02.1B-11T.

Line Name : CD-02.1B FWH 32B to HDR

Table continuation of line data, including entries for CD-02.1B-01N to CD-02.1B-04P.

Table with columns: Component Name, Geom Code, OD Sch., Pipe Size, Torit, Br/Small, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr., Cu., Mo., Design Press., Design Temp., Op. Press., Op. Temp., Op. Enth., Op. Qual., U/S Mn., Flow Rate, Br.

Line Name : CD-02.1C FWH 32C to HDR

Table with columns: Component Name, Geom Code, OD Sch., Pipe Size, Torit, Br/Small, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr., Cu., Mo., Design Press., Design Temp., Op. Press., Op. Temp., Op. Enth., Op. Qual., U/S Mn., Flow Rate, Br.

Line Name : CD-02.2 FWH 32 OUT HDR

Table with columns: Component Name, Geom Code, OD Sch., Pipe Size, Torit, Br/Small, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr., Cu., Mo., Design Press., Design Temp., Op. Press., Op. Temp., Op. Enth., Op. Qual., U/S Mn., Flow Rate, Br.

Line Name : CD-02.3 FWH 32 OUT HDR

Table with columns: Component Name, Geom Code, OD Sch., Pipe Size, Torit, Br/Small, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr., Cu., Mo., Design Press., Design Temp., Op. Press., Op. Temp., Op. Enth., Op. Qual., U/S Mn., Flow Rate, Br.

Line Name : CD-02.4 FWH 32 OUT HDR

Table with columns: Component Name, Geom Code, OD Sch., Pipe Size, Torit, Br/Small, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr., Cu., Mo., Design Press., Design Temp., Op. Press., Op. Temp., Op. Enth., Op. Qual., U/S Mn., Flow Rate, Br.

Line Name : CD-02.5 FWH 32 OUT HDR

Table with columns: Component Name, Geom Code, OD Sch., Pipe Size, Torit, Br/Small, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr., Cu., Mo., Design Press., Design Temp., Op. Press., Op. Temp., Op. Enth., Op. Qual., U/S Mn., Flow Rate, Br.

Table with columns: Component Name, Geom Code, OD Sch. (in), Pipe Size (Tnom, Tinit, Torit, End OD (in), Br/Small Tnom), R/D Ratio, Orient Angle (Deg.), Pipe Length (in), Spec/Type/Class, Cr. (%), Cu. (%), Mo. (%), Design Press. (psig), Op. Temp. (Deg. F), Op. Enth. (Btu/lbm), Op. Qual., U/S Mn. (Mlbm/hr), Flow Rate (D/S Mn.), Br.

Line Name : EX-01.5B HP EX HDR to FWH 36B

Table with columns: Geom Code, OD Sch. (in), Pipe Size (Tnom, Tinit, Torit, End OD (in), Br/Small Tnom), R/D Ratio, Orient Angle (Deg.), Pipe Length (in), Spec/Type/Class, Cr. (%), Cu. (%), Mo. (%), Design Press. (psig), Op. Temp. (Deg. F), Op. Enth. (Btu/lbm), Op. Qual., U/S Mn. (Mlbm/hr), Flow Rate (D/S Mn.), Br.

Line Name : EX-01.5C HP EX HDR to FWH 36C

Table with columns: Geom Code, OD Sch. (in), Pipe Size (Tnom, Tinit, Torit, End OD (in), Br/Small Tnom), R/D Ratio, Orient Angle (Deg.), Pipe Length (in), Spec/Type/Class, Cr. (%), Cu. (%), Mo. (%), Design Press. (psig), Op. Temp. (Deg. F), Op. Enth. (Btu/lbm), Op. Qual., U/S Mn. (Mlbm/hr), Flow Rate (D/S Mn.), Br.

Line Name : EX-02.1 PSEP 2A 10" to 35 HDR

Table with columns: Geom Code, OD Sch. (in), Pipe Size (Tnom, Tinit, Torit, End OD (in), Br/Small Tnom), R/D Ratio, Orient Angle (Deg.), Pipe Length (in), Spec/Type/Class, Cr. (%), Cu. (%), Mo. (%), Design Press. (psig), Op. Temp. (Deg. F), Op. Enth. (Btu/lbm), Op. Qual., U/S Mn. (Mlbm/hr), Flow Rate (D/S Mn.), Br.

Table with columns: Component Name, Geom Code, OD Sch. (in), Pipe Size (Tnom, Tinit, Torit), Br/Small End OD (in), R/D Ratio, Orient Angle (Deg.), Pipe Length (in), Spec/Type/Class, Cr. (%) Cu. (%) Mo. (%), Design Temp. (Deg. F), Op. Press. (psig), Op. Temp. (Deg. F), Op. Enth. (Btu/lbm), Op. Qual., U/S Mn. (Mlbm/hr), Flow Rate (D/S Mn.), Br.

Line Name : FW-01.1A BFP 31 to RCIRC T

Table with columns: Component Name, Geom Code, OD Sch. (in), Pipe Size (Tnom, Tinit, Torit), Br/Small End OD (in), R/D Ratio, Orient Angle (Deg.), Pipe Length (in), Spec/Type/Class, Cr. (%) Cu. (%) Mo. (%), Design Temp. (Deg. F), Op. Press. (psig), Op. Temp. (Deg. F), Op. Enth. (Btu/lbm), Op. Qual., U/S Mn. (Mlbm/hr), Flow Rate (D/S Mn.), Br.

Line Name : FW-01.1B BFP 32 to RCIRC T

Table with columns: Component Name, Geom Code, OD Sch. (in), Pipe Size (Tnom, Tinit, Torit), Br/Small End OD (in), R/D Ratio, Orient Angle (Deg.), Pipe Length (in), Spec/Type/Class, Cr. (%) Cu. (%) Mo. (%), Design Temp. (Deg. F), Op. Press. (psig), Op. Temp. (Deg. F), Op. Enth. (Btu/lbm), Op. Qual., U/S Mn. (Mlbm/hr), Flow Rate (D/S Mn.), Br.

Line Name : FW-01.2A BFP31 RCIRC T to HDR

Table with columns: Component Name, Geom Code, OD Sch. (in), Pipe Size (Tnom, Tinit, Torit), Br/Small End OD (in), R/D Ratio, Orient Angle (Deg.), Pipe Length (in), Spec/Type/Class, Cr. (%) Cu. (%) Mo. (%), Design Temp. (Deg. F), Op. Press. (psig), Op. Temp. (Deg. F), Op. Enth. (Btu/lbm), Op. Qual., U/S Mn. (Mlbm/hr), Flow Rate (D/S Mn.), Br.

Line Name : FW-01.2B BFP32 RCIRC T to HDR

Table with columns: Component Name, Geom Code, OD Sch. (in), Pipe Size (Tnom, Tinit, Torit), Br/Small End OD (in), R/D Ratio, Orient Angle (Deg.), Pipe Length (in), Spec/Type/Class, Cr. (%) Cu. (%) Mo. (%), Design Temp. (Deg. F), Op. Press. (psig), Op. Temp. (Deg. F), Op. Enth. (Btu/lbm), Op. Qual., U/S Mn. (Mlbm/hr), Flow Rate (D/S Mn.), Br.

Table with columns: Component Name, Geom Code, OD Sch. (in), Pipe Size (in), Torit (in), Br/Small End OD (in), R/D Ratio, Orient Angle (Deg.), Pipe Length (in), Spec/Type/Class, Cr. (%), Cu. (%), Mo. (%), Design Temp. (Deg. F), Op. Press. (psig), Op. Enth. (Btu/lbm), Op. Qual., U/S Min. (Mlbm/hr), Flow Rate (D/S Min.), Br.

Line Name : HD-04.1B FWH 34B to FWH 33B

Table with columns: Component Name, Geom Code, OD Sch. (in), Pipe Size (in), Torit (in), Br/Small End OD (in), R/D Ratio, Orient Angle (Deg.), Pipe Length (in), Spec/Type/Class, Cr. (%), Cu. (%), Mo. (%), Design Temp. (Deg. F), Op. Press. (psig), Op. Enth. (Btu/lbm), Op. Qual., U/S Min. (Mlbm/hr), Flow Rate (D/S Min.), Br.

Line Name : HD-04.1C FWH 34C to FWH 33C

Table with columns: Component Name, Geom Code, OD Sch. (in), Pipe Size (in), Torit (in), Br/Small End OD (in), R/D Ratio, Orient Angle (Deg.), Pipe Length (in), Spec/Type/Class, Cr. (%), Cu. (%), Mo. (%), Design Temp. (Deg. F), Op. Press. (psig), Op. Enth. (Btu/lbm), Op. Qual., U/S Min. (Mlbm/hr), Flow Rate (D/S Min.), Br.

Table with columns: Component Name, Geom Code, OD, Sch., Pipe Size (Tnom, Tinit, Torit), Br/Small (End OD, Tnom), R/D Ratio, Orient Angle (Deg.), Pipe Length (in), Spec/Type/Class, Cr. (%), Cu. (%), Material (%), Design Press. (psig), Design Temp. (Deg. F), Op. Press. (psig), Op. Temp. (Deg. F), Op. Enth. (Btu/lbm), Op. Qual., U/S Mn. (Mlbm/ft), Flow Rate (D/S Mn.), Br.

Line Name : HD-06.1C FWH 33C to FWH 32C

Line Name : HD-08.1A FWH 32A to FWH 31A

Component Name	Geom Code	OD (in)	Sch.	Pipe Size			Br/Small		R / D Ratio	Orient Angle (Deg.)	Pipe Length (in)	Spec/Type/Class	Cr. (%)	Cu. (%)	Material (%)	Design Temp. (Deg. F)	Op. Press. (psig)	Op. Temp. (Deg. F)	Op. Enth. (Btu/lbm)	Op. Qual.	U/S Mn. (Mlbm/hr)	Flow Rate D/S Mn. (Mlbm/hr)	Br.	
				Tnom	Tinit	Torit	End OD	Tnom																
Line Name :	MSD-01.12A-01T	12	12.750	0	0.250	0.250	0.000	12.750	0.250	90	0.00	A234/WPBWPE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00700	0.00350
Line Name :	MSD-01.11A_2 MSEP 33A to HDR	31	12.750	0	0.250	0.250	0.000	0.000	0.000	90	0.00	A106/BE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000
	MSD-01.11A-08P	61	12.750	0	0.250	0.250	0.000	0.000	0.000	180	88.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000
Line Name :	MSD-01.11A_3 MSEP 33A to HDR	31	12.750	0	0.250	0.250	0.000	0.000	0.000	90	0.00	A106/BE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000
	MSD-01.11A-07P	60	12.750	0	0.250	0.250	0.000	0.000	0.000	95	44.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000
Line Name :	MSD-01.11B_1 MSEP 33B to HDR	31	12.750	0	0.250	0.250	0.000	0.000	0.000	90	0.00	A106/BE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000
	MSD-01.11B-03P	60	12.750	0	0.250	0.250	0.000	0.000	0.000	95	88.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000
Line Name :	MSD-01.12B MSEP 33B DR HDR	12	12.750	0	0.250	0.250	0.000	12.750	0.250	90	0.00	A234/WPBWPE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00700	0.00350
Line Name :	MSD-01.11B_2 MSEP 33B to HDR	31	12.750	0	0.250	0.250	0.000	0.000	0.000	90	0.00	A106/BE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000
	MSD-01.11B-08P	61	12.750	0	0.250	0.250	0.000	0.000	0.000	180	88.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000
Line Name :	MSD-01.11B_3 MSEP 33B to HDR	31	12.750	0	0.250	0.250	0.000	0.000	0.000	90	0.00	A106/BE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000
	MSD-01.11B-07P	60	12.750	0	0.250	0.250	0.000	0.000	0.000	95	44.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000
Line Name :	MSD-01.12A MSEP 33A DR HDR	62	12.750	0	0.250	0.250	0.000	0.000	0.000	90	24.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00700	0.00000	0.00000
Line Name :	MSD-01.13A HDR to MSEP TK 33A	11	12.750	0	0.250	0.250	0.000	12.750	0.250	90	0.00	A234/WPBWPE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00700	0.01050
Line Name :	MSD-01.12B MSEP 33B DR HDR	62	12.750	0	0.250	0.250	0.000	0.000	0.000	90	24.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00700	0.00000	0.00000
Line Name :	MSD-01.13B HDR to MSEP TK 33B	11	12.750	0	0.250	0.250	0.000	12.750	0.250	90	0.00	A234/WPBWPE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00700	0.00350	0.01050
Line Name :	MSD-01.13A HDR to MSEP TK 33A	61	12.750	0	0.250	0.250	0.000	0.000	0.000	95	32.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.01050	0.00000	0.00000
	MSD-01.13A-02P	2	12.750	0	0.250	0.250	0.000	0.000	0.000	90	0.00	A234/WPBWPE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.01050	0.00000	0.00000
	MSD-01.13A-04V	25	12.750	0	0.250	0.250	0.000	0.000	0.000	90	0.00	A216/WCBWCB/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.01050	0.00000	0.00000
	MSD-01.13A-08P	58	12.750	0	0.250	0.250	0.000	0.000	0.000	90	17.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.01050	0.00000	0.00000

Component Name	Geom Code	OD (in)	Sch. (in)	Pipe Size Tnom (in)	Tinit (in)	Torit (in)	Br/Small End OD (in)	R / D Ratio	Orient Angle (Deg.)	Pipe Length (in)	Spec/Type/Class	Cr. (%)	Material Cu. (%)	Mo. (%)	Design Press. (psig)	Design Temp. (Deg. F)	Op. Press. (psig)	Op. Temp. (Deg. F)	Op. Enth. (Btu/lbm)	Op. Qual.	U/S Mn. (Mlbm/hr)	Flow Rate D/S Mn. (Mlbm/hr)	Br.	
Line Name :	MSD-01.7A MSEP 32A DR HDR																							
MSD-01.7A-01T	12	12.750	0	0.250	0.250	0.000	12.750	0.250	90	0.00	A234/WPBWPE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00700	0.00350	
Line Name :	MSD-01.6A_2 MSEP 32A to HDR																							
MSD-01.6A-04N	31	12.750	1	1.125	1.125	0.000	0.000	0.000	90	0.00	A106/BE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000	
MSD-01.6A-08P	61	12.750	0	0.250	0.250	0.000	0.000	0.000	180	88.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000	
Line Name :	MSD-01.6A_3 MSEP 32A to HDR																							
MSD-01.6A-05N	31	12.750	0	0.250	0.250	0.000	0.000	0.000	90	0.00	A106/BE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000	
MSD-01.6A-07P	60	12.750	0	0.250	0.250	0.000	0.000	0.000	95	39.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000	
Line Name :	MSD-01.6B_1 MSEP 32B to HDR																							
MSD-01.6B-01N	31	12.750	0	0.250	0.250	0.000	0.000	0.000	90	0.00	A106/BE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000	
MSD-01.6B-03P	60	12.750	20	0.250	0.312	0.000	0.000	0.000	95	88.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000	
Line Name :	MSD-01.7B MSEP 32B DR HDR																							
MSD-01.7B-01T	12	12.750	0	0.250	0.250	0.000	12.750	0.250	90	0.00	A234/WPBWPE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00700	0.00350	
Line Name :	MSD-01.6B_2 MSEP 32B to HDR																							
MSD-01.6B-04N	31	12.750	1	1.125	1.125	0.000	0.000	0.000	90	0.00	A106/BE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000	
MSD-01.6B-08P	61	12.750	20	0.250	0.312	0.000	0.000	0.000	180	88.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000	
Line Name :	MSD-01.6B_3 MSEP 32B to HDR																							
MSD-01.6B-05N	31	12.750	0	0.250	0.250	0.000	0.000	0.000	90	0.00	A106/BE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000	
MSD-01.6B-07P	60	12.750	20	0.250	0.284	0.000	0.000	0.000	95	39.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00350	0.00000	0.00000	
Line Name :	MSD-01.7A MSEP 32A DR HDR																							
MSD-01.7A-02P	62	12.750	0	0.250	0.250	0.000	0.000	0.000	90	29.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00700	0.00000	0.00000	
Line Name :	MSD-01.8A HDR to MSEP TK 32A																							
MSD-01.8A-01T	11	12.750	0	0.250	0.250	0.000	12.750	0.250	90	0.00	A234/WPBWPE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00700	0.00350	0.01050	
Line Name :	MSD-01.7B MSEP 32B DR HDR																							
MSD-01.7B-02P	62	12.750	20	0.250	0.304	0.000	0.000	0.000	90	29.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00700	0.00000	0.00000	
Line Name :	MSD-01.8B HDR to MSEP TK 32B																							
MSD-01.8B-01T	11	12.750	0	0.250	0.250	0.000	12.750	0.250	90	0.00	A234/WPBWPE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.00700	0.00350	0.01050	
Line Name :	MSD-01.8A HDR to MSEP TK 32A																							
MSD-01.8A-02P	61	12.750	0	0.250	0.250	0.000	0.000	0.000	95	32.00	A53/BS/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.01050	0.00000	0.00000	
MSD-01.8A-03E	2	12.750	0	0.250	0.250	0.000	0.000	1.00	90	0.00	A234/WPBWPE/	0.00	0.00	0.00	250	400	191	0	358.200	0.000	0.01050	0.00000	0.00000	

Table with columns: Component Name, Geom Code, OD Sch., Pipe Size, Torit, Br/Small End OD, Br/Small Trnom, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr., Cu., Mo., Design Temp., Op. Temp., Design Press., Op. Press., Op. Enth., Op. Qual., U/S Mn., Flow Rate, Br.

Line Name : RHD-01.3A_1 RH 32A to TK 32A

Table rows for line RHD-01.3A_1, including component names like RHD01.3A-01N, RHD01.3A-02P, and RHD01.3A-03N.

Line Name : RHD-01.3A_2 TK 32A to A HDR

Table rows for line RHD-01.3A_2, including component names like RHD01.3A-04N, RHD01.3A-05P, RHD01.3A-06E, RHD01.3A-07P, RHD01.3A-08E, RHD01.3A-09P, RHD01.3A-10E, RHD01.3A-11P, RHD01.3A-12E, RHD01.3A-13P, RHD01.3A-14E, RHD01.3A-15R, and RHD01.4A-01P_1.

Table with columns: Component Name, Geom Code, OD Sch, Pipe Size, Br/Small End OD, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr. (%), Cu. (%), Mo. (%), Design Temp. (psig), Op. Temp. (Deg. F), Op. Enth. (Btu/lbm), Op. Qual., U/S Mn. (Mlbm/hr), Flow Rate D/S Mn. (Mlbm/hr), Br. 7-14 RHD02.10A-01R to RHD02.10A-11T

Line Name : RHD-02.10A TK A HDR to FWH 36

Line Name : RHD-02.10B B HDR to FWH 36A

Table with columns: Component Name, Geom Code, OD Sch, Pipe Size, Br/Small End OD, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr. (%), Cu. (%), Mo. (%), Design Temp. (psig), Op. Temp. (Deg. F), Op. Enth. (Btu/lbm), Op. Qual., U/S Mn. (Mlbm/hr), Flow Rate D/S Mn. (Mlbm/hr), Br. 17-30 RHD02.10B-01R to RHD02.10B-11T

Line Name : RHD-02.11A A HDR to FWH 36A

Table with columns: Component Name, Geom Code, OD Sch, Pipe Size, Br/Small End OD, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr. (%), Cu. (%), Mo. (%), Design Temp. (psig), Op. Temp. (Deg. F), Op. Enth. (Btu/lbm), Op. Qual., U/S Mn. (Mlbm/hr), Flow Rate D/S Mn. (Mlbm/hr), Br. 33-46 RHD02.11A-01R to RHD02.11A-11T

Table with columns: Component Name, Geom Code, OD, Sch., Pipe Size (Tnom, Tinit, Torit), Br/Small End OD, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr, Cu, Mo, Design Press, Op. Temp, Op. Enth., Op. Qual., U/S Mn., Flow Rate D/S Mn., Br. Includes sub-header 'Line Name : RHD-02.12B B HDR to FWH 36B' and 30 rows of data.

Table with columns: Component Name, Geom Code, OD, Sch., Pipe Size (Tnom, Tinit, Torit), Br/Small End OD, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr, Cu, Mo, Design Press, Op. Temp, Op. Enth., Op. Qual., U/S Mn., Flow Rate D/S Mn., Br. Includes sub-header 'Line Name : RHD-02.13A A HDR to FWH 36B' and 30 rows of data.

Table with columns: Component Name, Geom Code, OD, Sch., Pipe Size (Tnom, Tinit, Torit), Br/Small End OD, R/D Ratio, Orient Angle, Pipe Length, Spec/Type/Class, Cr, Cu, Mo, Design Press, Op. Temp, Op. Enth., Op. Qual., U/S Mn., Flow Rate D/S Mn., Br. Includes sub-header 'Line Name : RHD-02.14B B HDR to FWH 36C' and 30 rows of data.

Component Name	Geom Code	OD (in)	Sch.	Tnom (in)	Tinit (in)	Torit (in)	Br/Small End OD (in)	Br/Small Tnom (in)	R / D Ratio	Orient Angle (Deg.)	Pipe Length (in)	Spec/Type/Class	Cr. (%)	Cu. (%)	Mo. (%)	Design Press. (psig)	Design Temp. (Deg. F)	Op. Press. (psig)	Op. Temp. (Deg. F)	Op. Enth. (Btu/lbm)	Op. Qual.	U/S Mn. (Mlbm/hr)	Flow Rate D/S Mn.	Br.
EX-03.1C-32P	54	20,000	0	0.250	0.250	0.000	0.000	0.000	0.00	90	0.00	A53/BS/	0.00	0.00	0.00	100	400	50	0	1177.400	0.000	0.16760	0.00000	0.00000
EX-03.1C-33T	15	20,000	0	0.250	0.250	0.000	6.625	0.280	0.00	90	0.00	A53/BS/	0.00	0.00	0.00	100	400	50	0	1177.400	0.000	0.16760	0.00000	0.00000
EX-03.1C-34P	65	20,000	0	0.250	0.250	0.000	0.000	0.000	0.00	90	0.00	A53/BS/	0.00	0.00	0.00	100	400	50	0	1177.400	0.000	0.16760	0.00000	0.00000
EX-03.1C-35E	4	20,000	0	0.250	0.250	0.000	0.000	0.000	1.00	90	0.00	A234/WPBWPB/	0.00	0.00	0.00	100	400	50	0	1177.400	0.000	0.16760	0.00000	0.00000
EX-03.1C-36P	54	20,000	0	0.250	0.263	0.000	0.000	0.000	0.00	0	0.00	A53/BS/	0.00	0.00	0.00	100	400	50	0	1177.400	0.000	0.16760	0.00000	0.00000
EX-03.1C-37E	2	20,000	0	0.250	0.439	0.000	0.000	0.000	1.00	90	0.00	A234/WPBWPB/	0.00	0.00	0.00	100	400	50	0	1177.400	0.000	0.16760	0.00000	0.00000
EX-03.1C-38P	52	20,000	0	0.250	0.259	0.000	0.000	0.000	0.00	90	0.00	A53/BS/	0.00	0.00	0.00	100	400	50	0	1177.400	0.000	0.16760	0.00000	0.00000
EX-03.1C-39E	2	20,000	0	0.250	0.250	0.000	0.000	0.000	1.00	90	0.00	A234/WPBWPB/	0.00	0.00	0.00	100	400	50	0	1177.400	0.000	0.16760	0.00000	0.00000
EX-03.1C-40N	30	20,000	0	0.250	0.250	0.000	0.000	0.000	0.00	90	0.00	A234/WPBWPB/	0.00	0.00	0.00	100	400	50	0	1177.400	0.000	0.16760	0.00000	0.00000

Note: This report is based on the assumption that at least the component U/S Main is included in a flow segment.

Company : Entergy Nuclear Operations, Inc.
 Plant : Indian Point
 Unit : 3
 DB Name: IPEC 3 (v4)

Report Date : 21-Jul-2011
 Report Time : 14:38:15

CHECWORKS SFA Version: 3.0 SP-2 (build 200)

Component History Summary Report

SELECTION CRITERIA:

Line Name: *
 Drawing Name: *
 Comp. Service Status: *

Component Name	Current Component Name	Period Replaced	Replacement Date	Replacement (old) Material
Line Name : EX-01.1 HP EXT to FWH 36 HDR Sorted : No				
EX-01.6-01P	EX-01.6-01P	RO8	01/01/1994	A106/B/B
EX-01.6-01P	EX-01.6-01P	RO9	05/14/1997	A691/EFW/22
EX-01.1-08R	EX-01.1-08R	RO9	05/14/1997	A234/WPB/WPB
EX-01.1-07P	EX-01.1-07P	RO9	05/14/1997	A106/B/B
EX-01.1-06E	EX-01.1-06E	RO9	05/14/1997	A234/WPB/WPB
EX-01.1-05P	EX-01.1-05P	RO9	05/14/1997	A106/B/B
EX-01.1-04E	EX-01.1-04E	RO9	05/14/1997	A234/WPB/WPB
EX-01.1-03P	EX-01.1-03P	RO9	05/14/1997	A106/B/B
EX-01.1-02E	EX-01.1-02E	RO9	05/14/1997	A234/WPB/WPB

Line Name : EX-01.2 HP EXT to FWH 36 HDR Sorted : No				
EX-01.2-09P	EX-01.2-09P	RO8	01/01/1994	A106/B/B
EX-01.2-04E	EX-01.2-04E	RO9	05/14/1997	A234/WPB/WPB
EX-01.2-05P	EX-01.2-05P	RO9	05/14/1997	A106/B/B
EX-01.2-06E	EX-01.2-06E	RO9	05/14/1997	A234/WPB/WPB
EX-01.2-07P	EX-01.2-07P	RO9	05/14/1997	A106/B/B
EX-01.2-08E	EX-01.2-08E	RO9	05/14/1997	A234/WPB/WPB
EX-01.2-09P	EX-01.2-09P	RO9	05/14/1997	A691/EFW/22
EX-01.2-02E	EX-01.2-02E	RO9	05/14/1997	A234/WPB/WPB
EX-01.2-03P	EX-01.2-03P	RO9	05/14/1997	A106/B/B

Line Name : EX-01.3 HP EXT FWH 36 HEADER Sorted : No				
EX-01.2-10L	EX-01.2-10L	RO8	01/01/1994	A106/B/B
EX-01.3-03P	EX-01.3-03P	RO9	05/14/1997	A106/B/B
EX-01.2-10L	EX-01.2-10L	RO9	05/14/1997	A691/EFW/22
EX-01.3-04T	EX-01.3-04T	RO9	05/14/1997	A106/B/B
EX-01.3-05P	EX-01.3-05P	RO9	05/14/1997	A106/B/B
EX-01.3-09E	EX-01.3-09E	RO9	05/14/1997	A234/WPB/WPB
EX-01.3-11T	EX-01.3-11T	RO9	05/14/1997	A106/B/B
EX-01.3-12P	EX-01.3-12P	RO9	05/14/1997	A106/B/B
EX-01.3-13E	EX-01.3-13E	RO9	05/14/1997	A234/WPB/WPB
EX-01.3-14P	EX-01.3-14P	RO9	05/14/1997	A106/B/B
EX-01.3-15E	EX-01.3-15E	RO9	05/14/1997	A234/WPB/WPB
EX-01.3-16P	EX-01.3-16P	RO9	05/14/1997	A106/B/B
EX-01.3-17T	EX-01.3-17T	RO9	05/14/1997	A106/B/B
EX-01.3-19E	EX-01.3-19E	RO9	05/14/1997	A234/WPB/WPB
EX-01.3-20P	EX-01.3-20P	RO9	05/14/1997	A106/B/B
EX-01.3-21E	EX-01.3-21E	RO9	05/14/1997	A234/WPB/WPB
EX-01.3-22P	EX-01.3-22P	RO9	05/14/1997	A106/B/B
EX-01.3-23T	EX-01.3-23T	RO9	05/14/1997	A106/B/B
EX-01.3-02E	EX-01.3-02E	RO9	05/14/1997	A234/WPB/WPB
EX-01.3-01P	EX-01.3-01P	RO9	05/14/1997	A106/B/B
EX-01.3-10P	EX-01.3-10P	RO9	05/14/1997	A106/B/B

Component Name	Current Component Name	Period Replaced	Replacement Date	Replacement (old) Material
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Line Name : EX-01.4 HP EXT FWH 36 HEADER **Sorted :** No

EX-01.4-02T	EX-01.4-02T	RO9	05/14/1997	A106/B/B
EX-01.4-01P	EX-01.4-01P	RO9	05/14/1997	A106/B/B

Line Name : EX-01.5A HP EX HDR to FWH 36A **Sorted :** No

EX-01.5A-16L	EX-01.5A-16L	RO8	04/18/1992	A106/B/B
EX-01.5A-07L	EX-01.5A-07L	RO8	04/18/1992	A106/B/B
EX-01.5A-04P	EX-01.5A-04P	RO8	04/18/1992	A106/B/B
EX-01.5A-08P	EX-01.5A-08P	RO8	04/18/1992	A106/B/B
EX-01.5A-09E	EX-01.5A-09E	RO8	04/18/1992	A234/WPB/WPB
EX-01.5A-03E	EX-01.5A-03E	RO8	04/18/1992	A234/WPB/WPB
EX-01.5A-06P	EX-01.5A-06P	RO8	04/18/1992	A106/B/B
EX-01.5A-05E	EX-01.5A-05E	RO8	04/18/1992	A234/WPB/WPB
EX-01.5A-16L	EX-01.5A-16L	RO9	05/14/1997	A691/EFW/22
EX-01.5A-05E	EX-01.5A-05E	RO9	05/14/1997	A234/WP22/WP2
EX-01.5A-04P	EX-01.5A-04P	RO9	05/14/1997	A691/EFW/22
EX-01.5A-03E	EX-01.5A-03E	RO9	05/14/1997	A234/WP22/WP2
EX-01.5A-02P	EX-01.5A-02P	RO9	05/14/1997	A106/B/B
EX-01.5A-01R	EX-01.5A-01R	RO9	05/14/1997	A234/WPB/WPB
EX-01.7-01P	EX-01.7-01P	RO9	05/14/1997	A106/B/B
EX-01.5A-06P	EX-01.5A-06P	RO9	05/14/1997	A691/EFW/22
EX-01.5A-15N	EX-01.5A-15N	RO9	05/14/1997	A105/A105/A10
EX-01.5A-14E	EX-01.5A-14E	RO9	05/14/1997	A234/WPB/WPB
EX-01.5A-17P	EX-01.5A-17P	RO9	05/14/1997	A106/B/B
EX-01.5A-13E	EX-01.5A-13E	RO9	05/14/1997	A234/WPB/WPB
EX-01.5A-12P	EX-01.5A-12P	RO9	05/14/1997	A106/B/B
EX-01.5A-10P	EX-01.5A-10P	RO9	05/14/1997	A106/B/B
EX-01.5A-09E	EX-01.5A-09E	RO9	05/14/1997	A234/WP22/WP2
EX-01.5A-08P	EX-01.5A-08P	RO9	05/14/1997	A691/EFW/22
EX-01.5A-07L	EX-01.5A-07L	RO9	05/14/1997	A691/EFW/22

Line Name : EX-01.5B HP EX HDR to FWH 36B **Sorted :** No

EX.01.5B-14L	EX.01.5B-14L	RO9	05/14/1997	A106/B/B
EX-01.5B-02E	EX-01.5B-02E	RO9	05/14/1997	A234/WPB/WPB
EX-01.5B-05P	EX-01.5B-05P	RO9	05/14/1997	A106/B/B
EX-01.5B-06E	EX-01.5B-06E	RO9	05/14/1997	A234/WPB/WPB
EX-01.5B-07E	EX-01.5B-07E	RO9	05/14/1997	A234/WPB/WPB
EX-01.5B-08P	EX-01.5B-08P	RO9	05/14/1997	A106/B/B
EX-01.5B-10P	EX-01.5B-10P	RO9	05/14/1997	A106/B/B
EX-01.5B-11E	EX-01.5B-11E	RO9	05/14/1997	A234/WPB/WPB
EX-01.5B-15P	EX-01.5B-15P	RO9	05/14/1997	A106/B/B
EX-01.5B-01P	EX-01.5B-01P	RO9	05/14/1997	A106/B/B
EX-01.5B-03P	EX-01.5B-03P	RO9	05/14/1997	A106/B/B
EX-01.5B-04L	EX-01.5B-04L	RO9	05/14/1997	A106/B/B
EX-01.5B-12E	EX-01.5B-12E	RO9	05/14/1997	A234/WPB/WPB
EX-01.5B-13N	EX-01.5B-13N	RO9	05/14/1997	A105/A105/A10

Line Name : EX-01.5C HP EX HDR to FWH 36C **Sorted :** No

EX-01.5C-01P	EX-01.5C-01P	RO9	05/14/1997	A106/B/B
EX-01.5C-13N	EX-01.5C-13N	RO9	05/14/1997	A105/A105/A10
EX-01.5C-12E	EX-01.5C-12E	RO9	05/14/1997	A234/WPB/WPB
EX-01.5C-15P	EX-01.5C-15P	RO9	05/14/1997	A106/B/B
EX-01.5C-11E	EX-01.5C-11E	RO9	05/14/1997	A234/WPB/WPB
EX-01.5C-10P	EX-01.5C-10P	RO9	05/14/1997	A106/B/B
EX-01.5C-02E	EX-01.5C-02E	RO9	05/14/1997	A234/WPB/WPB
EX-01.5C-07E	EX-01.5C-07E	RO9	05/14/1997	A234/WPB/WPB
EX-01.5C-06E	EX-01.5C-06E	RO9	05/14/1997	A234/WPB/WPB
EX-01.5C-05P	EX-01.5C-05P	RO9	05/14/1997	A106/B/B

Component Name	Current Component Name	Period Replaced	Replacement Date	Replacement (old) Material
EX-01.5C-04L	EX-01.5C-04L	RO9	05/14/1997	A106/B/B
EX-01.5C-14L	EX-01.5C-14L	RO9	05/14/1997	A106/B/B
EX-01.5C-03P	EX-01.5C-03P	RO9	05/14/1997	A106/B/B
EX-01.5C-08P	EX-01.5C-08P	RO9	05/14/1997	A106/B/B
Line Name :	EX-02.1 PSEP 2A 10" to 35 HDR	Sorted :	No	
EX-02.1-06T	EX-02.1-06T	RO13	03/13/2005	A53/B/S
EX-02.1-05O	EX-02.1-05O	RO13	03/13/2005	A53/B/S
EX-02.1-04P	EX-02.1-04P	RO13	03/13/2005	A53/B/S
EX-02.1-03E	EX-02.1-03E	RO13	03/13/2005	A234/WPB/WPB
EX-02.1-02P	EX-02.1-02P	RO13	03/13/2005	A53/B/S
EX-02.5-01P	EX-02.5-01P	RO13	03/13/2005	A53/B/S
Line Name :	EX-02.11 PSEP1B 14" to 35 HDR	Sorted :	No	
EX-02.11-06O	EX-02.11-06O	RO13	03/13/2005	A53/B/S
EX-02.11-04P	EX-02.11-04P	RO13	03/13/2005	A53/B/S
EX-02.11-03E	EX-02.11-03E	RO13	03/13/2005	A234/WPB/WPB
EX-02.11-02P	EX-02.11-02P	RO13	03/13/2005	A53/B/S
EX-02.11-07P	EX-02.11-07P	RO13	03/13/2005	A53/B/S
Line Name :	EX-02.12 PSEP 1B&2B to 35 HDR	Sorted :	No	
EX-02.9-10T	EX-02.9-10T	RO13	03/13/2005	A53/B/S
EX-02.12-01P	EX-02.12-01P	RO13	03/13/2005	A53/B/S
Line Name :	EX-02.13 PSEP 1B&2B to 35 HDR	Sorted :	No	
EX-02.13-03P	EX-02.13-03P	RO13	03/11/2005	A53/B/S
EX-02.11-05T	EX-02.11-05T	RO13	03/13/2005	A53/B/S
EX-02.13-01P	EX-02.13-01P	RO13	03/13/2005	A53/B/S
EX-02.13-05P	EX-02.13-05P	RO13	03/13/2005	A53/B/S
EX-02.13-04E	EX-02.13-04E	RO13	03/13/2005	A234/WPB/WPB
EX-02.13-03E	EX-02.13-03E	RO13	03/13/2005	A234/WPB/WPB
EX-02.13-02B	EX-02.13-02B	RO13	03/13/2005	A53/B/S
Line Name :	EX-02.14 FWH 35 HEADER	Sorted :	No	
EX-02.14-08E	EX-02.14-08E	RO5	05/03/1987	A234/WPB/WPB
EX-02.14-02E	EX-02.14-02E	RO5	05/03/1987	A234/WPB/WPB
EX-02.14-06E	EX-02.14-06E	RO5	05/03/1987	A234/WPB/WPB
EX-02.14-23P	EX-02.14-23P	RO8	01/01/1994	A155/C55/2
EX-02.7-02T	EX-02.7-02T	RO8	01/01/1994	A155/C55/2
EX-02.14-22T	EX-02.14-22T	RO8	01/01/1994	A155/C55/2
EX-02.14-33P	EX-02.14-33P	RO8	01/01/1994	A155/C55/2
EX-02.14-29T	EX-02.14-29T	RO8	01/01/1994	A155/C55/2
EX-02.14-28P	EX-02.14-28P	RO8	01/01/1994	A155/C55/2
EX-02.14-06E	EX-02.14-06E	RO15	03/13/2009	A234/WPB/WPB
EX-02.14-08E	EX-02.14-08E	RO15	03/13/2009	A234/WPB/WPB
EX-02.14-25E	EX-02.14-25E	RO16	03/12/2011	A234/WPB/WPB
Line Name :	EX-02.15 FWH 35 HEADER	Sorted :	No	
EX-02.15-02T	EX-02.15-02T	RO8	01/01/1994	A155/C55/2
EX-02.15-01P	EX-02.15-01P	RO8	01/01/1994	A155/C55/2
Line Name :	EX-02.16 HDR 35 to FWH 35A	Sorted :	No	
EX-02.16-08E	EX-02.16-08E	RO4	06/08/1985	A234/WPB/WPB

Component Name	Current Component Name	Period Replaced	Replacement Date	Replacement (old) Material
EX-02.19-01P	EX-02.19-01P	RO8	01/01/1994	A155/C55/2
EX-02.16-01R	EX-02.16-01R	RO8	01/01/1994	A234/WPB/WPB
EX-02.16-02P	EX-02.16-02P	RO11	04/28/2001	A53/B/S
EX-02.16-04P	EX-02.16-04P	RO11	04/28/2001	A53/B/S
EX-02.16-06E	EX-02.16-06E	RO11	04/28/2001	A234/WPB/WPB
EX-02.16-07P	EX-02.16-07P	RO11	04/28/2001	A53/B/S
EX-02.16-03E	EX-02.16-03E	RO11	04/28/2001	A234/WPB/WPB

Line Name : EX-02.17 HDR 35 to FWH 35B **Sorted :** No

EX-02.17-05E	EX-02.17-05E	RO4	06/08/1985	A234/WPB/WPB
EX-02.17-01P	EX-02.17-01P	RO8	01/01/1994	A53/B/S
EX-02.17-04P	EX-02.17-04P	RO8	01/01/1994	A53/B/S
EX-02.17-03E	EX-02.17-03E	RO11	04/28/2001	A234/WPB/WPB
EX-02.17-04P	EX-02.17-04P	RO11	04/28/2001	A691/EFW/22

Line Name : EX-02.18 HDR 35 to FWH 35C **Sorted :** No

EX-02.18-05E	EX-02.18-05E	RO4	06/08/1985	A234/WPB/WPB
EX-02.18-01P	EX-02.18-01P	RO8	01/01/1994	A53/B/S
EX-02.18-04P	EX-02.18-04P	RO8	01/01/1994	A53/B/S
EX-02.18-03E	EX-02.18-03E	RO8	01/01/1994	A234/WPB/WPB

Line Name : EX-02.2 PSEP 1A 10" to 35 HDR **Sorted :** No

EX-02.2-08O	EX-02.2-08O	RO13	03/13/2005	A53/B/S
EX-02.2-02P	EX-02.2-02P	RO13	03/13/2005	A53/B/S
EX-02.2-05E	EX-02.2-05E	RO13	03/13/2005	A234/WPB/WPB
EX-02.2-04P	EX-02.2-04P	RO13	03/13/2005	A53/B/S
EX-02.2-03E	EX-02.2-03E	RO13	03/13/2005	A234/WPB/WPB
EX-02.2-06P	EX-02.2-06P	RO13	03/13/2005	A53/B/S

Line Name : EX-02.4 PSEP2A 14" to 35 HDR **Sorted :** No

EX-02.4-07P	EX-02.4-07P	RO13	03/13/2005	A53/B/S
EX-02.4-03E	EX-02.4-03E	RO13	03/13/2005	A234/WPB/WPB
EX-02.4-02P	EX-02.4-02P	RO13	03/13/2005	A53/B/S
EX-02.4-04P	EX-02.4-04P	RO13	03/13/2005	A53/B/S
EX-02.4-06O	EX-02.4-06O	RO13	03/13/2005	A53/B/S

Line Name : EX-02.6 PSEP 1A&2A to 35 HDR **Sorted :** No

EX-02.6-01P	EX-02.6-01P	RO13	03/13/2005	A53/B/S
EX-02.2-07T	EX-02.2-07T	RO13	03/13/2005	A53/B/S

Line Name : EX-02.7 PSEP 1A&2A to 35 HDR **Sorted :** No

EX-02.4-05T	EX-02.4-05T	RO13	03/13/2005	A53/B/S
EX-02.7-01P	EX-02.7-01P	RO13	03/13/2005	A53/B/S

Line Name : EX-02.8 PSEP 2B 10" to 35 HDR **Sorted :** No

EX-02.8-09P	EX-02.8-09P	RO13	03/13/2005	A53/B/S
EX-02.8-08T	EX-02.8-08T	RO13	03/13/2005	A53/B/S
EX-02.8-07O	EX-02.8-07O	RO13	03/13/2005	A53/B/S
EX-02.8-06E	EX-02.8-06E	RO13	03/13/2005	A234/WPB/WPB
EX-02.8-05P	EX-02.8-05P	RO13	03/13/2005	A53/B/S
EX-02.8-03P	EX-02.8-03P	RO13	03/13/2005	A53/B/S
EX-02.8-04E	EX-02.8-04E	RO13	03/13/2005	A234/WPB/WPB
EX-02.8-02E	EX-02.8-02E	RO13	03/13/2005	A234/WPB/WPB

Component Name	Current Component Name	Period Replaced	Replacement Date	Replacement (old) Material
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Line Name : EX-02.9 PSEP 1B 10" to 35 HDR **Sorted :** No

EX-02.9-03E	EX-02.9-03E	RO12	04/15/2003	A234/WPB/WPB
EX-02.9-02P	EX-02.9-02P	RO12	04/15/2003	A53/B/S
EX-02.9-04P	EX-02.9-04P	RO12	04/15/2003	A53/B/S
EX-02.9-05E	EX-02.9-05E	RO12	04/15/2003	A234/WPB/WPB
EX-02.9-06P	EX-02.9-06P	RO12	04/15/2003	A53/B/S
EX-02.9-11O	EX-02.9-11O	RO13	03/13/2005	A53/B/S
EX-02.9-06P	EX-02.9-06P	RO13	03/13/2005	A53/B/S
EX-02.9-08P	EX-02.9-08P	RO13	03/13/2005	A53/B/S
EX-02.9-07E	EX-02.9-07E	RO13	03/13/2005	A234/WPB/WPB
EX-02.9-05E	EX-02.9-05E	RO13	03/13/2005	A234/WPB/WPB
EX-02.9-10P	EX-02.9-10P	RO13	03/13/2005	A53/B/S
EX-02.9-04P	EX-02.9-04P	RO13	03/13/2005	A53/B/S
EX-02.9-03E	EX-02.9-03E	RO13	03/13/2005	A234/WPB/WPB
EX-02.9-09E	EX-02.9-09E	RO13	03/13/2005	A234/WPB/WPB
EX-02.9-02P	EX-02.9-02P	RO13	03/13/2005	A53/B/S

Line Name : FW-02.8A SG HDR to SG 31 **Sorted :** No

FW-02.8A-25R	FW-02.8A-25R	RO15	03/24/2009	A234/WPB/WPB
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Line Name : FW-02.8B SG HDR to SG 32 **Sorted :** No

FW-02.8B-26R	FW-02.8B-26R	RO15	03/24/2009	A234/WPB/WPB
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Line Name : MSD-01.14A TK 33A to HD TK **Sorted :** No

MSD-01.15A-18P	MSD-01.15A-18P	RO8	04/19/1992	A53/B/S
MSD-01.15A-19E	MSD-01.15A-19E	RO8	04/19/1992	A234/WPB/WPB
MSD-01.14A-03T	MSD-01.14A-03T	RO10	10/01/1999	A53/B/S
MSD-01.15A-18P	MSD-01.15A-18P	RO10	10/01/1999	A53/B/S
MSD-01.15A-17E	MSD-01.15A-17E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15A-16P	MSD-01.15A-16P	RO10	10/01/1999	A53/B/S
MSD-01.15A-15E	MSD-01.15A-15E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15A-22P	MSD-01.15A-22P	RO10	10/01/1999	A53/B/S
MSD-01.15A-14P	MSD-01.15A-14P	RO10	10/01/1999	A53/B/S
MSD-01.15A-13E	MSD-01.15A-13E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15A-12P	MSD-01.15A-12P	RO10	10/01/1999	A53/B/S
MSD-01.15A-11E	MSD-01.15A-11E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15A-10P	MSD-01.15A-10P	RO10	10/01/1999	A53/B/S
MSD-01.15A-09E	MSD-01.15A-09E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15A-21P	MSD-01.15A-21P	RO10	10/01/1999	A53/B/S
MSD-01.15A-08P	MSD-01.15A-08P	RO10	10/01/1999	A53/B/S
MSD-01.15A-07E	MSD-01.15A-07E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15A-06P	MSD-01.15A-06P	RO10	10/01/1999	A53/B/S
MSD-01.15A-05E	MSD-01.15A-05E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15A-04E	MSD-01.15A-04E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15A-03P	MSD-01.15A-03P	RO10	10/01/1999	A53/B/S
MSD-01.15A-02V	MSD-01.15A-02V	RO10	10/01/1999	A216/WCB/WCB
MSD-01.15A-01E	MSD-01.15A-01E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.14A-04P	MSD-01.14A-04P	RO10	10/01/1999	A53/B/S
MSD-01.14A-02P	MSD-01.14A-02P	RO10	10/01/1999	A53/B/S
MSD-01.15A-19E	MSD-01.15A-19E	RO10	10/01/1999	A234/WPB/WPB

Line Name : MSD-01.14B TK 33B to HD TK **Sorted :** No

MSD-01.15B-24P	MSD-01.15B-24P	RO10	10/01/1999	A53/B/S
MSD-01.15B-12P	MSD-01.15B-12P_1	RO10	10/01/1999	A53/B/S
MSD-01.14B-03T	MSD-01.14B-03T	RO10	10/01/1999	A53/B/S
MSD-01.14B-04P	MSD-01.14B-04P	RO10	10/01/1999	A53/B/S

Component Name	Current Component Name	Period Replaced	Replacement Date	Replacement (old) Material
MSD-01.15B-01E	MSD-01.15B-01E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15B-02E	MSD-01.15B-02E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15B-03P	MSD-01.15B-03P	RO10	10/01/1999	A53/B/S
MSD-01.15B-04E	MSD-01.15B-04E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15B-05V	MSD-01.15B-05V	RO10	10/01/1999	A216/WCB/WCB
MSD-01.15B-06P	MSD-01.15B-06P	RO10	10/01/1999	A53/B/S
MSD-01.15B-07E	MSD-01.15B-07E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15B-08P	MSD-01.15B-08P	RO10	10/01/1999	A53/B/S
MSD-01.15B-09E	MSD-01.15B-09E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15B-10P	MSD-01.15B-10P	RO10	10/01/1999	A53/B/S
MSD-01.15B-11E	MSD-01.15B-11E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.14B-02P	MSD-01.14B-02P	RO10	10/01/1999	A53/B/S
MSD-01.15B-31P	MSD-01.15B-31P_2	RO10	10/01/1999	A53/B/S
MSD-01.15B-18P	MSD-01.15B-18P	RO10	10/01/1999	A53/B/S
MSD-01.15B-19E	MSD-01.15B-19E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15B-20P	MSD-01.15B-20P	RO10	10/01/1999	A53/B/S
MSD-01.15B-21E	MSD-01.15B-21E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15B-22P	MSD-01.15B-22P	RO10	10/01/1999	A53/B/S
MSD-01.15B-23E	MSD-01.15B-23E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15B-32P	MSD-01.15B-32P	RO10	10/01/1999	A53/B/S
MSD-01.15B-25E	MSD-01.15B-25E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15B-26P	MSD-01.15B-26P	RO10	10/01/1999	A53/B/S
MSD-01.15B-27E	MSD-01.15B-27E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.15B-28P	MSD-01.15B-28P	RO10	10/01/1999	A53/B/S
MSD-01.15B-17E	MSD-01.15B-17E	RO10	10/01/1999	A234/WPB/WPB

Line Name : MSD-01.4A TK 31A to HD TK

Sorted : No

MSD-01.5A-25P	MSD-01.5A-25P	RO10	10/01/1999	A53/B/S
MSD-01.5A-28P_2	MSD-01.5A-28P_2	RO10	10/01/1999	A53/B/S
MSD-01.5A-26E	MSD-01.5A-26E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5A-24E	MSD-01.5A-24E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.4A-03T	MSD-01.4A-03T	RO10	10/01/1999	A53/B/S
MSD-01.4A-04P	MSD-01.4A-04P	RO10	10/01/1999	A53/B/S
MSD-01.5A-01E	MSD-01.5A-01E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5A-02P	MSD-01.5A-02P	RO10	10/01/1999	A53/B/S
MSD-01.5A-03E	MSD-01.5A-03E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5A-04P	MSD-01.5A-04P	RO10	10/01/1999	A53/B/S
MSD-01.5A-05E	MSD-01.5A-05E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5A-06V	MSD-01.5A-06V	RO10	10/01/1999	A216/WCB/WCB
MSD-01.5A-07P	MSD-01.5A-07P	RO10	10/01/1999	A53/B/S
MSD-01.5A-08E	MSD-01.5A-08E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5A-10E	MSD-01.5A-10E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5A-22E	MSD-01.5A-22E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5A-11P	MSD-01.5A-11P	RO10	10/01/1999	A53/B/S
MSD-01.5A-13P	MSD-01.5A-13P	RO10	10/01/1999	A53/B/S
MSD-01.5A-14E	MSD-01.5A-14E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5A-15P	MSD-01.5A-15P_1	RO10	10/01/1999	A53/B/S
MSD-01.5A-16E	MSD-01.5A-16E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5A-17P	MSD-01.5A-17P	RO10	10/01/1999	A53/B/S
MSD-01.5A-18E	MSD-01.5A-18E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5A-19P	MSD-01.5A-19P	RO10	10/01/1999	A53/B/S
MSD-01.5A-20E	MSD-01.5A-20E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5A-21P	MSD-01.5A-21P	RO10	10/01/1999	A53/B/S
MSD-01.5A-29P	MSD-01.5A-29P	RO10	10/01/1999	A53/B/S
MSD-01.5A-12E	MSD-01.5A-12E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.4A-02P	MSD-01.4A-02P	RO10	10/01/1999	A53/B/S
MSD-01.5A-23P	MSD-01.5A-23P	RO10	10/01/1999	A53/B/S
MSD-01.5A-09P	MSD-01.5A-09P	RO10	10/10/1999	A53/B/S

Line Name : MSD-01.4B TK 31B to HD TK

Sorted : No

MSD-01.5B-26E	MSD-01.5B-26E	RO8	04/19/1992	A234/WPB/WPB
MSD-01.5B-23P	MSD-01.5B-23P	RO10	10/01/1999	A53/B/S
MSD-01.5B-11P	MSD-01.5B-11P_1	RO10	10/01/1999	A53/B/S

Component Name	Current Component Name	Period Replaced	Replacement Date	Replacement (old) Material
MSD-01.5B-16E	MSD-01.5B-16E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5B-17P	MSD-01.5B-17P	RO10	10/01/1999	A53/B/S
MSD-01.5B-18E	MSD-01.5B-18E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5B-19P	MSD-01.5B-19P	RO10	10/01/1999	A53/B/S
MSD-01.5B-21P	MSD-01.5B-21P	RO10	10/01/1999	A53/B/S
MSD-01.5B-10E	MSD-01.5B-10E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5B-09P	MSD-01.5B-09P	RO10	10/01/1999	A53/B/S
MSD-01.5B-08E	MSD-01.5B-08E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5B-07P	MSD-01.5B-07P	RO10	10/01/1999	A53/B/S
MSD-01.5B-06E	MSD-01.5B-06E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5B-05P	MSD-01.5B-05P	RO10	10/01/1999	A53/B/S
MSD-01.5B-04V	MSD-01.5B-04V	RO10	10/01/1999	A216/WCB/WCB
MSD-01.5B-03E	MSD-01.5B-03E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5B-01R	MSD-01.5B-01R	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5B-31P	MSD-01.5B-31P	RO10	10/01/1999	A53/B/S
MSD-01.4B-08P	MSD-01.4B-08P	RO10	10/01/1999	A53/B/S
MSD-01.4B-06T	MSD-01.4B-06T	RO10	10/01/1999	A53/B/S
MSD-01.4B-07P	MSD-01.4B-07P	RO10	10/01/1999	A53/B/S
MSD-01.4B-05E	MSD-01.4B-05E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.4B-04P	MSD-01.4B-04P	RO10	10/01/1999	A53/B/S
MSD-01.4B-03E	MSD-01.4B-03E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.4B-02P	MSD-01.4B-02P	RO10	10/01/1999	A53/B/S
MSD-01.5B-27P	MSD-01.5B-27P	RO10	10/01/1999	A53/B/S
MSD-01.5B-26E	MSD-01.5B-26E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5B-32P	MSD-01.5B-32P	RO10	10/01/1999	A53/B/S
MSD-01.5B-25P	MSD-01.5B-25P	RO10	10/01/1999	A53/B/S
MSD-01.5B-24E	MSD-01.5B-24E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5B-22E	MSD-01.5B-22E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5B-02P	MSD-01.5B-02P	RO10	10/01/1999	A53/B/S
MSD-01.5B-20E	MSD-01.5B-20E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.5B-30P_2	MSD-01.5B-30P_2	RO10	10/01/1999	A53/B/S

Line Name : MSD-01.9A TK 32A to HD TK Sorted : No

MSD-01.10A-24E	MSD-01.10A-24E	RO8	04/19/1992	A234/WPB/WPB
MSD-01.10A-19P	MSD-01.10A-19P	RO10	10/01/1999	A53/B/S
MSD-01.10A-20E	MSD-01.10A-20E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10A-27P	MSD-01.10A-27P	RO10	10/01/1999	A53/B/S
MSD-01.10A-18E	MSD-01.10A-18E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10A-17P	MSD-01.10A-17P	RO10	10/01/1999	A53/B/S
MSD-01.10A-16E	MSD-01.10A-16E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10A-15P	MSD-01.10A-15P	RO10	10/01/1999	A53/B/S
MSD-01.10A-14E	MSD-01.10A-14E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10A-13P	MSD-01.10A-13P	RO10	10/01/1999	A53/B/S
MSD-01.10A-12E	MSD-01.10A-12E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10A-11P	MSD-01.10A-11P	RO10	10/01/1999	A53/B/S
MSD-01.10A-10E	MSD-01.10A-10E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10A-09P	MSD-01.10A-09P	RO10	10/01/1999	A53/B/S
MSD-01.10A-08E	MSD-01.10A-08E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10A-07P	MSD-01.10A-07P	RO10	10/01/1999	A53/B/S
MSD-01.10A-06V	MSD-01.10A-06V	RO10	10/01/1999	A216/WCB/WCB
MSD-01.10A-05E	MSD-01.10A-05E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10A-04P	MSD-01.10A-04P	RO10	10/01/1999	A53/B/S
MSD-01.10A-21P	MSD-01.10A-21P	RO10	10/01/1999	A53/B/S
MSD-01.10A-02P	MSD-01.10A-02P	RO10	10/01/1999	A53/B/S
MSD-01.10A-03E	MSD-01.10A-03E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10A-26P_3	MSD-01.10A-26P_3	RO10	10/01/1999	A53/B/S
MSD-01.10A-26P_1	MSD-01.10A-26P_1	RO10	10/01/1999	A53/B/S
MSD-01.10A-24E	MSD-01.10A-24E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10A-22E	MSD-01.10A-22E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.9A-02P	MSD-01.9A-02P	RO10	10/01/1999	A53/B/S
MSD-01.9A-03T	MSD-01.9A-03T	RO10	10/01/1999	A53/B/S
MSD-01.9A-04P	MSD-01.9A-04P	RO10	10/01/1999	A53/B/S
MSD-01.10A-01E	MSD-01.10A-01E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10A-23P	MSD-01.10A-23P	RO10	10/01/1999	A53/B/S

Component Name	Current Component Name	Period Replaced	Replacement Date	Replacement (old) Material
Line Name : MSD-01.9B TK 32B to HD TK Sorted : No				
MSD-01.9B-02P	MSD-01.9B-02P	RO10	10/01/1999	A53/B/S
MSD-01.9B-03T	MSD-01.9B-03T	RO10	10/01/1999	A53/B/S
MSD-01.9B-04P	MSD-01.9B-04P	RO10	10/01/1999	A53/B/S
MSD-01.10B-01E	MSD-01.10B-01E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10B-02E	MSD-01.10B-02E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10B-15E	MSD-01.10B-15E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10B-03P	MSD-01.10B-03P	RO10	10/01/1999	A53/B/S
MSD-01.10B-04E	MSD-01.10B-04E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10B-05V	MSD-01.10B-05V	RO10	10/01/1999	A216/WCB/WCB
MSD-01.10B-06P	MSD-01.10B-06P	RO10	10/01/1999	A53/B/S
MSD-01.10B-07E	MSD-01.10B-07E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10B-08P	MSD-01.10B-08P	RO10	10/01/1999	A53/B/S
MSD-01.10B-09E	MSD-01.10B-09E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10B-10P	MSD-01.10B-10P	RO10	10/01/1999	A53/B/S
MSD-01.10B-29P	MSD-01.10B-29P_2	RO10	10/01/1999	A53/B/S
MSD-01.10B-16P	MSD-01.10B-16P	RO10	10/01/1999	A53/B/S
MSD-01.10B-23E	MSD-01.10B-23E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10B-25E	MSD-01.10B-25E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10B-24P	MSD-01.10B-24P	RO10	10/01/1999	A53/B/S
MSD-01.10B-30P	MSD-01.10B-30P	RO10	10/01/1999	A53/B/S
MSD-01.10B-22P	MSD-01.10B-22P	RO10	10/01/1999	A53/B/S
MSD-01.10B-21E	MSD-01.10B-21E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10B-20P	MSD-01.10B-20P	RO10	10/01/1999	A53/B/S
MSD-01.10B-19E	MSD-01.10B-19E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10B-18P	MSD-01.10B-18P	RO10	10/01/1999	A53/B/S
MSD-01.10B-17E	MSD-01.10B-17E	RO10	10/01/1999	A234/WPB/WPB
MSD-01.10B-26P	MSD-01.10B-26P	RO10	10/01/1999	A53/B/S

Line Name : PD-02.4 PRESEP HDR to HD TK Sorted : No				
PD-02.4-02E	PD-02.4-02E	RO12	03/29/2003	A234/WPB/WPB
PD-02.4-03P	PD-02.4-03P	RO12	03/29/2003	A53/B/S
PD-02.4-04E	PD-02.4-04E	RO12	03/29/2003	A234/WPB/WPB
PD-02.4-05P	PD-02.4-05P	RO12	03/29/2003	A53/B/S
PD-02.4-06E	PD-02.4-06E	RO12	03/29/2003	A234/WPB/WPB

Line Name : RHD-01.10A_2 TK 33A to A HDR Sorted : No				
RHD02.6A-01P	RHD02.6A-01P	RO7	09/16/1990	A106/B/B
RHD02.5A-02R	RHD02.5A-02R	RO7	09/16/1990	A234/WPB/WPB
RHD02.6A-05P	RHD02.6A-05P	RO14	03/07/2007	A106/B/B

Line Name : RHD-01.10B_2 TK 33B to B HDR Sorted : No				
RHD02.5B-02R	RHD02.5B-02R	RO7	09/16/1990	A234/WPB/WPB
RHD02.5B-02R	RHD02.5B-02R	RO10	10/18/1999	A234/WPB/WPB
RHD02.6B-01E	RHD02.6B-01E	RO13	03/13/2005	A234/WPB/WPB

Line Name : RHD-01.1A_2 TK 31A to A HDR Sorted : No				
RHD02.1A-02R	RHD02.1A-02R	RO7	09/16/1990	A234/WPB/WPB
RHD02.2A-01P	RHD02.2A-01P	RO7	09/16/1990	A106/B/B
RHD02.1A-02R	RHD02.1A-02R	RO15	03/24/2009	A234/WPB/WPB

Line Name : RHD-01.1B_2 TK 31B to B HDR Sorted : No				
RHD02.1B-02R	RHD02.1B-02R	RO7	09/16/1990	A234/WPB/WPB
RHD02.2B-01P	RHD02.2B-01P	RO7	09/16/1990	A106/B/B

Component Name	Current Component Name	Period Replaced	Replacement Date	Replacement (old) Material
RHD02.1B-02R	RHD02.1B-02R	RO11	05/10/2001	A234/WPB/WPB
Line Name : RHD-01.3A_2 TK 32A to A HDR		Sorted : No		
RHD02.4A-01P	RHD02.4A-01P	RO7	09/16/1990	A106/B/B
RHD02.3A-02R	RHD02.3A-02R	RO7	09/16/1990	A234/WPB/WPB
Line Name : RHD-01.3B_2 TK 32B to B HDR		Sorted : No		
RHD02.3B-02R	RHD02.3B-02R	RO7	09/16/1990	A234/WPB/WPB
RHD02.4B-01P	RHD02.4B-01P	RO7	09/16/1990	A106/B/B
RHD02.3B-02R	RHD02.3B-02R	RO13	03/13/2005	A234/WPB/WPB
Line Name : RHD-02.14B B HDR to FWH 36C		Sorted : No		
RHD02.14B-14P	RHD02.14B-14P	RO14	03/07/2007	A106/B/B
RHD02.14B-02E	RHD02.14B-02E	RO14	03/07/2007	A234/WPB/WPB
RHD02.14B-10T	RHD02.14B-10T	RO15	03/24/2009	A234/WPB/WPB
Line Name : RHD-02.15A A HDR to FWH 36C		Sorted : No		
RHD02.15A-11T	RHD02.15A-11T	RO14	03/07/2007	A234/WPB/WPB
RHD02.15A-02E	RHD02.15A-02E	RO14	03/07/2007	A234/WPB/WPB
RHD02.15A-13P	RHD02.15A-13P	RO14	03/07/2007	A106/B/B

Appendix F
UT Inspection Data

CHECWORKS Line Name		Component Name		Component Section		Period	Report Number	Tinit or Thom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.1 1-02P	Entered as U/S Ext. of CD-02.11-03E	RO8			0.322	0.028	Band	No (1)		
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.1 1-02P	Entered as U/S Ext. of CD-02.11-03E	RO9	97UT070		0.322	0.033	Band	No (1)		
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.1 1-04P	Entered as D/S Ext. of CD-02.11-03E	RO8			0.322	0.088	Band	Yes		
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.1 1-04P	Entered as D/S Ext. of CD-02.11-03E	RO9	97UT070		0.322	0.087	Band	Yes		
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.1 1-09P	Entered as U/S Ext of CD-02.11-10E	RO12	03UT041		0.322	0.069	Band	No (2)		
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.1 1-11 P	Entered as D/S Ext of CD-02.11-10E	RO12	03UT041		0.322	0.094	Band	Yes		
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.1 1-11 P	Entered as U/S Ext of CD-02.11-12E	RO12	03UT041		0.322	0.117	Band	Yes		
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.11-03E	Main	RO8			0.322	0.068	Blanket	Yes		
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.11-03E	Main	RO9	97UT070		0.322	0.060	Blanket	Yes		
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.11-05E	Main	RO8			0.322	0.056	Blanket	Yes		
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.11-05E	Main	RO9	97UT070		0.322	0.062	Blanket	Yes		

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Timit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.11-06P	Main		Cycle 13	05UT013	0.322	0.081	Band	Yes
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.11-07E	Main		Cycle 13	05UT013	0.322	0.045	Blanket	Yes
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.11-08P	Main		Cycle 13	05UT013	0.322	0.082	Band	Yes
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.11-10E	Main		RO12	03UT041	0.322	0.064	Blanket	Yes
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.11-12E	Main		RO12	03UT041	0.322	0.061	Blanket	No (8)
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.11-13T	N/A		RO9	97UT100	0.562	N/A	N/A	No (8)
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.11-13T	Branch		RO12	03UT041	0.322	0.030	Band	No (1)
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.11-13T	D/S Main		RO12	03UT041	0.562	0.042	Band	Yes
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.11-13T	U/S Main		RO12	03UT041	0.562	0.039	Band	No (6)
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.12-05P	Entered as D/S Ext. of CD-02.12-04V		RO9	97UT101	0.562	0.044	Band	Yes
CD-02.1 1 SGBD HX3to FWH HDR	CD-02.12-06E	Main		RO9	97UT101	0.562	0.074	Blanket	Yes
CD-02.1 B FWH 32B toHDR	CD-02.1B-09E	Main		RO8		0.438	0.065	Blanket	Yes
CD-02.1 B FWH 32B toHDR	CD-02.1B-09E	Main		RO9	97UT053	0.438	0.065	Blanket	Yes
CD-02.1 B FWH 32B toHDR	CD-02.1B-10P	Entered as Branch of CD-02.1B-11T		RO12	03UT037	0.438	0.095	Band	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-02.1 C FWH 32C toHDR	CD-02.1C-10E	Main	RO8		0.575	0.055	T DAT	Yes
CD-02.1 C FWH 32C toHDR	CD-02.1C-10E	Main	RO9	97UT054	0.575	0.057	Blanket	Yes
CD-02.1 C FWH 32C toHDR	CD-02.1C-10E	Main	Cycle 10B	99UT074	0.575	0.060	Blanket	Yes
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-03E	D/S Ext	RO15		0.322	0.018	Blanket	Yes
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-03E	U/S Ext	RO15		0.322	0.046	P2P	No (2)
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-03E	U/S Main	RO15		0.322	0.076	P2P	Yes
CD-02.11 SGBD HX3 to FWH HDR	CD-02.12-05P	U/S Main	RO16		0.562	0.032	Band	Yes
CD-02.1A FWH 32A to HDR	CD-02.1A-01N	U/S Main	RO16		0.438	0.056	Band	No (9)
CD-02.1A FWH 32A to HDR	CD-02.1A-01N	D/S Ext.	RO16		0.438	0.057	Band	No (9)
CD-02.1A FWH 32A to HDR	CD-02.1A-06E	U/S Main	RO16		0.438	0.058	Blanket	Yes
CD-02.1A FWH 32A to HDR	CD-02.1A-06E	D/S Ext.	RO16		0.438	0.077	Band	Yes
CD-02.1A FWH 32A toHDR	CD-02.1A-13R	D/S Main	RO9	97UT053	0.594	0.039	Band	Yes
CD-02.1A FWH 32A toHDR	CD-02.1A-13R	U/S Main	RO9	97UT053	0.438	0.088	Band	Yes
CD-02.1A FWH 32A toHDR	CD-02.1A-13R	D/S Main	RO12	03UT037	0.594	0.039	Band	Yes
CD-02.1A FWH 32A toHDR	CD-02.1A-13R	U/S Main	RO12	03UT037	0.438	0.063	Band	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-02.1B FWH 32B to HDR	CD-02.1B-01N	U/S Main	RO16		0.438	0.039	Band	No (9)
CD-02.1B FWH 32B to HDR	CD-02.1B-01N	D/S Ext.	RO16		0.438	0.072	Band	No (9)
CD-02.1B FWH 32B to HDR	CD-02.1B-03E	U/S Main	RO16		0.438	0.123	Blanket	Yes
CD-02.1B FWH 32B to HDR	CD-02.1B-03E	U/S Ext.	RO16		0.438	0.063	Band	No (2)
CD-02.1B FWH 32B to HDR	CD-02.1B-03E	D/S Ext.	RO16		0.438	0.109	Band	Yes
CD-02.1C FWH 32C to HDR	CD-02.1C-01N	U/S Main	RO16		0.438	0.067	Band	No (9)
CD-02.1C FWH 32C to HDR	CD-02.1C-02P	U/S Main	RO16		0.438	0.112	Band	Yes
CD-02.1C FWH 32C to HDR	CD-02.1C-03E	U/S Main	RO16		0.438	0.063	Blanket	Yes
CD-02.1C FWH 32C to HDR	CD-02.1C-03E	D/S Ext.	RO16		0.438	0.077	Band	Yes
CD-02.2 FWH 32 OUTHDR	CD-02.1 B-11T	Branch	RO8		0.438	0.103	Band	Yes
CD-02.2 FWH 32 OUTHDR	CD-02.1 B-11T	Branch	RO9	97UT053	0.438	0.098	Band	Yes
CD-02.2 FWH 32 OUTHDR	CD-02.1 B-11T	D/S Main	RO9	97UT053	0.624	0.044	Band	Yes
CD-02.2 FWH 32 OUTHDR	CD-02.1 B-11T	U/S Main	RO9	97UT053	0.624	0.050	Band	Yes
CD-02.2 FWH 32 OUTHDR	CD-02.1 B-11T	D/S Main	RO12	03UT037	0.624	0.052	Band	Yes
CD-02.2 FWH 32 OUTHDR	CD-02.1 B-11T	U/S Main	RO12	03UT037	0.624	0.054	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Timit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-02.2 FWH 32 OUTHDR	CD-02.1B-11T	D/S Main		RO8		0.624	0.037	Band	Yes
CD-02.2 FWH 32 OUTHDR	CD-02.1B-11T	U/S Main		RO8		0.624	0.041	Band	Yes
CD-02.2 FWH 32 OUTHDR	CD-02.2-01P	Entered as D/S Ext. of CD-02.1B-11T		RO8		0.594	0.082	Band	Yes
CD-02.2 FWH 32 OUTHDR	CD-02.2-01P	Entered as D/S Ext. of CD-02.1B-11T		RO9	97UT053	0.594	0.061	Band	Yes
CD-02.2 FWH 32 OUTHDR	CD-02.2-01P	Entered as D/S Ext of CD-02.1B-11T		RO12	03UT037	0.594	0.053	Band	Yes
CD-02.2 FWH 32 OUTHDR	CD-02.2-02R	D/S Main		RO9	97UT054	0.688	0.015	Band	No (1)
CD-02.2 FWH 32 OUTHDR	CD-02.2-02R	U/S Main		RO9	97UT054	0.594	0.043	Band	Yes
CD-02.2 FWH 32 OUTHDR	CD-02.2-02R	D/S Main		Cycle 10B	99UT074	0.688	0.074	Band	Yes
CD-02.2 FWH 32 OUTHDR	CD-02.2-02R	U/S Main		Cycle 10B	99UT074	0.594	0.105	Band	Yes
CD-02.3 FWH 32 OUT HDR	CD-02.1C-12T	CD-02.1C-12T		RO14		0.688	0.043	Max BAND	Yes
CD-02.3 FWH 32 OUT HDR	CD-02.1C-12T	CD-02.1C-12T-BR		RO14		0.438	0.064	Max BAND	Yes
CD-02.3 FWH 32 OUT HDR	CD-02.1C-12T	CD-02.1C-12T-DSX		RO14		0.688	0.047	Max BAND	Yes
CD-02.3 FWH 32 OUT HDR	CD-02.3-15T	U/S Main		RO16		0.688	0.042	Band	No (9)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-02.3 FWH 32 OUT HDR	CD-02.3-15T	D/S Main		RO16		0.688	0.077	Band	No (9)
CD-02.3 FWH 32 OUT HDR	CD-02.3-15T	Branch		RO16		0.500	0.066	Band	No (9)
CD-02.3 FWH 32 OUTHDR	CD-02.1C-12T	Branch		RO8		0.438	0.082	T DAT	Yes
CD-02.3 FWH 32 OUTHDR	CD-02.1C-12T	U/S Main		RO8		0.692	0.043	T DAT	Yes
CD-02.3 FWH 32 OUTHDR	CD-02.1C-12T	Branch		RO9	97UT054	0.438	0.093	Band	Yes
CD-02.3 FWH 32 OUTHDR	CD-02.1C-12T	D/S Main		RO9	97UT054	0.692	0.037	Band	Yes
CD-02.3 FWH 32 OUTHDR	CD-02.1C-12T	U/S Main		RO9	97UT054	0.692	0.030	Band	No (1)
CD-02.3 FWH 32 OUTHDR	CD-02.1C-12T	Branch		Cycle 10B	99UT074	0.438	0.078	Band	Yes
CD-02.3 FWH 32 OUTHDR	CD-02.1C-12T	D/S Main		Cycle 10B	99UT074	0.692	0.034	Band	Yes
CD-02.3 FWH 32 OUTHDR	CD-02.1C-12T	U/S Main		Cycle 10B	99UT074	0.692	0.032	Band	Yes
CD-02.3 FWH 32 OUTHDR	CD-02.1C-12T	Branch		RO11	01UT051	0.438	0.071	Band	Yes
CD-02.3 FWH 32 OUTHDR	CD-02.1C-12T	D/S Main		RO11	01UT051	0.692	0.033	Band	No (1)
CD-02.3 FWH 32 OUTHDR	CD-02.1C-12T	U/S Main		RO11	01UT051	0.692	0.044	Band	Yes
CD-02.3 FWH 32 OUTHDR	CD-02.3-01P	Entered as D/S Ext. of CD-02.1C-12T		RO8		0.736	0.044	Band	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-02.3 FWH 32 OUTHDR	CD-02.3-01P	Entered as D/S Ext. of CD-02.1C-12T	RO9	97UT054	0.736	0.086	T DAT	Yes
CD-02.3 FWH 32 OUTHDR	CD-02.3-01P	Entered as D/S Ext. of CD-02.1C-12T	Cycle 10B	99UT074	0.736	0.077	Band	Yes
CD-02.3 FWH 32 OUTHDR	CD-02.3-01P	Entered as D/S Ext. of CD-02.1C-12T	RO11	01UT051	0.736	0.090	Band	Yes
CD-02.4 FWH 32 OUT HDR	CD-02.4-04E	U/S Main	RO16		0.594	0.100	Blanket	Yes
CD-02.4 FWH 32 OUT HDR	CD-02.4-04E	D/S Main	RO16		0.688	0.050	Blanket	Yes
CD-02.4 FWH 32 OUT HDR	CD-02.5-01P	U/S Main	RO16		0.688	0.020	Band	No (1)
CD-02.4 FWH 32 OUT HDR	CD-02.5-02E	D/S Ext	RO15		0.688	0.055	Band	Yes
CD-02.4 FWH 32 OUT HDR	CD-02.5-02E	U/S Ext	RO15		0.688	0.026	Band	No (2)
CD-02.4 FWH 32 OUT HDR	CD-02.5-02E	U/S Main	RO15		0.688	0.181	Blanket	Yes
CD-02.4 FWH 32 OUTHDR	CD-02.4-04E	U/S Main	RO8		0.864	0.125	T DAT	No (17)
CD-02.4 FWH 32 OUTHDR	CD-02.5-01P	Main	RO8		0.754	0.125	T DAT	No (8)
CD-02.4 FWH 32 OUTHDR	CD-02.5-02E	Main	RO8		0.994	0.279	T DAT	No (3)
CD-02.5 FWH 32 OUT HDR	CD-02.5-04T	Branch	RO15		0.438	0.229	Band	No (9)

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-02.5 FWH 32 OUT HDR	CD-02.5-04T	D/S Main	RO15		0.688	0.059	Band	No (9)
CD-02.5 FWH 32 OUT HDR	CD-02.5-04T	U/S Main	RO15		0.688	0.036	Band	No (9)
CD-02.5 FWH 32 OUTHDR	CD-02.5-03T	D/S Main	RO8		0.688	0.038	Band	Yes
CD-02.5 FWH 32 OUTHDR	CD-02.5-03T	U/S Main	RO8		0.688	0.046	Band	Yes
CD-02.5 FWH 32 OUTHDR	CD-02.5-04T	Branch	RO8		0.438	0.252	Band	No (3)
CD-02.5 FWH 32 OUTHDR	CD-02.5-04T	D/S Main	RO8		0.730	0.066	Band	Yes
CD-02.5 FWH 32 OUTHDR	CD-02.5-04T	U/S Main	RO8		0.730	0.070	Band	Yes
CD-02.5 FWH 32 OUTHDR	CD-02.5-04T	Branch	RO9	97UT047	0.438	0.245	Band	No (3)
CD-02.5 FWH 32 OUTHDR	CD-02.5-04T	D/S Main	RO9	97UT045	0.730	0.080	Band	Yes
CD-02.5 FWH 32 OUTHDR	CD-02.5-04T	U/S Main	RO9	97UT045	0.730	0.077	Band	Yes
CD-02.5 FWH 32 OUTHDR	CD-02.5-04T	Branch	Cycle 10B	99UT078	0.438	0.250	Band	No (3)
CD-02.5 FWH 32 OUTHDR	CD-02.5-04T	D/S Main	RO12	03UT039	0.730	0.081	Band	Yes
CD-02.5 FWH 32 OUTHDR	CD-02.5-04T	U/S Main	RO12	03UT039	0.730	0.076	Band	Yes
CD-02.6 FWH 32 OUT HDR	CD-02.6-03T	U/S Main	RO16		0.688	0.077	Band	Yes
CD-02.6 FWH 32 OUT HDR	CD-02.6-03T	D/S Main	RO16		0.688	0.055	Band	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-02.6 FWH 32 OUT HDR	CD-02.6-03T	Branch	RO16		0.438	0.076	Band	Yes
CD-02.6 FWH 32 OUTHDR	CD-02.6-01T	D/S Main	RO8		0.693	0.039	Band	Yes
CD-02.6 FWH 32 OUTHDR	CD-02.6-01T	N/A	RO8		0.693	0.056	T DAT	No (13)
CD-02.6 FWH 32 OUTHDR	CD-02.6-01T	U/S Main	RO8		0.693	0.054	Band	Yes
CD-02.6 FWH 32 OUTHDR	CD-02.6-01T	Branch	RO9	97UT045	0.406	0.053	Band	No (6)
CD-02.6 FWH 32 OUTHDR	CD-02.6-01T	D/S Main	RO9	97UT045	0.693	0.044	Band	Yes
CD-02.6 FWH 32 OUTHDR	CD-02.6-01T	U/S Main	RO9	97UT045	0.693	0.059	Band	Yes
CD-02.6 FWH 32 OUTHDR	CD-02.6-01T	Branch	RO12	03UT038	0.406	0.062	Band	Yes
CD-02.6 FWH 32 OUTHDR	CD-02.6-01T	D/S Main	RO12	03UT038	0.693	0.067	Max PTP	Yes
CD-02.6 FWH 32 OUTHDR	CD-02.6-01T	U/S Main	RO12	03UT038	0.693	0.077	Max PTP	Yes
CD-02.6 FWH 32 OUTHDR	CD-02.6-02P	Entered as D/S Ext. of CD-02.6-01T	RO8		0.693	0.062	Band	Yes
CD-02.6 FWH 32 OUTHDR	CD-02.6-02P	N/A	RO8		0.693	0.052	T DAT	No (13)
CD-02.6 FWH 32 OUTHDR	CD-02.6-02P	Entered as D/S Ext. of CD-02.6-01T	RO9	97UT045	0.693	0.049	Band	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-02.6 FWH 32 OUTHDR	CD-02.6-02P	Entered as U/S Ext. of CD-02.6-03T	RO9	97UT044	0.693	0.050	Band	No (2)
CD-02.6 FWH 32 OUTHDR	CD-02.6-03T	Branch	RO8		0.438	0.073	T DAT	Yes
CD-02.6 FWH 32 OUTHDR	CD-02.6-03T	U/S Main	RO8		0.694	0.061	T DAT	Yes
CD-02.6 FWH 32 OUTHDR	CD-02.6-03T	Branch	RO9	97UT044	0.438	0.084	Band	Yes
CD-02.6 FWH 32 OUTHDR	CD-02.6-03T	D/S Main	RO9	97UT044	0.694	0.063	Band	Yes
CD-02.6 FWH 32 OUTHDR	CD-02.6-03T	U/S Main	RO9	97UT044	0.694	0.032	Band	Yes
CD-02.6 FWH 32 OUTHDR	CD-02.6-03T	Branch	RO11	01UT071	0.438	0.095	Band	Yes
CD-02.6 FWH 32 OUTHDR	CD-02.6-03T	D/S Main	RO11	01 UT071	0.694	0.094	Band	Yes
CD-02.6 FWH 32 OUTHDR	CD-02.6-03T	U/S Main	RO11	01 UT071	0.694	0.058	Band	Yes
CD-02.8A HDR to FWH 33A	CD-02.7-02T	Branch	RO15		0.438	0.084	Band	Yes
CD-02.8A HDR to FWH 33A	CD-02.7-02T	D/S Ext	RO15		0.688	0.037	Band	Yes
CD-02.8A HDR to FWH 33A	CD-02.7-02T	D/S Main	RO15		0.688	0.030	Band	Yes
CD-02.8A HDR to FWH 33A	CD-02.7-02T	U/S Main	RO15		0.688	0.041	Band	Yes
CD-02.8A HDR to FWH 33A	CD-02.8A-08N	U/S Main	RO16		0.438	0.071	Band	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-02.8A HDR toFWH 33A	CD-02.7-01 P	Entered as U/S Ext. ofCD-02.7-02T	RO8		0.675	0.035	Band	No (2)
CD-02.8A HDR toFWH 33A	CD-02.7-01 P	Entered as U/S Ext. ofCD-02.7-02T	RO9	97UT048	0.675	0.052	Band	No (2)
CD-02.8A HDR toFWH 33A	CD-02.7-01P	Entered as D/S Ext. ofCD-02.6-03T	RO8		0.675	0.034	T DAT	Yes
CD-02.8A HDR toFWH 33A	CD-02.7-01P	Entered as D/S Ext. ofCD-02.6-03T	RO9	97UT044	0.675	0.047	Band	Yes
CD-02.8A HDR toFWH 33A	CD-02.7-01P	Entered as D/S Ext. ofCD-02.6-03T	RO11	01UT071	0.675	0.071	Band	No (17)
CD-02.8A HDR toFWH 33A	CD-02.7-02T	Branch	RO8		0.438	0.082	Band	Yes
CD-02.8A HDR toFWH 33A	CD-02.7-02T	D/S Main	RO8		0.688	0.016	Band	No (1)
CD-02.8A HDR toFWH 33A	CD-02.7-02T	U/S Main	RO8		0.688	0.035	Band	Yes
CD-02.8A HDR toFWH 33A	CD-02.7-02T	Branch	RO9	97UT048	0.438	0.087	Band	Yes
CD-02.8A HDR toFWH 33A	CD-02.7-02T	D/S Ext.	RO9	97UT048	0.688	0.064	Band	No (14)
CD-02.8A HDR toFWH 33A	CD-02.7-02T	D/S Main	RO9	97UT048	0.688	0.019	Band	No (1)
CD-02.8A HDR toFWH 33A	CD-02.7-02T	U/S Main	RO9	97UT048	0.688	0.045	Band	Yes
CD-02.8A HDR toFWH 33A	CD-02.8A-02E	Main	RO8		0.438	0.231	Blanket	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-02.8A HDR to FWH 33A	CD-02.8A-02E	Main		RO9	97UT049	0.438	0.171	Blanket	Yes
CD-02.8A HDR to FWH 33A	CD-02.8A-03P	Entered as D/S Ext. of CD-02.8A-02E		RO9	97UT049	0.438	0.084	Band	Yes
CD-02.8A HDR to FWH 33A	CD-02.8A-03P	Entered as D/S Ext. of CD-02.8A-02E		RO11	01 UT059	0.438	0.082	Band	Yes
CD-02.8A HDR to FWH 33A	CD-02.8A-03P	Entered as D/S Ext. of CD-02.8A-02E		RO13	05UT044	0.438	0.091	Max PTP	Yes
CD-02.8A HDR to FWH 33A	CD-02.8A-05E	Main		RO11	01UT130	0.438	0.081	Blanket	Yes
CD-02.8A HDR to FWH 33A	CD-02.8A-06P	Entered as D/S Ext. of CD-02.8A-05E		RO11	01UT130	0.438	0.073	Band	Yes
CD-02.8A HDR to FWH 33A	CD-02.8A-07E	D/S Ext.		RO11	01UT130	0.438	0.074	Band	No (14)
CD-02.8A HDR to FWH 33A	CD-02.8A-07E	Main		RO11	01UT130	0.438	0.079	Blanket	Yes
CD-02.8B HDR to FWH 33B	CD-02.8B-01P	CD-02.8B-01P		RO14		0.438	0.072	Max BAND	Yes
CD-02.8B HDR to FWH 33B	CD-02.8B-02E	CD-02.8B-02E		RO14		0.438	0.238	Max BAND	Yes
CD-02.8B HDR to FWH 33B	CD-02.8B-02E	CD-02.8B-02E-DSX		RO14		0.438	0.097	Max BAND	Yes
CD-02.8B HDR to FWH 33B	CD-02.8B-02E	U/S Main		RO16		0.438	0.060	Max PtP	Yes
CD-02.8B HDR to FWH 33B	CD-02.8B-02E	D/S Ext.		RO16		0.438	0.074	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-02.8B HDR to FWH 33B	CD-02.8B-05E	U/S Main		RO16		0.438	0.074	Blanket	Yes
CD-02.8B HDR to FWH 33B	CD-02.8B-06P	U/S Main		RO16		0.438	0.073	Band	Yes
CD-02.8B HDR to FWH 33B	CD-02.8B-07E	U/S Main		RO16		0.438	0.042	Blanket	Yes
CD-02.8B HDR to FWH 33B	CD-02.8B-08N	U/S Main		RO16		0.438	0.066	Band	Yes
CD-02.8B HDR to FWH 33B	CD-02.8B-01 P	Main		RO8		0.445	0.081	T DAT	Yes
CD-02.8B HDR to FWH 33B	CD-02.8B-02E	Main		RO8		0.438	0.234	T DAT	Yes
CD-02.8B HDR to FWH 33B	CD-02.8B-02E	Main		RO9	97UT042	0.438	0.219	Blanket	Yes
CD-02.8B HDR to FWH 33B	CD-02.8B-02E	Main		RO11	01UT071	0.438	0.195	Blanket	Yes
CD-02.8B HDR to FWH 33B	CD-02.8B-03P	Entered as D/S Ext. of CD-02.8B-02E		RO9	97UT043	0.438	0.084	Band	Yes
CD-02.8B HDR to FWH 33B	CD-02.8B-03P	Entered as D/S Ext. of CD-02.8B-02E		RO11	01 UT071	0.438	0.083	Band	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-02E	CD-02.8C-02E		RO14		0.438	0.089	Blanket	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-02E	CD-02.8C-02E-DSX		RO14		0.438	0.035	Band	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-02E	U/S Main		RO16		0.438	0.088	Max PtP	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-02E	U/S Ext.		RO16		0.438	0.251	Band	No (2)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-02.8C HDR to FWH 33C	CD-02.8C-02E	D/S Ext.		RO16		0.438	0.236	Band	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-05E	U/S Ext		RO15		0.438	0.067	Band	No (2)
CD-02.8C HDR to FWH 33C	CD-02.8C-05E	U/S Main		RO15		0.438	0.125	Blanket	Yes
CD-02.8C HDR toFWH 33C	CD-02.8C-01P	Entered as U/S Ext. ofCD-02.8C-02E		RO11	01 UT052	0.629	0.248	Band	No (2)
CD-02.8C HDR toFWH 33C	CD-02.8C-01P	Entered as Branch ofCD-02.5-04T		RO12	03UT039	0.438	0.248	Band	No (3)
CD-02.9 FWH HDR to SGBD HX3	CD-02.10-02O	D/S Ext		RO15		0.322	0.081	Band	No (10)
CD-02.9 FWH HDR to SGBD HX3	CD-02.10-02O	U/S Ext		RO15		0.322	0.112	Band	No (2)
CD-02.9 FWH HDR to SGBD HX3	CD-02.10-02O	U/S Main		RO15		0.322	0.173	Band	No (10)
CD-02.9 FWH HDR toSGBD HX3	CD-02.10-02O	Main		RO9	97UT072	0.322	0.147	Band	No (10)
CD-02.9 FWH HDR toSGBD HX3	CD-02.10-03P	Entered as D/S Ext. ofCD-02.10-02O		RO9	97UT071	0.322	0.097	Band	Yes
CD-02.9 FWH HDR toSGBD HX3	CD-02.10-04E	Main		RO9	97UT071	0.322	0.053	Blanket	Yes
CD-02.9 FWH HDR toSGBD HX3	CD-02.10-07P	Entered as U/S Ext. ofCD-02.10-08E		RO8		0.322	0.098	Band	No (2)
CD-02.9 FWH HDR toSGBD HX3	CD-02.10-08E	Main		RO8		0.322	0.035	Blanket	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-02.9 FWH HDR toSGBD HX3	CD-02.10-09P	Entered as D/S Ext. ofCD-02.10-08E	RO8			0.322	0.059	Band	Yes
CD-02.9 FWH HDR toSGBD HX3	CD-02.10-10E	Main	RO8			0.322	0.050	Blanket	Yes
CD-03.1 B FWH 33B toFWH 34B	CD-03.1B-02E	Main	RO9	97UT094		0.438	0.041	Blanket	Yes
CD-03.1 B FWH 33B toFWH 34B	CD-03.1B-03E	Main	RO9	97UT094		0.438	0.052	Blanket	Yes
CD-03.1 B FWH 33B toFWH 34B	CD-03.1B-04P	Entered as D/S Ext. ofCD-03.1B-03E	RO9	97UT094		0.438	0.074	Band	Yes
CD-03.1 B FWH 33B toFWH 34B	CD-03.1B-05E	Main	RO8			0.547	0.066	Blanket	Yes
CD-03.1 B FWH 33B toFWH 34B	CD-03.1B-06E	Main	RO8			0.555	0.095	Blanket	Yes
CD-03.1 B FWH 33B toFWH 34B	CD-03.1B-07P	Entered as D/S Ext. ofCD-03.1B-06E	RO8			0.477	0.066	Band	Yes
CD-03.1A FWH 33A toFWH 34A	CD-03.1A-01N	Main	RO12	03UT077		0.438	0.108	Band	Yes
CD-03.1A FWH 33A toFWH 34A	CD-03.1A-02E	Main	RO12	03UT077		0.438	0.100	Blanket	Yes
CD-03.1A FWH 33A toFWH 34A	CD-03.1A-03E	Main	RO12	03UT077		0.438	0.070	Blanket	Yes
CD-03.1A FWH 33A toFWH 34A	CD-03.1A-04P	Entered as D/S Ext ofCD-03.1A-03E	RO12	03UT077		0.438	0.850	Band	Yes
CD-03.1B FWH 33B to FWH 34B	CD-03.1B-03E	D/S Ext	RO15			0.438	0.063	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-03.1B FWH 33B to FWH 34B	CD-03.1B-03E	U/S Main		RO15		0.438	0.076	Blanket	Yes
CD-03.1B FWH 33B to FWH 34B	CD-03.1B-03E	U/S Main		RO15		0.438	0.076	Band	No (2)
CD-03.1B FWH 33B to FWH 34B	CD-03.1B-06E	U/S Main		RO15		0.438	0.079	Band	Yes
CD-03.1C FWH 33C to FWH 34C	CD-03.1C-01N	CD-03.1C-01N		RO14		0.438	0.084	Max BAND	Yes
CD-03.1C FWH 33C to FWH 34C	CD-03.1C-02E	CD-03.1C-02E		RO14		0.438	0.083	BLANKET	Yes
CD-04.1 B FWH 34B to FWH 35B	CD-04.1B-01N	Main		RO12	03UT100	0.438	0.117	Band	Yes
CD-04.1 B FWH 34B to FWH 35B	CD-04.1B-02E	Main		RO12	03UT099	0.438	0.067	Blanket	Yes
CD-04.1 B FWH 34B to FWH 35B	CD-04.1B-03E	Main		RO12	03UT099	0.438	0.140	Blanket	Yes
CD-04.1 B FWH 34B to FWH 35B	CD-04.1B-04P	Entered as D/S Ext of CD-04.1B-03E		RO12	03UT101	0.438	0.062	Band	Yes
CD-04.1 C FWH 34C to FWH 35C	CD-04.1C-02E	Main		RO8		0.594	0.094	Blanket	Yes
CD-04.1 C FWH 34C to FWH 35C	CD-04.1C-03E	Main		RO8		0.570	0.085	Blanket	Yes
CD-04.1A FWH 34A to FWH 35A	CD-04.1A-04P	CD-04.1A-04P		RO14		0.438	0.096	Max BAND	Yes
CD-04.1A FWH 34A to FWH 35A	CD-04.1A-01N	Main		Cycle 10B	01126-13.DAT	0.438	0.048	Band	No (8)
CD-04.1A FWH 34A to FWH 35A	CD-04.1A-01N	Entered as U/S Ext. of CD-04.1A-02E		RO11	01UT073	0.438	0.035	Band	No (2)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-04.1A FWH 34A toFWH 35A	CD-04.1A-02E	Main		Cycle 10B	01126-13.DAT	0.438	0.070	Blanket	Yes
CD-04.1A FWH 34A toFWH 35A	CD-04.1A-02E	Main		RO11	01UT073	0.438	0.117	Blanket	Yes
CD-04.1A FWH 34A toFWH 35A	CD-04.1A-03E	Main		Cycle 10B	01126-14.DAT	0.438	0.083	Blanket	Yes
CD-04.1A FWH 34A toFWH 35A	CD-04.1A-03E	Main		RO11	01 UT073	0.438	0.067	Blanket	Yes
CD-04.1A FWH 34A toFWH 35A	CD-04.1A-04P	Entered as D/S Ext. ofCD-04.1A-03E		RO10	01126-14A.DAT	0.438	0.044	Band	Yes
CD-04.1A FWH 34A toFWH 35A	CD-04.1A-04P	Entered as D/S Ext. ofCD-04.1A-03E		RO11	01UT073	0.438	0.094	Band	Yes
CD-04.1C FWH 34C to FWH 35C	CD-04.1C-01N	CD-04.1C-01N		RO14		0.438	0.060	Max BAND	No (8)
CD-04.1C FWH 34C to FWH 35C	CD-04.1C-02E	U/S Main		RO16		0.438	0.068	Blanket	Yes
CD-04.1C FWH 34C to FWH 35C	CD-04.1C-03E	U/S Main		RO16		0.438	0.068	Blanket	Yes
CD-04.1C FWH 34C to FWH 35C	CD-04.1C-05E	CD-04.1C-05E		RO14		0.438	0.079	BLANKET	Yes
CD-04.1C FWH 34C to FWH 35C	CD-04.1C-05E	CD-04.1C-05E-DSX		RO14		0.438	0.044	Max BAND	Yes
CD-04.1C FWH 34C to FWH 35C	CD-04.1C-05E	CD-04.1C-05E-USX		RO14		0.438	0.067	Max BAND	No(2)
CD-04.1C FWH 34C to FWH 35C	CD-04.1C-07E	CD-04.1C-07E		RO14		0.438	0.073	BLANKET	Yes
CD-04.1C FWH 34C to FWH 35C	CD-04.1C-07E	CD-04.1C-07E-DSX		RO14		0.438	0.080	Max BAND	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-05.1 B FWH 35B toHDR	CD-05.1B-03E	Main		RO10	01126-17.DAT	0.438	0.083	Blanket	Yes
CD-05.1 B FWH 35B toHDR	CD-05.1B-03E	Main		RO11	01UT095	0.438	0.078	Blanket	Yes
CD-05.1 B FWH 35B toHDR	CD-05.1B-04P	Entered as D/S Ext. ofCD-05.1B-03E		RO11	01UT095	0.438	0.081	Band	Yes
CD-05.1 B FWH 35B toHDR	CD-05.1B-07E	Main		RO8		0.575	0.094	T DAT	Yes
CD-05.1 B FWH 35B toHDR	CD-05.1B-08P	Main		RO8		0.465	0.035	T DAT	Yes
CD-05.1 C FWH 35C toHDR	CD-05.1C-08E	Main		RO8		0.438	0.059	Blanket	Yes
CD-05.1 C FWH 35C toHDR	CD-05.1C-08E	Main		RO9	97UT092	0.438	0.060	Blanket	Yes
CD-05.1A FWH 35A to HDR	CD-05.1A-01N	U/S Main		RO16		0.438	0.245	Band	Yes
CD-05.1A FWH 35A to HDR	CD-05.1A-06P	U/S Main		RO16		0.438	0.100	Band	Yes
CD-05.1A FWH 35A to HDR	CD-05.1A-07E	U/S Main		RO16		0.438	0.075	Blanket	Yes
CD-05.1A FWH 35A toHDR	CD-05.1A-02E	Main		Cycle 10B	01126-15.DAT	0.438	0.054	Blanket	Yes
CD-05.1A FWH 35A toHDR	CD-05.1A-03E	Main		Cycle 10B	01126-15A.DAT	0.438	0.073	Blanket	Yes
CD-05.1B FWH 35B to HDR	CD-05.1B-03E	CD-05.1B-03E-DSX		RO14		0.438	0.073	Max BAND	Yes
CD-05.1B FWH 35B to HDR	CD-05.1B-06P	U/S Main		RO16		0.438	0.068	Band	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-05.1B FWH 35B to HDR	CD-05.1B-07E	U/S Main	RO16		0.438	0.090	Blanket	Yes
CD-05.1B FWH 35B to HDR	CD-05.1B-01N	Entered as U/S Ext. of CD-05.1B-02E	RO11	01UT125	0.438	0.195	Band	No (2)
CD-05.1B FWH 35B to HDR	CD-05.1B-02E	Main	Cycle 10B	01126-16.DAT	0.438	0.046	Blanket	Yes
CD-05.1B FWH 35B to HDR	CD-05.1B-02E	Main	RO11	01UT095	0.438	0.075	Blanket	Yes
CD-05.1C FWH 35C to HDR	CD-05.1C-01N	U/S Main	RO15		0.438	0.051	Band	No (9)
CD-05.3 FWH 35 OUTHDR	CD-05.1 B-09T	Branch	RO8		0.438	0.039	T DAT	Yes
CD-05.3 FWH 35 OUTHDR	CD-05.1 B-09T	U/S Main	RO8		0.724	0.051	T DAT	Yes
CD-05.3 FWH 35 OUTHDR	CD-05.1B-09T	Branch	RO13	05UT063	0.438	0.035	Band	Yes
CD-05.3 FWH 35 OUTHDR	CD-05.1B-09T	DS Main	RO13	05UT063	0.724	0.295	Band	Yes
CD-05.3 FWH 35 OUTHDR	CD-05.1B-09T	US Main	RO13	05UT063	0.724	0.076	Band	Yes
CD-05.3 FWH 35 OUTHDR	CD-05.3-01P	Entered as U/S Ext. of CD-05.1C-10T	RO8		0.724	0.058	Band	No (2)
CD-05.3 FWH 35 OUTHDR	CD-05.3-01P	Main	RO8		0.724	0.055	T DAT	Yes
CD-05.3 FWH 35 OUTHDR	CD-05.3-01P	Entered as U/S Ext. of CD-05.1C-10T	RO9	97UT092	0.724	0.057	Band	No (2)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-05.3 FWH 35 OUTHDR	CD-05.3-01P	Main		RO13	05UT063	0.724	0.056	Band	Yes
CD-05.4 FWH 35 OUT HDR	CD-05.1C-10T	Branch		RO15		0.438	0.059	Band	Yes
CD-05.4 FWH 35 OUT HDR	CD-05.1C-10T	D/S Main		RO15		0.688	0.029	Band	No (1)
CD-05.4 FWH 35 OUT HDR	CD-05.1C-10T	U/S Main		RO15		0.688	0.031	Band	Yes
CD-05.4 FWH 35 OUTHDR	CD-05.1C-10T	Branch		RO8		0.438	0.074	Band	Yes
CD-05.4 FWH 35 OUTHDR	CD-05.1C-10T	D/S Main		RO8		0.688	0.089	Band	Yes
CD-05.4 FWH 35 OUTHDR	CD-05.1C-10T	U/S Main		RO8		0.688	0.032	Band	No (1)
CD-05.4 FWH 35 OUTHDR	CD-05.1C-10T	Branch		RO9	97UT092	0.438	0.056	Band	Yes
CD-05.4 FWH 35 OUTHDR	CD-05.1C-10T	D/S Main		RO9	97UT092	0.688	0.033	Band	No (1)
CD-05.4 FWH 35 OUTHDR	CD-05.1C-10T	U/S Main		RO9	97UT092	0.688	0.027	Band	No (1)
CD-05.4 FWH 35 OUTHDR	CD-05.4-01E	Main		RO9	97UT092	0.688	0.099	Blanket	Yes
CD-05.4 FWH 35 OUTHDR	CD-05.4-02P	Main		RO8		0.722	0.089	T DAT	No (8)
CD-05.4 FWH 35 OUTHDR	CD-05.4-02P	Entered as Br. Ext. ofCD-05.4-03T		RO9	97UT065	0.722	0.067	Band	No (2)
CD-05.4 FWH 35 OUTHDR	CD-05.4-02P	Entered as Br. Ext ofCD-05.4-03T		RO12	03UT082	0.688	0.062	Band	No (2)

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-05.4 FWH 35 OUTHDR	CD-05.4-03T	Branch	RO8		0.696	0.052	T DAT	No (17)
CD-05.4 FWH 35 OUTHDR	CD-05.4-03T	U/S Main	RO8		0.696	0.022	T DAT	No (6)
CD-05.4 FWH 35 OUTHDR	CD-05.4-03T	Branch	RO9	97UT065	0.696	0.061	Band	Yes
CD-05.4 FWH 35 OUTHDR	CD-05.4-03T	D/S Main	RO9	97UT065/66	0.696	0.036	Band	Yes
CD-05.4 FWH 35 OUTHDR	CD-05.4-03T	U/S Main	RO9	97UT065/66	0.696	0.065	Band	No (6)
CD-05.4 FWH 35 OUTHDR	CD-05.4-03T	Branch	RO12	03UT082	0.696	0.044	Band	Yes
CD-05.4 FWH 35 OUTHDR	CD-05.4-03T	D/S Main	RO12	03UT082	0.696	0.020	Band	No (1)
CD-05.4 FWH 35 OUTHDR	CD-05.4-03T	U/S Main	RO12	03UT082	0.696	0.019	Band	No (1)
CD-05.4 FWH 35 OUTHDR	CD-05.4-03T	Branch	RO13	05UT051	0.696	0.045	Band	Yes
CD-05.4 FWH 35 OUTHDR	CD-05.4-03T	DS Main	RO13	05UT051	0.696	0.026	Band	No(2)
CD-05.4 FWH 35 OUTHDR	CD-05.4-03T	US Main	RO13	05UT051	0.696	0.031	Band	No(17)
CD-05.4 FWH 35 OUTHDR	CD-05.4-04P	Entered as D/S Ext. ofCD-05.1C-10T	RO8		0.688	0.176	Band	Yes
CD-05.4 FWH 35 OUTHDR	CD-05.4-05P	Entered as U/S Ext. ofCD-06.1-01T	RO8		0.625	0.012	Band	No (1)

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-05.4 FWH 35 OUTHDR	CD-05.4-05P	Entered as D/S Ext of CD-05.4-03T	RO12	03UT082	0.625	0.015	Band	No (1)
CD-06.1 FWH 35 OUT HDR	CD-06.1-01T	U/S Main	RO16		0.625	0.024	Band	No (1)
CD-06.1 FWH 35 OUT HDR	CD-06.1-01T	D/S Main	RO16		0.625	0.028	Band	No (1)
CD-06.1 FWH 35 OUT HDR	CD-06.1-01T	Branch	RO16		0.500	0.204	Band	Yes
CD-06.1 FWH 35 OUTHDR	CD-06.1-01T	Branch	RO8		0.500	0.085	Band	Yes
CD-06.1 FWH 35 OUTHDR	CD-06.1-01T	D/S Main	RO8		0.659	0.031	Band	No (1)
CD-06.1 FWH 35 OUTHDR	CD-06.1-01T	N/A	RO8		0.659	0.029	T DAT	No (13)
CD-06.1 FWH 35 OUTHDR	CD-06.1-01T	U/S Main	RO8		0.659	0.031	Band	No (1)
CD-06.1 FWH 35 OUTHDR	CD-06.1-01T	Branch	RO9	97UT066	0.500	0.114	Band	Yes
CD-06.1 FWH 35 OUTHDR	CD-06.1-01T	D/S Main	RO9	97UT066	0.659	0.020	Band	No (1)
CD-06.1 FWH 35 OUTHDR	CD-06.1-01T	U/S Main	RO9	97UT066	0.659	0.022	Band	No (1)
CD-06.1 FWH 35 OUTHDR	CD-06.1-02P	Entered as D/S Ext. of CD-06.1-01T	RO8		0.663	0.024	Band	No (1)
CD-06.1 FWH 35 OUTHDR	CD-06.1-02P	N/A	RO8		0.663	0.026	T DAT	No (13)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-06.1 FWH 35 OUTHDR	CD-06.1-02P	Entered as D/S Ext. of CD-06.1-01T	RO9	97UT066	0.663	0.031	Band	No (1)	
CD-06.1 FWH 35 OUTHDR	CD-06.1-02P	Entered as U/S Ext of CD-05.4-03T	RO12	03UT082	0.625	0.024	Band	No (1)	
CD-06.1 FWH 35 OUTHDR	CD-06.1-03T	Branch	RO8		0.721	0.062	T DAT	Yes	
CD-06.1 FWH 35 OUTHDR	CD-06.1-03T	U/S Main	RO8		0.702	0.028	T DAT	Yes	
CD-06.1 FWH 35 OUTHDR	CD-06.1-03T	Branch	RO9	97UT066	0.721	0.086	Band	Yes	
CD-06.1 FWH 35 OUTHDR	CD-06.1-03T	D/S Main	RO9	97UT066	0.702	0.029	Band	No (1)	
CD-06.1 FWH 35 OUTHDR	CD-06.1-03T	U/S Main	RO9	97UT066	0.702	0.033	Band	Yes	
CD-06.2A HDR to BFP 31	CD-06.2A-02E	U/S Main	RO16		0.688	0.054	Blanket	Yes	
CD-06.2A HDR to BFP 31	CD-06.2A-02E	U/S Ext.	RO16		0.688	0.033	Band	No (1)	
CD-06.2A HDR to BFP 31	CD-06.2A-02E	D/S Ext.	RO16		0.688	0.037	Band	Yes	
CD-06.2A HDR to BFP 31	CD-06.2A-08P	U/S Main	RO16		0.688	0.121	Band	Yes	
CD-06.2A HDR to BFP 31	CD-06.2A-11E	U/S Main	RO16		0.688	0.051	Blanket	Yes	
CD-06.2A HDR to BFP 31	CD-06.2A-11E	U/S Ext.	RO16		0.688	0.079	Band	No (2)	
CD-06.2A HDR to BFP 31	CD-06.2A-11E	D/S Ext.	RO16		0.688	0.071	Band	Yes	

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-06.2A HDR to BFP 31	CD-06.3A-01R	D/S Main	RO15		0.562	0.040	Band	Yes
CD-06.2A HDR to BFP 31	CD-06.3A-01R	U/S Main	RO15		0.688	0.064	Band	Yes
CD-06.2A HDR to BFP31	CD-06.2A-01 P	Main	RO8		0.721	0.050	T DAT	Yes
CD-06.2A HDR to BFP31	CD-06.2A-01P	Entered as Br. Ext. ofCD-06.1-03T	RO9	97UT066	0.721	0.066	Band	No (2)
CD-06.2A HDR to BFP31	CD-06.2A-02E	Main	RO8		0.729	0.055	T DAT	Yes
CD-06.2A HDR to BFP31	CD-06.2A-23P	Entered as US Ext ofCD-06.2A-24O	RO13	05UT068	0.688	0.043	Band	No(1)
CD-06.2A HDR to BFP31	CD-06.2A-25P	Entered as DS Ext ofCD-06.2A-24O	RO13	05UT068	0.688	0.043	Band	Yes
CD-06.2A HDR to BFP31	CD-06.3A-01 R	D/S Main	RO8		0.562	0.040	Band	Yes
CD-06.2A HDR to BFP31	CD-06.3A-01 R	U/S Main	RO8		0.688	0.064	Band	Yes
CD-06.2A HDR to BFP31	CD-06.3A-02N	U/S Main	RO8		0.562	0.118	Band	Yes
CD-06.2B HDR to BFP 32	CD-06.2B-04T	Branch	RO15		0.688	0.162	Band	Yes
CD-06.2B HDR to BFP 32	CD-06.2B-04T	D/S Main	RO15		0.688	0.351	Band	Yes
CD-06.2B HDR to BFP 32	CD-06.2B-04T	U/S Main	RO15		0.688	0.196	Band	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-06.2B HDR to BFP 32	CD-06.2B-06E	D/S Ext	RO15		0.688	0.063	Band	Yes
CD-06.2B HDR to BFP 32	CD-06.2B-06E	U/S Main	RO15		0.688	0.069	Blanket	Yes
CD-06.2B HDR to BFP 32	CD-06.3B-02N	CD-06.3B-02N	RO14		0.562	0.417	Max BAND	No (9)
CD-06.2B HDR to BFP32	CD-06.2B-01 R	D/S Main	RO11	01 UT062	0.688	0.075	Band	Yes
CD-06.2B HDR to BFP32	CD-06.2B-01 R	U/S Ext.	RO11	01 UT062	0.625	0.013	Band	No (2)
CD-06.2B HDR to BFP32	CD-06.2B-01R	U/S Main	RO11	01UT062	0.625	0.171	Band	Yes
CD-06.2B HDR to BFP32	CD-06.2B-02P	Entered as D/S Ext. ofCD-06.2B-01 R	RO8		0.702	0.063	T DAT	Yes
CD-06.2B HDR to BFP32	CD-06.2B-02P	Entered as D/S Ext. ofCD-06.2B-01 R	RO11	01 UT062	0.688	0.051	Band	Yes
CD-06.2B HDR to BFP32	CD-06.2B-07P	Imported as US Ext ofCD-06.2B-08O	RO13	05UT059	0.688	0.056	Band	No(1)
CD-06.2B HDR to BFP32	CD-06.2B-08O	N/A	RO9	97UT099	0.688	N/A	N/A	No (15)
CD-06.2B HDR to BFP32	CD-06.2B-09P	Imported as DS Ext ofCD-06.2B-08O	RO13	05UT059	0.688	0.069	Band	Yes
EX-01.1 HP EXT toFWH 36 HDR	EX-01.1-01N	Main	RO12	03UT136	0.330	0.038	Band	No(9)
EX-01.1 HP EXT toFWH 36 HDR	EX-01.1-02E	Main	RO8		0.446	0.133	Blanket	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-01.1 HP EXT toFWH 36 HDR	EX-01.1-03P	Entered as D/S Ext. ofEX-01.1-02E	RO8		0.352	0.131	Band	Yes
EX-01.1 HP EXT toFWH 36 HDR	EX-01.1-04E	Main	RO8		0.450	0.127	Blanket	Yes
EX-01.1 HP EXT toFWH 36 HDR	EX-01.1-05P	Main	RO8		0.368	0.037	T DAT	Yes
EX-01.1 HP EXT toFWH 36 HDR	EX-01.1-07P	Entered as U/S Ext. ofEX-01.1-08R	RO8		0.330	0.206	Band	No (2)
EX-01.1 HP EXT toFWH 36 HDR	EX-01.1-08R	D/S Main	RO8		0.438	0.218	Band	Yes
EX-01.1 HP EXT toFWH 36 HDR	EX-01.1-08R	U/S Main	RO8		0.330	0.161	Band	Yes
EX-01.2 HP EXT toFWH 36 HDR	EX-01.2-01N	N/A	RO8		0.330	0.142	T DAT	No (3)
EX-01.2 HP EXT toFWH 36 HDR	EX-01.2-02E	Main	RO8		0.330	0.285	Blanket	Yes
EX-01.2 HP EXT toFWH 36 HDR	EX-01.2-03P	Entered as D/S Ext. ofEX-01.2-02E	RO8		0.385	0.070	Band	Yes
EX-01.2 HP EXT toFWH 36 HDR	EX-01.2-04E	Main	RO8		0.330	0.080	Blanket	Yes
EX-01.2 HP EXT toFWH 36 HDR	EX-01.2-05P	Entered as D/S Ext. ofEX-01.2-04E	RO8		0.330	0.037	Band	Yes
EX-01.2 HP EXT toFWH 36 HDR	EX-01.2-09P	Entered as U/S Ext. ofEX-01.2-10L	RO8		0.357	0.090	Band	No (2)
EX-01.2 HP EXT toFWH 36 HDR	EX-01.2-09P	N/A	RO8		0.357	0.224	T DAT	No (13)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-01.3 HP EXT FWH 36 HEADER	EX-01.2-10L	U/S Main	RO16			0.375	0.013	Band	No (1)
EX-01.3 HP EXT FWH 36 HEADER	EX-01.2-10L	D/S Main	RO16			0.375	0.016	Band	No (1)
EX-01.3 HP EXT FWH 36 HEADER	EX-01.2-10L	Branch	RO16			0.375	0.065	Band	Yes
EX-01.3 HP EXT FWH36 HEADER	EX-01.2-10L	Branch	RO8			0.391	0.226	Band	Yes
EX-01.3 HP EXT FWH36 HEADER	EX-01.2-10L	Branch	RO8			0.391	0.192	T DAT	No (13)
EX-01.3 HP EXT FWH36 HEADER	EX-01.2-10L	Branch Ext.	RO8			0.391	0.140	Band	No (2)
EX-01.3 HP EXT FWH36 HEADER	EX-01.2-10L	D/S Main	RO8			0.482	0.228	Band	Yes
EX-01.3 HP EXT FWH36 HEADER	EX-01.2-10L	Run	RO8			0.482	0.187	T DAT	No (13)
EX-01.3 HP EXT FWH36 HEADER	EX-01.2-10L	U/S Main	RO8			0.482	0.158	Band	Yes
EX-01.3 HP EXT FWH36 HEADER	EX-01.2-10L	Branch	RO9			0.391	0.000	Baseline	No (5)
EX-01.3 HP EXT FWH36 HEADER	EX-01.2-10L	D/S Main	RO9			0.482	0.000	Baseline	No (5)
EX-01.3 HP EXT FWH36 HEADER	EX-01.2-10L	U/S Main	RO9			0.482	0.000	Baseline	No (5)
EX-01.3 HP EXT FWH36 HEADER	EX-01.3-01P	Entered as D/S Ext. of EX-01.2-10L	RO8			0.456	0.152	Band	Yes
EX-01.3 HP EXT FWH36 HEADER	EX-01.3-03P	Entered as U/S Ext. of EX-01.3-04T	RO8			0.438	0.047	T DAT	No (2)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-01.3 HP EXT FWH36 HEADER	EX-01.3-04T	Branch		RO8		0.280	0.036	T DAT	No (14)
EX-01.3 HP EXT FWH36 HEADER	EX-01.3-04T	U/S Main		RO8		0.468	0.098	T DAT	No (17)
EX-01.3 HP EXT FWH36 HEADER	EX-01.3-05P	Main		RO8		0.464	0.094	T DAT	Yes
EX-01.3 HP EXT FWH36 HEADER	EX-01.3-16P	Entered as U/S Ext. of EX-01.3-17T		RO8		0.460	0.123	Band	No (2)
EX-01.3 HP EXT FWH36 HEADER	EX-01.3-17T	Branch		RO8		0.280	0.037	Band	No (6)
EX-01.3 HP EXT FWH36 HEADER	EX-01.3-17T	D/S Main		RO8		0.501	0.156	Band	Yes
EX-01.3 HP EXT FWH36 HEADER	EX-01.3-17T	U/S Main		RO8		0.501	0.169	Band	Yes
EX-01.3 HP EXT FWH36 HEADER	EX-01.3-19E	Main		RO8		0.438	0.277	Blanket	Yes
EX-01.3 HP EXT FWH36 HEADER	EX-01.3-22P	Entered as U/S Ext. of EX-01.3-23T		RO8		0.528	0.163	Band	No (2)
EX-01.3 HP EXT FWH36 HEADER	EX-01.3-23T	Branch		RO8		0.566	0.333	Band	No (3)
EX-01.3 HP EXT FWH36 HEADER	EX-01.3-23T	D/S Main		RO8		0.539	0.042	Band	No (3)
EX-01.3 HP EXT FWH36 HEADER	EX-01.3-23T	U/S Main		RO8		0.539	0.042	Band	No (3)
EX-01.4 HP EXT FWH 36 HEADER	EX-01.4-02T	U/S Main		RO16		0.438	0.016	Band	No (1)
EX-01.4 HP EXT FWH 36 HEADER	EX-01.4-02T	D/S Main		RO16		0.438	0.021	Band	No (1)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-01.4 HP EXT FWH 36 HEADER	EX-01.4-02T	Branch	Branch	RO16		0.330	0.021	Band	No (1)
EX-01.4 HP EXT FWH36 HEADER	EX-01.4-01P	Entered as D/S Ext. of EX-01.3-23T		RO8		0.528	0.039	Band	No (18)
EX-01.4 HP EXT FWH36 HEADER	EX-01.4-01P	N/A		RO8		0.528	0.047	T DAT	No (13)
EX-01.4 HP EXT FWH36 HEADER	EX-01.4-02T	Branch	Branch	RO8		0.363	0.082	T DAT	Yes
EX-01.4 HP EXT FWH36 HEADER	EX-01.4-02T	U/S Main	U/S Main	RO8		0.439	0.235	T DAT	Yes
EX-01.4 HP EXT FWH36 HEADER	EX-01.4-02T	Branch	Branch	RO9		0.363	0.000	Baseline	No (5)
EX-01.4 HP EXT FWH36 HEADER	EX-01.4-02T	D/S Main	D/S Main	RO9		0.439	0.000	Baseline	No (5)
EX-01.4 HP EXT FWH36 HEADER	EX-01.4-02T	U/S Main	U/S Main	RO9		0.439	0.000	Baseline	No (5)
EX-01.5A HP EX HDR to FWH 36A	EX-01.5A-15N	EX-01.5A-15N	EX-01.5A-15N	RO14		0.309	0.165	Max BAND	Yes
EX-01.5A HP EX HDRto FWH 36A	EX-01.5A-01R	N/A		RO8		0.438	0.184	T DAT	No (3)
EX-01.5A HP EX HDRto FWH 36A	EX-01.5A-02P	Main	Main	RO8		0.374	0.057	T DAT	Yes
EX-01.5A HP EX HDRto FWH 36A	EX-01.5A-03E	Main	Main	RO8		0.330	0.158	Blanket	No (3)
EX-01.5A HP EX HDRto FWH 36A	EX-01.5A-04P	Entered as D/S Ext. of EX-01.5A-03E		RO8		0.411	0.190	Band	No (3)
EX-01.5A HP EX HDRto FWH 36A	EX-01.5A-05E	Main	Main	RO8		0.419	0.167	Blanket	No (3)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-01.5A HP EX HDRto FWH 36A	EX-01.5A-12P	Main		RO8		0.387	0.166	T DAT	Yes
EX-01.5A HP EX HDRto FWH 36A	EX-01.5A-13E	Main		RO8		0.426	0.106	T DAT	Yes
EX-01.5A HP EX HDRto FWH 36A	EX-01.5A-14E	Main		RO8		0.470	0.170	T DAT	Yes
EX-01.5A HP EX HDRto FWH 36A	EX-01.5A-17P	Main		RO8		0.335	0.090	T DAT	Yes
EX-01.5B HP EX HDR to FWH 36B	EX-01.5B-13N	EX-01.5B-13N		RO14		0.309	0.196	Max BAND	Yes
EX-01.5B HP EX HDRto FWH 36B	EX-01.5B-01P	N/A		RO8		0.363	0.129	T DAT	No (3)
EX-01.5B HP EX HDRto FWH 36B	EX-01.5B-02E	N/A		RO8		0.477	0.137	T DAT	No (3)
EX-01.5B HP EX HDRto FWH 36B	EX-01.5B-10P	Main		RO8		0.374	0.123	T DAT	Yes
EX-01.5B HP EX HDRto FWH 36B	EX-01.5B-11E	Main		RO8		0.452	0.107	T DAT	Yes
EX-01.5B HP EX HDRto FWH 36B	EX-01.5B-12E	N/A		RO8		0.543	0.321	T DAT	No (3)
EX-01.5B HP EX HDRto FWH 36B	EX-01.5B-15P	Main		RO8		0.386	0.127	T DAT	Yes
EX-01.5C HP EX HDR to FWH 36C	EX-01.5C-13N	EX-01.5C-13N		RO14		0.309	0.157	Max BAND	Yes
EX-01.5C HP EX HDRto FWH 36C	EX-01.5C-0 1 P	Entered as U/S Ext. ofEX-01.5C-02E		RO8		0.450	0.307	Band	No (2)
EX-01.5C HP EX HDRto FWH 36C	EX-01.5C-02E	Main		RO8		0.423	0.053	Blanket	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-01.5C HP EX HDRto FWH 36C	EX-01.5C-03P	N/A		RO8		0.377	0.130	T DAT	No (3)
EX-01.5C HP EX HDRto FWH 36C	EX-01.5C-04L	U/S Main		RO8		0.364	0.109	T DAT	No (17)
EX-01.5C HP EX HDRto FWH 36C	EX-01.5C-05P	Main		RO8		0.373	0.084	T DAT	Yes
EX-01.5C HP EX HDRto FWH 36C	EX-01.5C-06E	Main		RO8		0.431	0.146	T DAT	Yes
EX-01.5C HP EX HDRto FWH 36C	EX-01.5C-07E	Main		RO8		0.416	0.104	T DAT	Yes
EX-01.5C HP EX HDRto FWH 36C	EX-01.5C-08P	Main		RO8		0.356	0.101	T DAT	Yes
EX-01.5C HP EX HDRto FWH 36C	EX-01.5C-10P	Main		RO8		0.358	0.070	T DAT	Yes
EX-01.5C HP EX HDRto FWH 36C	EX-01.5C-11E	Main		RO8		0.448	0.107	T DAT	Yes
EX-01.5C HP EX HDRto FWH 36C	EX-01.5C-12E	N/A		RO8		0.485	0.201	T DAT	No (3)
EX-01.5C HP EX HDRto FWH 36C	EX-01.5C-14L	U/S Main		RO8		0.373	0.067	T DAT	No (17)
EX-01.5C HP EX HDRto FWH 36C	EX-01.5C-15P	Main		RO8		0.337	0.074	T DAT	Yes
EX-02. 14 FWH 35HEADER	EX-02.14-12P	Entered as D/S Ext. ofEX-02.14-11V		RO9		0.375	0.185	Band	Yes
EX-02. 14 FWH 35HEADER	EX-02.14-19P	Entered as D/S Ext ofEX-02.14-18E		RO12	03UT104	0.375	0.029	Band	No(1)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-02.14 FWH 35HEADER	EX-02.14-21P	Entered as D/S Ext of EX-02.14-20E	RO12	03UT104	0.375	0.038	Band	No(3)	
EX-02.14 FWH 35HEADER	EX-02.14-23P	Entered as U/S Ext of EX-02.14-24E	RO12	03UT148	0.375	0.024	Band	No(1)	
EX-02.14 FWH 35HEADER	EX-02.14-26P	Entered as U/S Ext. of EX-02.14-27E	RO8		0.375	0.023	Band	No(1)	
EX-02.14 FWH 35HEADER	EX-02.14-26P	Entered as D/S Ext of EX-02.14-25E	RO12	03UT148	0.375	0.026	Band	No(1)	
EX-02.14 FWH 35HEADER	EX-02.14-28P	Entered as D/S Ext. of EX-02.14-27E	RO8		0.375	0.279	Band	No (3)	
EX-02.14 FWH 35HEADER	EX-02.14-28P	Entered as D/S Ext of EX-02.14-27E	RO12	03UT148	0.375	0.011	Band	No(1)	
EX-02.1 PSEP 2A 10"to 35 HDR	EX-02.1-02P	Main	RO8		0.378	0.067	T DAT	Yes	
EX-02.1 PSEP 2A 10"to 35 HDR	EX-02.1-03E	Main	RO8		0.425	0.110	T DAT	Yes	
EX-02.1 PSEP 2A 10"to 35 HDR	EX-02.1-03E	Main	RO12	03UT142	0.425	0.164	Blanket	Yes	
EX-02.1 PSEP 2A 10"to 35 HDR	EX-02.1-06T	Branch	RO12	03UT130	0.365	0.094	Blanket	Yes	
EX-02.1 PSEP 2A 10"to 35 HDR	EX-02.1-06T	D/S Main	RO12	03UT130	0.500	0.204	Blanket	Yes	
EX-02.1 PSEP 2A 10"to 35 HDR	EX-02.1-06T	Entered as U/S Ext of EX-02.1-06T	RO12	03UT130	0.500	0.046	Band	No(2)	

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-02.1	PSEP 2A 10" to 35 HDR	EX-02.1-06T	U/S Main	RO12	03UT130	0.500	0.240	Blanket	No(6)
EX-02.13	PSEP1B&2B to 35 HDR	EX-02.13-02B	Main	RO11	01UT108	0.501	0.130	Blanket	Yes
EX-02.13	PSEP1B&2B to 35 HDR	EX-02.13-02B	Main	RO12	03UT085	0.500	0.127	Blanket	Yes
EX-02.13	PSEP1B&2B to 35 HDR	EX-02.13-03E	D/S Ext.	RO11	01UT108	0.312	0.069	Band	No (14)
EX-02.13	PSEP1B&2B to 35 HDR	EX-02.13-03E	Main	RO11	01UT108	0.501	0.143	Blanket	Yes
EX-02.13	PSEP1B&2B to 35 HDR	EX-02.13-03E	Main	RO12	03UT085	0.375	0.156	Blanket	Yes
EX-02.13	PSEP1B&2B to 35 HDR	EX-02.13-03P	Entered as D/S Ext of EX-02.13-03E	RO12	03UT086	0.375	0.071	Band	Yes
EX-02.13	PSEP1B&2B to 35 HDR	EX-02.13-04E	Main	RO11	01UT108	0.375	0.117	Blanket	Yes
EX-02.13	PSEP1B&2B to 35 HDR	EX-02.13-04E	Main	RO12	03UT086	0.375	0.120	Blanket	Yes
EX-02.13	PSEP1B&2B to 35 HDR	EX-02.13-05P	Main	RO11	01UT108	0.375	0.072	Band	Yes
EX-02.13	PSEP1B&2B to 35 HDR	EX-02.13-05P	Main	RO12	03UT086	0.375	0.062	Band	Yes
EX-02.14	FWH 35 HEADER	EX-02.14-01P	U/S Main	RO15		0.375	0.019	Band	No (1)
EX-02.14	FWH 35 HEADER	EX-02.14-02E	EX-02.14-02E	RO14		0.375	0.049	BLANKET	Yes
EX-02.14	FWH 35 HEADER	EX-02.14-06E	EX-02.14-06E	RO14		0.375	0.223	BLANKET	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-02.14 FWH 35 HEADER	EX-02.14-06E	U/S Main	RO15		0.375	0.198	BLANKET	Yes
EX-02.14 FWH 35 HEADER	EX-02.14-07P	EX-02.14-07P	RO14		0.375	0.033	Max BAND	No (3)
EX-02.14 FWH 35 HEADER	EX-02.14-08E	EX-02.14-08E	RO14		0.375	0.211	BLANKET	Yes
EX-02.14 FWH 35 HEADER	EX-02.14-08E	EX-02.14-08E-DSX	RO14		0.375	0.026	Max BAND	No(1)
EX-02.14 FWH 35 HEADER	EX-02.14-08E	U/S Main	RO15		0.375	0.139	BLANKET	Yes
EX-02.14 FWH 35 HEADER	EX-02.14-17P	U/S Main	RO15		0.375	0.015	Band	No (1)
EX-02.14 FWH 35 HEADER	EX-02.14-20E	D/S Ext	RO15		0.375	0.026	Band	No (1)
EX-02.14 FWH 35 HEADER	EX-02.14-24E	U/S Main	RO15		0.375	0.197	Blanket	Yes
EX-02.14 FWH 35 HEADER	EX-02.14-25E	D/S Ext	RO15		0.375	0.017	Band	No (1)
EX-02.14 FWH 35 HEADER	EX-02.14-25E	U/S Main	RO15		0.375	0.242	Blanket	Yes
EX-02.14 FWH 35 HEADER	EX-02.14-25E	U/S Main	RO16		0.375	0.099	Max PtP	Yes
EX-02.14 FWH 35 HEADER	EX-02.14-27E	U/S Main	RO15		0.375	0.271	Blanket	Yes
EX-02.14 FWH 35 HEADER	EX-02.14-31P	U/S Main	RO15		0.375	0.030	Band	No (1)
EX-02.14 FWH 35HEADER	EX-02.14-04T	Branch	RO13	05UT032	0.280	0.026	Band	No(2)
EX-02.14 FWH 35HEADER	EX-02.14-04T	DS Main	RO13	05UT032	0.375	0.009	Band	No(2)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-02.14 FWH 35HEADER	EX-02.14-04T	US Main		RO13	05UT032	0.375	0.027	Band	No(2)
EX-02.14 FWH 35HEADER	EX-02.14-14E	Main		RO9		0.375	0.153	Blanket	Yes
EX-02.14 FWH 35HEADER	EX-02.14-16E	Main		RO9		0.375	0.157	Blanket	Yes
EX-02.14 FWH 35HEADER	EX-02.14-18E	Main		RO12	03UT104	0.375	0.146	Blanket	Yes
EX-02.14 FWH 35HEADER	EX-02.14-20E	Main		RO12	03UT104	0.375	0.186	Blanket	Yes
EX-02.14 FWH 35HEADER	EX-02.14-24E	Main		RO12	03UT148	0.375	0.177	Blanket	Yes
EX-02.14 FWH 35HEADER	EX-02.14-25E	Main		RO12	03UT148	0.375	0.210	Blanket	Yes
EX-02.14 FWH 35HEADER	EX-02.14-27E	Main		RO8		0.375	0.192	Blanket	Yes
EX-02.14 FWH 35HEADER	EX-02.14-27E	Main		RO12	03UT148	0.375	0.266	Max P-P+ PastWear	Yes
EX-02.14 FWH 35HEADER	EX-02.14-32T	N/A		RO9		N/A	N/A	N/A	No (15)
EX-02.14 FWH 35HEADER	EX-02.14-32T	Branch		RO12	03UT072	0.250	0.070	Band	No(6)
EX-02.14 FWH 35HEADER	EX-02.14-32T	D/S Main		RO12	03UT072	0.375	0.024	Band	No(1)
EX-02.14 FWH 35HEADER	EX-02.14-32T	U/S Main		RO12	03UT072	0.375	0.030	Band	No(1)
EX-02.14 FWH 35HEADER	EX-02.7-02T	N/A		RO9		N/A	N/A	N/A	No (15)
EX-02.16 HDR 35 to FWH 35A	EX-02.16-01R	D/S Ext		RO15		0.375	0.147	Band	No (11)

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-02.16 HDR 35 to FWH 35A	EX-02.16-01R	D/S Main	RO15		0.312	0.311	Band	No (11)
EX-02.16 HDR 35 to FWH 35A	EX-02.16-01R	U/S Ext	RO15		0.312	0.028	Band	No (11)
EX-02.16 HDR 35 to FWH 35A	EX-02.16-01R	U/S Main	RO15		0.375	0.308	Band	No (11)
EX-02.16 HDR 35 to FWH 35A	EX-02.16-07P	U/S Main	RO15		0.375	0.035	Band	No (11)
EX-02.16 HDR 35 to FWH 35A	EX-02.16-08E	U/S Main	RO15		0.312	0.165	Blanket	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.16-01R	D/S Main	RO8		0.312	0.126	Blanket	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.16-01R	U/S Main	RO8		0.375	0.284	Blanket	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.16-01R	D/S Main	RO10		0.312	0.444	Blanket	No (11)
EX-02.16 HDR 35 toFWH 35A	EX-02.16-01R	U/S Main	RO10		0.375	0.326	Blanket	No (11)
EX-02.16 HDR 35 toFWH 35A	EX-02.16-02P	Main	RO8		0.284	0.077	Band	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.16-02P	N/A	RO8		0.284	0.046	T DAT	No (13)
EX-02.16 HDR 35 toFWH 35A	EX-02.16-02P	Main	RO10		0.284	0.102	Band	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.16-03E	Main	RO8		0.455	0.242	T DAT	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.16-03E	Main	RO10		0.455	0.274	Blanket	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.16-03E	U/S Ext.	RO10		0.284	0.106	Band	No (2)

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-02.16 HDR 35 toFWH 35A	EX-02.16-04P	Entered as D/S Ext. ofEX-02.16-03E	RO8		0.346	0.037	T DAT	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.16-04P	Entered as D/S Ext. ofEX-02.16-03E	RO10		0.346	0.060	Band	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.16-06E	Main	RO8		0.312	0.176	Blanket	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.16-06E	N/A	RO8		0.312	0.255	T DAT	No (13)
EX-02.16 HDR 35 toFWH 35A	EX-02.16-06E	Main	RO9		0.312	0.199	Blanket	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.16-06E	Main	RO10		0.312	0.249	Blanket	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.16-07P	Entered as D/S Ext. ofEX-02.16-06E	RO8		0.380	0.208	Band	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.16-07P	N/A	RO8		0.380	0.196	T DAT	No (13)
EX-02.16 HDR 35 toFWH 35A	EX-02.16-07P	Entered as D/S Ext. ofEX-02.16-06E	RO9		0.380	0.187	Band	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.16-07P	Entered as D/S Ext. ofEX-02.16-06E	RO10		0.380	0.196	Band	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.16-08E	Main	RO8		0.924	0.165	Blanket	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.16-08E	Main	RO8		0.924	0.194	T DAT	No (17)
EX-02.16 HDR 35 toFWH 35A	EX-02.16-08E	Main	RO9		0.924	0.174	Blanket	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-02.16 HDR 35 toFWH 35A	EX-02.16-08E	Main	RO10		0.924	0.181	Blanket	Yes
EX-02.16 HDR 35 toFWH 35A	EX-02.19-01P	N/A	RO8		0.375	0.389	Band	No (3)
EX-02.17 HDR 35 to FWH 35B	EX-02.17-03E	U/S Main	RO16		0.375	0.100	Blanket	Yes
EX-02.17 HDR 35 to FWH 35B	EX-02.17-04P	U/S Main	RO16		0.375	0.048	Band	Yes
EX-02.17 HDR 35 toFWH 35B	EX-02.17-03E	Main	RO8		0.497	0.268	T DAT	Yes
EX-02.17 HDR 35 toFWH 35B	EX-02.17-03E	Main	RO10		0.497	0.313	Blanket	Yes
EX-02.17 HDR 35 toFWH 35B	EX-02.17-04P	Main	RO8		0.378	0.178	T DAT	Yes
EX-02.17 HDR 35 toFWH 35B	EX-02.17-04P	Main	RO10		0.378	0.285	Band	No (11)
EX-02.17 HDR 35 toFWH 35B	EX-02.17-05E	N/A	RO8		0.968	0.226	T DAT	No (13)
EX-02.17 HDR 35 toFWH 35B	EX-02.17-05E	Main	RO9		0.968	0.184	Blanket	Yes
EX-02.17 HDR 35 toFWH 35B	EX-02.17-05E	Main	RO10		0.968	0.247	Blanket	Yes
EX-02.17 HDR 35 toFWH 35B	EX-02.17-06N	Main	RO9		0.293	0.130	Band	Yes
EX-02.18 HDR 35 to FWH 35C	EX-02.18-03E	U/S Main	RO15		0.375	0.155	Blanket	No (11)
EX-02.18 HDR 35 to FWH 35C	EX-02.18-04P	U/S Main	RO15		0.375	0.051	Band	No (11)
EX-02.18 HDR 35 to FWH 35C	EX-02.18-05E	U/S Main	RO15		0.312	0.188	Blanket	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-02.18 HDR 35 to FWH 35C	EX-02.18-06N	U/S Main		RO15		0.312	0.158	Band	No (9)
EX-02.18 HDR 35 toFWH 35C	EX-02.18-03E	Main		RO8		0.480	0.154	T DAT	Yes
EX-02.18 HDR 35 toFWH 35C	EX-02.18-03E	Main		RO10		0.375	0.160	Blanket	No (11)
EX-02.18 HDR 35 toFWH 35C	EX-02.18-04P	Main		RO8		0.346	0.129	T DAT	Yes
EX-02.18 HDR 35 toFWH 35C	EX-02.18-04P	Main		RO10		0.375	0.024	Band	No (1)
EX-02.18 HDR 35 toFWH 35C	EX-02.18-05E	N/A		RO8		0.312	0.207	T DAT	No (3)
EX-02.18 HDR 35 toFWH 35C	EX-02.18-05E	Main		RO10		0.312	0.166	Blanket	Yes
EX-02.2 PSEP 1A 10" to 35 HDR	EX-02.2-01N	Main		RO11	01UT124	0.365	0.013	Band	No (1)
EX-02.2 PSEP 1A 10" to 35 HDR	EX-02.2-01N	U/S Main		RO16		0.365	0.049	Band	No (11)
EX-02.2 PSEP 1A 10" to 35 HDR	EX-02.2-02P	Entered as D/S Ext. ofEX-02.2-01N		RO11	01UT117	0.365	0.191	Band	Yes
EX-02.2 PSEP 1A 10" to 35 HDR	EX-02.2-02P	Entered as U/S Ext. ofEX-02.2-03E		RO11	01 UT1 17	0.365	0.060	Band	No (2)
EX-02.2 PSEP 1A 10" to 35 HDR	EX-02.2-03E	Main		RO11	01 UT1 13	0.365	0.202	Blanket	Yes
EX-02.2 PSEP 1A 10" to 35 HDR	EX-02.2-04P	Entered as D/S Ext. ofEX-02.2-03E		RO11	01UT113	0.365	0.127	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-02.6 PSEP 1A&2Ato 35 HDR	EX-02.2-07T	Branch		RO12	03UT130	0.365	0.043	Blanket	No (3)
EX-02.6 PSEP 1A&2Ato 35 HDR	EX-02.2-07T	D/S Main		RO12	03UT130	0.500	0.166	Blanket	Yes
EX-02.6 PSEP 1A&2Ato 35 HDR	EX-02.2-07T	U/S Main		RO12	03UT130	0.500	0.162	Blanket	Yes
EX-02.7 PSEP 1A&2Ato 35 HDR	EX-02.4-05T	Br. Ext.		RO12	03UT130	0.375	0.048	Band	No(2)
EX-02.7 PSEP 1A&2Ato 35 HDR	EX-02.4-05T	Branch		RO12	03UT130	0.375	0.036	Blanket	No(3)
EX-02.7 PSEP 1A&2Ato 35 HDR	EX-02.4-05T	D/S Main		RO12	03UT130	0.500	0.092	Blanket	No(3)
EX-02.7 PSEP 1A&2Ato 35 HDR	EX-02.4-05T	U/S Main		RO12	03UT130	0.500	0.043	Blanket	No(3)
EX-02.9 PSEP 1 B 10"to 35 HDR	EX-02.9-02P	Entered as U/S Ext ofEX-02.9-03E		RO12	03UT084	0.365	0.124	Band	No(2)
EX-02.9 PSEP 1 B 10"to 35 HDR	EX-02.9-04P	Entered as D/S Ext ofEX-02.9-03E		RO12	03UT084	0.365	0.126	Band	Yes
EX-02.9 PSEP 1 B 10"to 35 HDR	EX-02.9-06P	Entered as D/S Ext ofEX-02.9-05E		RO12	03UT084	0.365	0.107	Band	Yes
EX-02.9 PSEP 1 B 10"to 35 HDR	EX-02.9-07P	Entered as U/S Ext ofEX-02.9-07E		RO12	03UT141	0.365	0.054	Band	No(2)
EX-02.9 PSEP 1 B 10"to 35 HDR	EX-02.9-08P	Entered as D/S Ext ofEX-02.9-07E		RO12	03UT141	0.365	0.083	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-02.9 PSEP 1 B 10"to 35 HDR	EX-02.9-10P	Entered as D/S Ext. of EX-02.9-09E	RO12	03UT141	0.365	0.033	Band	Yes	
EX-02.9 PSEP 1B 10"to 35 HDR	EX-02.9-02P	Main	RO12	03UT151	0.365	N/A	Baseline	No(5)	
EX-02.9 PSEP 1B 10"to 35 HDR	EX-02.9-03E	Main	RO12	03UT084	0.365	0.253	Blanket	Yes	
EX-02.9 PSEP 1B 10"to 35 HDR	EX-02.9-03E	Main	RO12	03UT151	0.365	N/A	Baseline	No(5)	
EX-02.9 PSEP 1B 10"to 35 HDR	EX-02.9-04P	Main	RO12	03UT151	0.365	N/A	Baseline	No(5)	
EX-02.9 PSEP 1B 10"to 35 HDR	EX-02.9-05E	Main	RO12	03UT084	0.365	0.115	Blanket	Yes	
EX-02.9 PSEP 1B 10"to 35 HDR	EX-02.9-05E	Main	RO12	03UT151	0.365	N/A	Baseline	No(5)	
EX-02.9 PSEP 1B 10"to 35 HDR	EX-02.9-06P	Main	RO12	03UT151	0.365	N/A	Baseline	No(5)	
EX-02.9 PSEP 1B 10"to 35 HDR	EX-02.9-07E	Main	RO12	03UT141	0.365	0.191	Blanket	Yes	
EX-02.9 PSEP 1B 10"to 35 HDR	EX-02.9-09E	Main	RO12	03UT141	0.365	0.190	Blanket	Yes	
EX-03. 1 B LP EXT 12to FWH 34B	EX-03.1 B-04P	Entered as U/S Ext. of EX-03.1 B-05T	RO9		0.250	0.111	Band	No (2)	
EX-03. 1 C LP EXT 12to FWH 34C	EX-03.1C-12P	Entered as D/S Ext. of EX-03.1C-11V	RO9		0.250	0.049	Band	Yes	
EX-03. 1 C LP EXT 12to FWH 34C	EX-03.1C-14P	Entered as D/S Ext. of EX-03.1C-13E	RO9		0.250	0.040	Band	Yes	

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-03.1A LP EXT 12 to FWH 34A	EX-03.1A-14E	EX-03.1A-14E	RO14			0.250	0.098	BLANKET	Yes
EX-03.1A LP EXT 12 to FWH 34A	EX-03.1A-14E	EX-03.1A-14E-DSX	RO14			0.250	0.020	Max BAND	No(1)
EX-03.1A LP EXT 12 to FWH 34A	EX-03.1A-14E	EX-03.1A-14E-USX	RO14			0.250	0.023	Max BAND	No(2)
EX-03.1A LP EXT 12 to FWH 34A	EX-03.1A-36E	D/S Ext	RO15			0.250	0.019	Band	No (1)
EX-03.1A LP EXT 12 to FWH 34A	EX-03.1A-36E	U/S Ext	RO15			0.250	0.015	Band	No (1,2)
EX-03.1A LP EXT 12 to FWH 34A	EX-03.1A-36E	U/S Main	RO15			0.250	0.064	Blanket	Yes
EX-03.1A LP EXT 12to FWH 34A	EX-03.1A-35P	N/A	RO8			0.249	0.012	T DAT	No (1)
EX-03.1A LP EXT 12to FWH 34A	EX-03.1A-36E	Main	RO8			0.461	0.079	T DAT	Yes
EX-03.1A LP EXT 12to FWH 34A	EX-03.1A-37P	N/A	RO8			0.253	0.020	T DAT	No (1)
EX-03.1B LP EXT 12to FWH 34B	EX-03.1 B-05T	D/S Main	Cycle 10B			0.250	0.053	Band	No (11)
EX-03.1B LP EXT 12to FWH 34B	EX-03.1B-05T	Branch	RO9			0.280	0.076	Band	No (6)
EX-03.1B LP EXT 12to FWH 34B	EX-03.1B-05T	Branch Ext.	RO9			0.280	0.105	Band	No (2)
EX-03.1B LP EXT 12to FWH 34B	EX-03.1B-05T	D/S Main	RO9			0.250	0.042	Band	Yes
EX-03.1B LP EXT 12to FWH 34B	EX-03.1B-05T	U/S Main	RO9			0.250	0.081	Band	Yes
EX-03.1B LP EXT 12to FWH 34B	EX-03.1B-05T	U/S Main	Cycle 10B			0.250	0.036	Band	No (11)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-03.1B LP EXT 12to FWH 34B	EX-03.1B-06E	Main		RO9		0.250	0.059	Blanket	Yes
EX-03.1B LP EXT 12to FWH 34B	EX-03.1B-32P	N/A		RO8		0.263	0.025	T DAT	No (1)
EX-03.1B LP EXT 12to FWH 34B	EX-03.1B-33E	Main		RO8		0.431	0.046	T DAT	Yes
EX-03.1B LP EXT 12to FWH 34B	EX-03.1B-34P	N/A		RO8		0.263	0.025	T DAT	No (1)
EX-03.1C LP EXT 12to FWH 34C	EX-03.1C-13E	Main		RO9		0.250	0.056	Blanket	Yes
EX-03.1C LP EXT 12to FWH 34C	EX-03.1C-36P	N/A		RO8		0.263	0.025	T DAT	No (1)
EX-03.1C LP EXT 12to FWH 34C	EX-03.1C-37E	Main		RO8		0.439	0.096	T DAT	Yes
EX-03.1C LP EXT 12to FWH 34C	EX-03.1C-38P	N/A		RO8		0.259	0.025	T DAT	No (1)
EX-04. 13 LP EXT 32to FWH 33B	EX-04.12-01P	N/A		RO8		0.313	0.021	T DAT	No (1)
EX-04. 13 LP EXT 32to FWH 33B	EX-04.13-01R	N/A		RO8		0.313	0.759	T DAT	No (3)
EX-04. 13 LP EXT 32to FWH 33B	EX-04.13-01R	D/S Main		RO11	01UT088	0.250	0.576	Band	No (3)
EX-04. 13 LP EXT 32to FWH 33B	EX-04.13-01R	U/S Main		RO11	01UT088	0.313	0.116	Band	Yes
EX-04. 13 LP EXT 32to FWH 33B	EX-04.13-02P	Main		RO8		0.255	0.058	T DAT	Yes
EX-04. 13 LP EXT 32to FWH 33B	EX-04.13-02P	Main		RO11	01UT088	0.255	0.076	Band	Yes
EX-04. 14 LP EXT 32to FWH 33B	EX-04.14-01P	Main		RO8		0.276	0.042	T DAT	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-04.14 LP EXT 32to FWH 33B	EX-04.14-01P	Main		RO9		0.276	0.054	Band	Yes
EX-04.14 LP EXT 32to FWH 33B	EX-04.14-01P	Main		RO11	01UT088	0.276	0.046	Band	Yes
EX-04.14 LP EXT 32to FWH 33B	EX-04.14-02E	Main		RO9		0.250	0.073	Blanket	Yes
EX-04.11 LPEX FWH 33B IN HDR	EX-04.11-08E	EX-04.11-08E		RO14		0.313	0.087	BLANKET	Yes
EX-04.11 LPEX FWH 33B IN HDR	EX-04.11-08E	EX-04.11-08E-USX		RO14		0.313	0.075	Max BAND	No(2)
EX-04.11 LPEX FWH33B IN HDR	EX-04.11-18P	N/A		RO8		0.313	0.016	T DAT	No (1)
EX-04.11 LPEX FWH33B IN HDR	EX-04.11-19T	Branch		RO8		0.259	0.041	T DAT	No (13)
EX-04.11 LPEX FWH33B IN HDR	EX-04.11-19T	N/A		RO8		0.313	0.026	T DAT	No (1)
EX-04.11 LPEX FWH33B IN HDR	EX-04.11-19T	Branch		RO9		0.259	0.057	Band	Yes
EX-04.11 LPEX FWH33B IN HDR	EX-04.11-19T	Branch		RO11	01UT088	0.259	0.047	Blanket	Yes
EX-04.11 LPEX FWH33B IN HDR	EX-04.11-19T	D/S Main		RO11	01UT088	0.313	0.026	Blanket	No (1)
EX-04.11 LPEX FWH33B IN HDR	EX-04.11-19T	U/S Main		RO11	01UT088	0.313	0.020	Blanket	No (1)
EX-04.11 LPEX FWH33B IN HDR	EX-04.11-20P	Main		RO11	01UT088	0.313	0.023	Band	No (1)
EX-04.13 LP EXT 32 to FWH 33B	EX-04.13-01R	D/S Main		RO15		0.250	0.345	Max PTP	No (3)
EX-04.13 LP EXT 32 to FWH 33B	EX-04.13-01R	U/S Main		RO15		0.313	0.011	Max PTP	No (1)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-04.13 LP EXT 32 to FWH 33B	EX-04.13-01R	U/S Main		RO16		0.313	0.023	Max PtP	No (1)
EX-04.13 LP EXT 32 to FWH 33B	EX-04.13-01R	D/S Main		RO16		0.250	0.187	Max PtP	No (3)
EX-04.13 LP EXT 32 to FWH 33B	EX-04.13-01R	U/S Ext.		RO16		0.313	0.025	Band	No (1)
EX-04.13 LP EXT 32 to FWH 33B	EX-04.13-01R	D/S Ext.		RO16		0.250	0.072	Band	No (3)
EX-04.13 LP EXT 32 to FWH 33B	EX-04.13-07T	EX-04.13-07T		RO14		0.250	0.036	Max BAND	No (9)
EX-04.13 LP EXT 32 to FWH 33B	EX-04.13-07T	EX-04.13-07T-BR		RO14		0.154	0.007	SCAN/RT/VT	No(1)
EX-04.18 LPEX FWH33C IN HDR	EX-04.20-15P	N/A		RO8		0.313	0.025	T DAT	No (1)
EX-04.18 LPEX FWH33C IN HDR	EX-04.20-16T	Branch		RO8		0.250	0.034	T DAT	No (17)
EX-04.18 LPEX FWH33C IN HDR	EX-04.20-16T	Run		RO8		0.384	0.046	T DAT	No (3)
EX-04.18 LPEX FWH33C IN HDR	EX-04.20-16T	Branch		Cycle 10B		0.250	0.073	Band	No (3)
EX-04.18 LPEX FWH33C IN HDR	EX-04.20-16T	Branch Ext.		Cycle 10B		0.271	0.048	Band	No (2)
EX-04.18 LPEX FWH33C IN HDR	EX-04.20-16T	D/S Main		Cycle 10B		0.384	0.051	Band	No (3)
EX-04.18 LPEX FWH33C IN HDR	EX-04.20-16T	U/S Ext.		Cycle 10B		0.313	0.025	Band	No (2)
EX-04.18 LPEX FWH33C IN HDR	EX-04.20-16T	U/S Main		Cycle 10B		0.384	0.041	Band	No (3)
EX-04.21 LP EXT 31 to FWH 33C	EX-04.21-01R	EX-04.21-01R-DSX		RO14		0.250	0.098	SCAN/RT/VT	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-04.21 LP EXT 31 to FWH 33C	EX-04.21-01R	D/S Ext		RO15		0.313	0.038	Band	Yes
EX-04.21 LP EXT 31 to FWH 33C	EX-04.21-01R	D/S Main		RO15		0.250	0.605	Band	No (3)
EX-04.21 LP EXT 31 to FWH 33C	EX-04.21-01R	U/S Ext		RO15		0.250	0.110	Band	Yes
EX-04.21 LP EXT 31 to FWH 33C	EX-04.21-01R	U/S Main		RO15		0.313	0.082	Band	Yes
EX-04.21 LP EXT 31to FWH 33C	EX-04.20-17P	N/A		RO8		0.313	0.008	T DAT	No (1)
EX-04.21 LP EXT 31to FWH 33C	EX-04.21-01R	N/A		RO8		0.313	0.643	T DAT	No (3)
EX-04.21 LP EXT 31to FWH 33C	EX-04.21-01R	D/S Main		Cycle 10B		0.250	0.546	Blanket	No (3)
EX-04.21 LP EXT 31to FWH 33C	EX-04.21-01R	U/S Main		Cycle 10B		0.313	0.109	Blanket	Yes
EX-04.21 LP EXT 31to FWH 33C	EX-04.21-02P	Entered as D/S Ext. ofEX-04.21-01R		RO8		0.267	0.058	T DAT	Yes
EX-04.21 LP EXT 31to FWH 33C	EX-04.21-02P	Entered as D/S Ext. ofEX-04.21-01R		Cycle 10B		0.267	0.069	Band	Yes
EX-04.21 LP EXT 31to FWH 33C	EX-04.21-03E	Main		Cycle 10B		0.250	0.118	Blanket	Yes
EX-04.21 LP EXT 31to FWH 33C	EX-04.21-04P	Entered as U/S Ext. ofEX-04.21-05E		RO9		0.250	0.054	Band	No (2)
EX-04.21 LP EXT 31to FWH 33C	EX-04.21-04P	Main		Cycle 13	05UT003	0.250	0.050	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-04.21 LP EXT 31to FWH 33C	EX-04.21-05E	Main		RO9		0.250	0.070	Blanket	Yes
EX-04.21 LP EXT 31to FWH 33C	EX-04.21-07T	D/S Main		Cycle 10B		0.250	0.037	Band	Yes
EX-04.21 LP EXT 31to FWH 33C	EX-04.21-07T	U/S Main		Cycle 10B		0.250	0.073	Band	Yes
EX-04.22 LP EXT 31 to FWH 33C	EX-04.22-03N	U/S Main		RO15		0.250	0.219	Band	No (9)
EX-04.22 LP EXT 31to FWH 33C	EX-04.22-01 P	Main		RO8		0.271	0.037	T DAT	Yes
EX-04.4 LPEX FWH 33A IN HDR	EX-04.2-09T	EX-04.2-09T		RO14		0.313	0.050	Max BAND	No (9)
EX-04.4 LPEX FWH 33A IN HDR	EX-04.2-09T	EX-04.2-09T-BR		RO14		0.250	0.075	Max BAND	Yes
EX-04.4 LPEX FWH 33A IN HDR	EX-04.4-08E	EX-04.4-08E		RO14		0.313	0.094	BLANKET	Yes
EX-04.4 LPEX FWH 33A IN HDR	EX-04.4-08E	EX-04.4-08E-USX		RO14		0.313	0.027	Max BAND	No(2)
EX-04.4 LPEX FWH33A IN HDR	EX-04.4-21P	N/A		RO8		0.313	0.021	T DAT	No (1)
EX-04.4 LPEX FWH33A IN HDR	EX-04.4-22T	Branch		RO8		0.259	0.050	T DAT	No (17)
EX-04.4 LPEX FWH33A IN HDR	EX-04.4-22T	N/A		RO8		0.352	0.030	T DAT	No (1)
EX-04.4 LPEX FWH33A IN HDR	EX-04.4-22T	Branch		Cycle 10B		0.259	0.089	Band	No (3)
EX-04.4 LPEX FWH33A IN HDR	EX-04.4-22T	Branch Ext.		Cycle 10B		0.264	0.044	Band	No (2)
EX-04.4 LPEX FWH33A IN HDR	EX-04.4-22T	D/S Main		Cycle 10B		0.352	0.037	Band	No (3)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-04.4 LPEX FWH33A IN HDR	EX-04.4-22T	U/S Ext.	Cycle 10B			0.313	0.022	Band	No (2)
EX-04.4 LPEX FWH33A IN HDR	EX-04.4-22T	U/S Main	Cycle 10B			0.352	0.026	Band	No (1)
EX-04.4 LPEX FWH33A IN HDR	EX-04.4-22T	Branch	RO13	05UT031		0.259	0.113	Band	No(17)
EX-04.4 LPEX FWH33A IN HDR	EX-04.4-22T	DS Main	RO13	05UT031		0.352	0.039	Band	No(17)
EX-04.4 LPEX FWH33A IN HDR	EX-04.4-22T	US Main	RO13	05UT031		0.352	0.041	Band	No(17)
EX-04.6 LP EXT to FWH 33A	EX-04.6-01R	D/S Ext	RO15			0.250	0.070	Band	Yes
EX-04.6 LP EXT to FWH 33A	EX-04.6-01R	D/S Main	RO15			0.250	0.572	Band	No (3)
EX-04.6 LP EXT to FWH 33A	EX-04.6-01R	U/S Ext	RO15			0.250	0.065	Band	Yes
EX-04.6 LP EXT to FWH 33A	EX-04.6-01R	U/S Main	RO15			0.313	0.095	Band	Yes
EX-04.6 LP EXT to FWH 33A	EX-04.6-04P	U/S Main	RO16			0.250	0.041	Band	Yes
EX-04.6 LP EXT to FWH 33A	EX-04.6-05E	U/S Main	RO16			0.250	0.081	Blanket	Yes
EX-04.6 LP EXT to FWH 33A	EX-04.6-06N	EX-04.6-06N	RO14			0.375	0.077	Max BAND	Yes
EX-04.6 LP EXT toFWH 33A	EX-04.5-01P	N/A	RO8			0.313	0.017	T DAT	No (1)
EX-04.6 LP EXT toFWH 33A	EX-04.6-01R	N/A	RO8			0.313	0.666	T DAT	No (3)
EX-04.6 LP EXT toFWH 33A	EX-04.6-01R	D/S Main	Cycle 10B			0.250	0.552	Blanket	No (3)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-04.6 LP EXT toFWH 33A	EX-04.6-01R	U/S Main		Cycle 10B		0.313	0.115	Blanket	Yes
EX-04.6 LP EXT toFWH 33A	EX-04.6-02P	Entered as D/S Ext. ofEX-04.6-01R		RO8		0.264	0.055	T DAT	Yes
EX-04.6 LP EXT toFWH 33A	EX-04.6-02P	Entered as D/S Ext. ofEX-04.6-01R		Cycle 10B		0.264	0.065	Band	Yes
EX-04.6 LP EXT toFWH 33A	EX-04.6-03E	Main		RO8		0.461	0.149	T DAT	Yes
EX-04.6 LP EXT toFWH 33A	EX-04.6-03E	Main		Cycle 10B		0.461	0.152	Blanket	Yes
EX-04.6 LP EXT toFWH 33A	EX-04.6-04P	Main		RO8		0.279	0.039	T DAT	Yes
EX-04.6 LP EXT toFWH 33A	EX-04.6-04P	Entered as U/S Ext. ofEX-04.6-05E		RO9		0.250	0.042	Band	No (2)
EX-04.6 LP EXT toFWH 33A	EX-04.6-07T	U/S Main		RO8		0.262	0.036	T DAT	No (17)
EX-04.6 LP EXT toFWH 33A	EX-04.6-07T	D/S Main		Cycle 10B		0.262	0.027	Band	No (1)
EX-04.6 LP EXT toFWH 33A	EX-04.6-07T	U/S Main		Cycle 10B		0.262	0.029	Band	No (1)
EX-04.7 LP EXT to FWH 33A	EX-04.7-01P	U/S Main		RO16		0.250	0.035	Band	Yes
EX-04.7 LP EXT toFWH 33A	EX-04.7-01 P	Main		RO8		0.264	0.042	T DAT	Yes
EX-05.1B LP EXT 16to FWH 32B	EX-05.1B-01N	Main		RO13	05UT095	0.250	0.039	Band	No(9)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
EX-05.1B LP EXT 16to FWH 32B	EX-05.1B-02P	Main		RO13	05UT095	0.250	0.070	Band	No (10)
EX-05.1B LP EXT 16to FWH 32B	EX-05.1B-03E	Main		RO13	05UT095	0.250	0.061	Blanket	Yes
EX-05.1B LP EXT 16to FWH 32B	EX-05.1B-04N	Main		RO13	05UT095	0.375	0.072	Band	Yes
EX-05.1C LP EXT 16 to FWH 32C	EX-05.1C-04N	EX-05.1C-04N		RO14		0.375	0.086	SCAN/RT/VT	Yes
EX-05.2B LP EXT 15 to FWH 32B	EX-05.2B-06N	U/S Main		RO16		0.250	0.013	Band	No (1)
EX-05.2B LP EXT 15to FWH 32B	EX-05.2B-01N	Main		RO13	05UT105	0.250	0.104	Band	Yes
EX-05.2B LP EXT 15to FWH 32B	EX-05.2B-02E	Main		RO13	05UT105	0.250	0.111	Blanket	Yes
EX-05.2B LP EXT 15to FWH 32B	EX-05.2B-03E	Main		RO13	05UT105	0.250	0.093	Blanket	Yes
EX-05.2B LP EXT 15to FWH 32B	EX-05.2B-04P	Main		RO13	05UT105	0.250	0.134	Band	Yes
EX-05.2B LP EXT 15to FWH 32B	EX-05.2B-05E	Main		RO13	05UT105	0.250	0.163	Blanket	Yes
EX-05.2B LP EXT 15to FWH 32B	EX-05.2B-06N	Main		RO13	05UT105	0.375	0.133	Band	Yes
EX-05.2C LP EXT 15 to FWH 32C	EX-05.2C-06N	EX-05.2C-06N		RO14		0.375	0.032	SCAN/RT/VT	No (8)
EX-06.2A LP EXT 17 to FWH 31A	EX-06.2A-04N	U/S Main		RO16		0.313	0.089	Band	Yes
EX-06.3A LP EXT 20 to FWH 31A	EX-06.3A-05N	U/S Main		RO16		0.313	0.105	Band	Yes
FW-01 .1 B BFP 32 toRCIRC T	FW-01.1B-01N	Main		RO8		1.031	0.041	Band	No (1)

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-01 .1 B BFP 32 to RCIRC T	FW-01.1B-02P	Entered as D/S Ext. of FW-01.1B-01N	RO8		1.176	0.128	Band	
FW-01 .1 B BFP 32 to RCIRC T	FW-01.1B-02P	Entered as D/S Ext. of FW-01.1B-01N	RO8		1.176	0.128	Band	Yes
FW-01 .1 B BFP 32 to RCIRC T	FW-01.1B-02P	Entered as U/S Ext. of FW-01.1B-03R	RO11	01UT087	1.176	0.032	Band	
FW-01 .1 B BFP 32 to RCIRC T	FW-01.1B-02P	Entered as U/S Ext. of FW-01.1B-03R	RO11	01UT087	1.176	0.032	Band	No (2)
FW-01 .1 B BFP 32 to RCIRC T	FW-01.1B-03R	D/S Main	RO8		1.031	0.086	Band	Yes
FW-01 .1 B BFP 32 to RCIRC T	FW-01.1B-03R	U/S Main	RO8		1.095	0.078	Band	Yes
FW-01 .1 B BFP 32 to RCIRC T	FW-01.1B-03R	D/S Main	RO11	01UT087	1.031	0.094	Band	Yes
FW-01 .1 B BFP 32 to RCIRC T	FW-01.1B-03R	U/S Main	RO11	01UT087	1.095	0.092	Band	
FW-01 .1 B BFP 32 to RCIRC T	FW-01.1B-03R	U/S Main	RO11	01UT087	1.095	0.092	Band	Yes
FW-01 .1 B BFP 32 to RCIRC T	FW-01.1B-03R	D/S Main	RO15		1.095	0.068	Band	No (8)
FW-01 .1 B BFP 32 to RCIRC T	FW-01.1B-03R	U/S Main	RO15		1.031	0.027	Band	No (1)
FW-01 .1 B BFP 32 to RCIRC T	FW-01.2B-01E	Main	RO8		1.031	0.208	Blanket	Yes
FW-01 .1 B BFP 32 to RCIRC T	FW-01.2B-03E	Main	RO8		1.251	0.199	Blanket	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-01 .1 B BFP 32 to RCIRC T	FW-01.2B-03E	N/A	RO8		1.251	0.208	T DAT	No (13)
FW-01 .1 B BFP 32 to RCIRC T	FW-01.2B-04P	Entered as D/S Ext. of FW-01.2B-03E	RO8		1.032	0.078	Band	Yes
FW-01 .1 B BFP 32 to RCIRC T	FW-01.2B-04P	N/A	RO8		1.032	0.053	T DAT	No (13)
FW-01 .1 B BFP 32 to RCIRC T	FW-01.2B-05T	D/S Main	RO8		1.036	0.024	Band	No (1)
FW-01 .1 B BFP 32 to RCIRC T	FW-01.2B-05T	N/A	RO8		1.036	0.036	T DAT	No (1)
FW-01 .1 B BFP 32 to RCIRC T	FW-01.2B-05T	U/S Main	RO8		1.036	0.043	Band	No (1)
FW-01 .2A BFP31RCIRC T to HDR	FW-01 .2A-04P	Main	RO8		1.039	0.059	T DAT	Yes
FW-01 .2A BFP31RCIRC T to HDR	FW-01 .2A-23P	Main	RO8		1.053	0.078	T DAT	Yes
FW-01 .2B BFP32RCIRC T to HDR	FW-01 .2B-06P	Entered as D/S Ext. of FW-01.2B-05T	RO8		1.057	0.043	Band	No (1)
FW-01 .2B BFP32RCIRC T to HDR	FW-01 .2B-06P	N/A	RO8		1.057	0.053	T DAT	No (13)
FW-01 .2B BFP32RCIRC T to HDR	FW-01 .2B-27R	D/S Main	RO8		1.031	0.096	T DAT	No (17)
FW-01 .2B BFP32RCIRC T to HDR	FW-01 .2B-27R	U/S Ext.	RO10	99UT271	1.031	0.062	Band	No (2)
FW-01 .2B BFP32RCIRC T to HDR	FW-01.2B-27R	D/S Main	RO10	99UT271	1.260	0.113	Band	Yes
FW-01 .2B BFP32RCIRC T to HDR	FW-01.2B-27R	U/S Main	RO10	99UT271	1.031	0.100	Band	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-01 .3 BFPPDISCHARGE HDR	FW-01 .3-05P	Entered as U/S Ext. ofFW-01.3-06E	RO9		1.260	0.084	Band	No (2)
FW-01 .3 BFPPDISCHARGE HDR	FW-01.3-02P	Entered as D/S Ext. ofFW-01.3-01T	RO8		1.371	0.061	Band	Yes
FW-01 .3 BFPPDISCHARGE HDR	FW-01.3-02P	Entered as D/S Ext. ofFW-01.3-01T	RO10	99UT271	1.371	0.035	Band	No (1)
FW-01 .3 BFPPDISCHARGE HDR	FW-01.3-07P	Entered as D/S Ext. ofFW-01.3-06E	RO9		1.260	0.068	Band	Yes
FW-01 .3 BFPPDISCHARGE HDR	FW-01.3-09P	Entered as D/S Ext. ofFW-01.3-08E	RO9		1.260	0.082	Band	Yes
FW-01 .3 BFPPDISCHARGE HDR	FW-01.3-09P	Entered as the U/S Ext ofFW-01.3-10E	RO12	03UT112	1.260	0.026	Band	No(1)
FW-01 .3 BFPPDISCHARGE HDR	FW-01.3-11P	Entered as the D/S Ext ofFW-01.3-10E	RO12	03UT112	1.260	0.034	Band	No(1)
FW-01 .3 BFPPDISCHARGE HDR	FW-01.3-11P	Entered as US Ext ofFW-01.3-12E	RO13	05UT094	1.260	0.043	Band	No(1)
FW-01 .3 BFPPDISCHARGE HDR	FW-01.3-13P	Entered as DS Ext ofFW-01.3-12E	RO13	05UT094	1.260	0.084	Band	Yes
FW-01 .3 BFPPDISCHARGE HDR	FW-01.3-16P	Entered as D/S Ext. ofFW-01.3-15E	RO11	01UT127	1.260	0.064	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-01 .3 BFPDISCHARGE HDR	FW-01.3-18P	Entered as U/S Ext. ofFW-01.4-01T	RO8			1.348	0.028	Band	No (1)
FW-01 .3 BFPDISCHARGE HDR	FW-01.3-18P	Entered as U/S Ext. ofFW-01.4-01T	RO9			1.348	0.054	Band	No (1)
FW-01 .3 BFPDISCHARGE HDR	FW-01.3-18P	Entered as DS Ext ofFW-01.3-17T	RO13	05UT050		1.348	0.030	Band	No(2)
FW-01 .4 BFPDISCHARGE HDR	FW-01.4-02P	Entered as D/S Ext. ofFW-01.4-01T	RO8			1.341	0.039	Band	No (1)
FW-01 .4 BFPDISCHARGE HDR	FW-01.4-02P	Entered as D/S Ext. ofFW-01.4-01T	RO9			1.341	0.060	Band	No (1)
FW-01 .4 BFPDISCHARGE HDR	FW-01.4-02P	Entered as U/S Ext. ofFW-01.5-01T	RO11	01UT126		1.341	0.051	Band	No (2)
FW-01 .6A BFP HDRto FWH 36A	FW-01 .6A-01 R	N/A	RO8			1.260	0.906	T DAT	No (3)
FW-01 .6A BFP HDRto FWH 36A	FW-01 .6A-01 R	D/S Main	RO11	01 UT1 26		0.938	0.396	Band	No (3)
FW-01 .6A BFP HDRto FWH 36A	FW-01 .6A-02P	Entered as D/S Ext. ofFW-01.6A-01 R	RO8			1.009	0.096	T DAT	Yes
FW-01 .6A BFP HDRto FWH 36A	FW-01.6A-01R	U/S Main	RO11	01UT126		1.260	0.152	Band	No (8)
FW-01 .6A BFP HDRto FWH 36A	FW-01.6A-02P	Entered as D/S Ext. ofFW-01.6A-01R	RO11	01UT126		1.009	0.059	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-01 .6B BFP HDRto FWH 36B	FW-01.6B-07P	Entered as the D/S Ext of FW-01.6B-06E	RO12	03UT123	0.938	0.085	Band	Yes	
FW-01 .6C BFP HDRto FWH 36C	FW-01 .6C-02P	Main	RO8		0.938	0.086		Yes	
FW-01 .6C BFP HDRto FWH 36C	FW-01.6C-02P	Entered as Br Ext. ofFW-01.4-01T	RO8		0.938	0.043	Band	No (1)	
FW-01 .6C BFP HDRto FWH 36C	FW-01.6C-02P	Entered as Br Ext. ofFW-01.4-01T	RO9		0.938	0.058	Band	No (2)	
FW-01.1A BFP 31 to RCIRC T	FW-01.2A-01E	U/S Main	RO15		1.031	0.283	Blanket	Yes	
FW-01.1A BFP 31 to RCIRC T	FW-01.2A-03T	U/S Main	RO16		1.031	0.050	Band	No (1)	
FW-01.1A BFP 31 to RCIRC T	FW-01.2A-03T	D/S Main	RO16		1.031	0.061	Band	Yes	
FW-01.1A BFP 31 to RCIRC T	FW-01.2A-03T	Branch	RO16		0.864	0.088	Band	No (6)	
FW-01.1A BFP 31 toRCIRC T	FW-01 .2A-03T	U/S Ext.	RO8		1.043	0.052	T DAT	No (2)	
FW-01.1A BFP 31 toRCIRC T	FW-01.1A-01N	Main	RO8		1.031	0.082	Band	No (3)	
FW-01.1A BFP 31 toRCIRC T	FW-01.1A-01N	Main	RO13	05UT080	1.031	0.594	Band	No(11)	
FW-01.1A BFP 31 toRCIRC T	FW-01.1A-02P	Entered as D/S Ext. ofFW-01.1A-01N	RO8		1.075	0.058	Band	Yes	
FW-01.1A BFP 31 toRCIRC T	FW-01.1A-02P	Main	RO13	05UT080	1.075	0.085	Band	Yes	

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-01.1A BFP 31 to RCIRC T	FW-01.1A-03R	D/S Main	RO8		1.031	0.094	Band	Yes
FW-01.1A BFP 31 to RCIRC T	FW-01.1A-03R	U/S Main	RO8		1.095	0.067	Band	Yes
FW-01.1A BFP 31 to RCIRC T	FW-01.1A-03R	DS Main	RO13	05UT080	1.031	0.065	Band	Yes
FW-01.1A BFP 31 to RCIRC T	FW-01.1A-03R	US Main	RO13	05UT080	1.095	0.086	Band	Yes
FW-01.1A BFP 31 to RCIRC T	FW-01.2A-01E	Main	RO8		1.031	0.165	Blanket	Yes
FW-01.1A BFP 31 to RCIRC T	FW-01.2A-02P	Entered as D/S Ext. of FW-01.2A-01E	RO8		1.043	0.058	Band	Yes
FW-01.1A BFP 31 to RCIRC T	FW-01.2A-03T	N/A	RO8		1.039	0.048	T DAT	No (1)
FW-01.1B BFP 32 to RCIRC T	FW-01.1B-01N	U/S Main	RO15		1.031	0.068	Band	No (11)
FW-01.1B BFP 32 to RCIRC T	FW-01.2B-03E	D/S Ext	RO15		1.031	0.065	Band	Yes
FW-01.1B BFP 32 to RCIRC T	FW-01.2B-03E	U/S Ext	RO15		1.031	0.086	Band	No (2)
FW-01.1B BFP 32 to RCIRC T	FW-01.2B-03E	U/S Main	RO15		1.031	0.148	Blanket	Yes
FW-01.2A BFP31 RCIRC T to HDR	FW-01.2A-04P	U/S Main	RO15		1.031	0.044	Band	Yes
FW-01.2A BFP31 RCIRC T to HDR	FW-01.2A-10E	U/S Main	RO16		1.031	0.149	Blanket	Yes
FW-01.2A BFP31 RCIRC T to HDR	FW-01.2A-10E	U/S Ext.	RO16		1.031	0.090	Band	No (2)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-01.2A BFP31 RCIRC T to HDR	FW-01.2A-10E	D/S Ext.		RO16		1.031	0.081	Band	Yes
FW-01.2A BFP31 RCIRC T to HDR	FW-01.2A-23P	U/S Main		RO16		1.031	0.070	Band	Yes
FW-01.2B BFP32 RCIRC T to HDR	FW-01.2B-27R	U/S Main		RO16		1.031	0.117	Band	Yes
FW-01.2B BFP32 RCIRC T to HDR	FW-01.2B-27R	D/S Main		RO16		1.260	0.130	Band	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-03E	U/S Main		RO15		1.260	0.238	Blanket	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-04E	U/S Main		RO15		1.260	0.230	Blanket	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-05P	U/S Main		RO15		1.260	0.043	Band	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-06E	U/S Ext		RO15		1.260	0.152	Band	No (2)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-06E	U/S Main		RO15		1.260	0.214	Blanket	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-08E	D/S Ext		RO15		1.260	0.058	Band	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-08E	U/S Main		RO15		1.260	0.189	Blanket	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-13P	FW-01.3-13P		RO14		1.260	0.025	Max BAND	No(1)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-14E	FW-01.3-14E		RO14		1.260	0.196	BLANKET	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-15E	U/S Main		RO16		1.260	0.121	Max PtP	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.4-01T	Branch		RO15		0.938	0.204	Band	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-01.3 BFP DISCHARGE HDR	FW-01.4-01T	D/S Main	RO15		1.260	0.021	Band	No (1)
FW-01.3 BFP DISCHARGE HDR	FW-01.4-01T	U/S Main	RO15		1.260	0.017	Band	No (1)
FW-01.3 BFPDISCHARGE HDR	FW-01.3-01T	Br. Ext.	RO8		1.053	0.061	Band	No (2)
FW-01.3 BFPDISCHARGE HDR	FW-01.3-01T	Branch	RO8		1.042	0.091	Band	Yes
FW-01.3 BFPDISCHARGE HDR	FW-01.3-01T	D/S Main	RO8		1.375	0.069	Band	Yes
FW-01.3 BFPDISCHARGE HDR	FW-01.3-01T	N/A	RO8		1.375	0.036	T DAT	No (1)
FW-01.3 BFPDISCHARGE HDR	FW-01.3-01T	N/A	RO8		1.042	0.089	T DAT	No (13)
FW-01.3 BFPDISCHARGE HDR	FW-01.3-01T	U/S Ext.	RO8		1.375	0.145	Band	No (2)
FW-01.3 BFPDISCHARGE HDR	FW-01.3-01T	U/S Main	RO8		1.375	0.061	Band	No (1)
FW-01.3 BFPDISCHARGE HDR	FW-01.3-01T	Br. Ext.	RO10	99UT271	1.053	0.052	Band	No (2)
FW-01.3 BFPDISCHARGE HDR	FW-01.3-01T	Branch	RO10	99UT271	1.042	0.095	Band	Yes
FW-01.3 BFPDISCHARGE HDR	FW-01.3-01T	D/S Main	RO10	99UT271	1.375	0.026	Band	No (1)
FW-01.3 BFPDISCHARGE HDR	FW-01.3-01T	U/S Main	RO10	99UT271	1.375	0.047	Band	No (1)
FW-01.3 BFPDISCHARGE HDR	FW-01.3-02P	N/A	RO8		1.371	0.029	T DAT	No (1)
FW-01.3 BFPDISCHARGE HDR	FW-01.3-03E	Main	RO8		1.514	0.185	Blanket	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-01.3 BFPDISCHARGE HDR	FW-01.3-03E	N/A	RO8		1.514	0.204	T DAT	No (13)
FW-01.3 BFPDISCHARGE HDR	FW-01.3-04E	Main	RO8		1.638	0.225	Blanket	Yes
FW-01.3 BFPDISCHARGE HDR	FW-01.3-06E	Main	RO9		1.260	0.233	Blanket	Yes
FW-01.3 BFPDISCHARGE HDR	FW-01.3-08E	Main	RO9		1.260	0.242	Blanket	Yes
FW-01.3 BFPDISCHARGE HDR	FW-01.3-10E	Main	RO12	03UT112	1.260	0.210	Blanket	Yes
FW-01.3 BFPDISCHARGE HDR	FW-01.3-12E	Main	RO13	05UT094	1.260	0.227	Blanket	Yes
FW-01.3 BFPDISCHARGE HDR	FW-01.3-15E	Main	RO11	01UT127	1.260	0.216	Blanket	Yes
FW-01.3 BFPDISCHARGE HDR	FW-01.3-17T	Branch	RO13	05UT050	0.938	0.122	Band	Yes
FW-01.3 BFPDISCHARGE HDR	FW-01.3-17T	DS Main	RO13	05UT050	1.260	0.047	Band	Yes
FW-01.3 BFPDISCHARGE HDR	FW-01.3-17T	US Main	RO13	05UT050	1.260	0.044	Band	Yes
FW-01.3 BFPDISCHARGE HDR	FW-01.3-18P	N/A	RO8		1.348	0.061	T DAT	No (1)
FW-01.3 BFPDISCHARGE HDR	FW-01.4-01T	Branch	RO8		1.019	0.210	Band	Yes
FW-01.3 BFPDISCHARGE HDR	FW-01.4-01T	D/S Main	RO8		1.351	0.032	Band	No (1)
FW-01.3 BFPDISCHARGE HDR	FW-01.4-01T	N/A	RO8		1.351	0.074	T DAT	No (13)
FW-01.3 BFPDISCHARGE HDR	FW-01.4-01T	N/A	RO8		1.019	0.209	T DAT	No (13)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-01.3 BFPDISCHARGE HDR	FW-01.4-01T	U/S Main		RO8		1.351	0.028	Band	No (1)
FW-01.3 BFPDISCHARGE HDR	FW-01.4-01T	Branch		RO9		1.019	0.227	Band	Yes
FW-01.3 BFPDISCHARGE HDR	FW-01.4-01T	D/S Main		RO9		1.351	0.057	Band	No (1)
FW-01.3 BFPDISCHARGE HDR	FW-01.4-01T	U/S Main		RO9		1.351	0.042	Band	No (1)
FW-01.4 BFP DISCHARGE HDR	FW-01.5-01T	Branch		RO15		0.938	0.167	Band	Yes
FW-01.4 BFP DISCHARGE HDR	FW-01.5-01T	D/S Main		RO15		1.260	0.049	Band	Yes
FW-01.4 BFP DISCHARGE HDR	FW-01.5-01T	U/S Main		RO15		1.260	0.055	Band	No (9)
FW-01.4 BFPDISCHARGE HDR	FW-01.4-02P	N/A		RO8		1.341	0.064	T DAT	No (13)
FW-01.4 BFPDISCHARGE HDR	FW-01.5-01T	Branch		RO8		1.015	0.189	T DAT	Yes
FW-01.4 BFPDISCHARGE HDR	FW-01.5-01T	U/S Main		RO8		1.385	0.074	T DAT	Yes
FW-01.4 BFPDISCHARGE HDR	FW-01.5-01T	Branch		RO11	01UT126	1.015	0.190	Band	Yes
FW-01.4 BFPDISCHARGE HDR	FW-01.5-01T	D/S Main		RO11	01UT126	1.385	0.045	Band	Yes
FW-01.4 BFPDISCHARGE HDR	FW-01.5-01T	U/S Main		RO11	01UT126	1.385	0.059	Band	Yes
FW-01.6A BFP HDR to FWH 36A	FW-01.6A-12N	FW-01.6A-12N		RO14		0.938	0.101	Max BAND	Yes
FW-01.6B BFP HDRto FWH 36B	FW-01 .6B-02P	Main		RO8		0.930	0.088	T DAT	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-01.6B BFP HDRto FWH 36B	FW-01.6B-02P	Main		RO11	01UT129	0.930	0.075	Band	Yes
FW-01.6B BFP HDRto FWH 36B	FW-01.6B-06E	Main		RO12	03UT123	0.938	0.155	Blanket	Yes
FW-01.6B BFP HDRto FWH 36B	FW-01.6B-08E	Main		RO12	03UT123	0.938	0.100	Blanket	Yes
FW-01.6B BFP HDRto FWH 36B	FW-01.6B-10N	Main		RO12	03UT123	0.938	0.087	Band	Yes
FW-01.6C BFP HDR to FWH 36C	FW-01.6C-02P	U/S Main		RO15		0.938	0.054	Band	Yes
FW-01.6C BFP HDR to FWH 36C	FW-01.6C-10N	FW-01.6C-10N		RO14		0.938	0.051	Max BAND	No (7)
FW-02.1 B FWH 36B toSG HDR	FW-02.1B-03P	Entered as the D/S Extof FW-02.1B-02E		RO12	03UT102	0.938	0.061	Band	Yes
FW-02.1 B FWH 36B toSG HDR	FW-02.1B-06P	Entered as the D/S Extof FW-02.1B-05V		RO12	03UT102	0.938	0.112	Band	Yes
FW-02.1A FWH 36A to SG HDR	FW-02.1A-01N	FW-02.1A-01N		RO14		0.938	0.000		No(1)
FW-02.1A FWH 36A to SG HDR	FW-02.1A-02E	FW-02.1A-02E		RO14		0.938	0.115	BLANKET	Yes
FW-02.1A FWH 36A to SG HDR	FW-02.1A-03P	FW-02.1A-03P		RO14		0.938	0.064	Max BAND	Yes
FW-02.1A FWH 36A to SG HDR	FW-02.1A-04E	FW-02.1A-04E		RO14		0.938	0.183	BLANKET	Yes
FW-02.1A FWH 36A to SG HDR	FW-02.1A-09E	U/S Main		RO15		0.938	0.189	Blanket	Yes
FW-02.1A FWH 36A to SG HDR	FW-02.1A-10P	U/S Main		RO15		0.938	0.203	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-02.1A FWH 36A to SG HDR	FW-02.1A-11E	D/S Ext	RO15			0.938	0.046	Band	Yes
FW-02.1A FWH 36A to SG HDR	FW-02.1A-11E	U/S Main	RO15			0.938	0.122	Blanket	Yes
FW-02.1A FWH 36A toSG HDR	FW-02.1A-11E	Main	RO10	99UT247		0.938	0.125	Blanket	Yes
FW-02.1A FWH 36A toSG HDR	FW-02.1A-11E	U/S Ext.	RO10	99UT247		0.938	0.204	Band	No (2)
FW-02.1A FWH 36A toSG HDR	FW-02.1A-12P	Entered as D/S Ext. ofFW-02.1A-11E	RO10	99UT247		0.938	0.119	Band	Yes
FW-02.1A FWH 36A toSG HDR	FW-02.1A-13R	D/S Main	RO8			1.260	0.151	T DAT	No (17)
FW-02.1A FWH 36A toSG HDR	FW-02.1A-13R	D/S Main	RO10	99UT270		1.260	0.152	Band	No (7)
FW-02.1A FWH 36A toSG HDR	FW-02.1A-13R	U/S Main	RO10	99UT270		0.938	0.108	Band	Yes
FW-02.1B FWH 36B to SG HDR	FW-02.1B-10P	U/S Main	RO15			0.938	0.122	Band	Yes
FW-02.1B FWH 36B toSG HDR	FW-02.1B-01N	Main	RO12	03UT102		0.938	0.041	Band	No(1)
FW-02.1B FWH 36B toSG HDR	FW-02.1B-02E	Main	RO12	03UT102		0.938	0.283	Blanket	Yes
FW-02.1B FWH 36B toSG HDR	FW-02.1B-04E	Main	RO12	03UT102		0.938	0.249	Blanket	Yes
FW-02.1B FWH 36B toSG HDR	FW-02.1B-10P	Main	RO8			0.965	0.125	T DAT	Yes
FW-02.1C FWH 36C to SG HDR	FW-02.1C-10P	U/S Main	RO16			0.938	0.058	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-02.1C FWH 36Cto SG HDR	FW-02.1C-01N	Main	RO13	05UT052	0.938	0.156	Band	Yes	
FW-02.1C FWH 36Cto SG HDR	FW-02.1C-02E	Main	RO13	05UT052	0.938	0.280	Blanket	Yes	
FW-02.1C FWH 36Cto SG HDR	FW-02.1C-03P	Main	RO13	05UT052	0.938	0.050	Band	Yes	
FW-02.1C FWH 36Cto SG HDR	FW-02.1C-10P	Main	RO8		0.998	0.091	T DAT	Yes	
FW-02.3 SG INLETHEADER	FW-02.1B-11T	Branch	RO8		0.974	0.059	T DAT	Yes	
FW-02.3 SG INLETHEADER	FW-02.1B-11T	U/S Main	RO8		1.398	0.071	T DAT	Yes	
FW-02.3 SG INLETHEADER	FW-02.1B-11T	Br. Ext.	RO10	99UT270	0.965	0.098	Band	No (2)	
FW-02.3 SG INLETHEADER	FW-02.1B-11T	Branch	RO10	99UT270	0.974	0.071	Band	Yes	
FW-02.3 SG INLETHEADER	FW-02.1B-11T	D/S Ext.	RO10	99UT270	1.380	0.038	Band	No (1)	
FW-02.3 SG INLETHEADER	FW-02.1B-11T	D/S Main	RO10	99UT270	1.398	0.035	Band	No (1)	
FW-02.3 SG INLETHEADER	FW-02.1B-11T	U/S Main	RO10	99UT270	1.398	0.030	Band	No (1)	
FW-02.3 SG INLETHEADER	FW-02.3-01P	N/A	RO8		1.380	0.055	T DAT	No (1)	
FW-02.4 SG INLET HEADER	FW-02.1C-11T	U/S Main	RO16		1.260	0.065	Band	No (9)	
FW-02.4 SG INLET HEADER	FW-02.1C-11T	D/S Main	RO16		1.260	0.084	Band	No (9)	
FW-02.4 SG INLET HEADER	FW-02.1C-11T	Branch	RO16		0.944	0.054	Band	No (9)	

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-02.4 SG INLET HEADER	FW-02.1C-11T	Branch Ext.	RO16		0.944	0.069	Band	No (9)
FW-02.4 SG INLET HEADER	FW-02.4-05E	U/S Main	RO16		1.260	0.064	Max PtP	Yes
FW-02.4 SG INLET HEADER	FW-02.4-05E	U/S Ext.	RO16		1.260	0.127	Band	No (2)
FW-02.4 SG INLET HEADER	FW-02.4-05E	D/S Ext.	RO16		1.260	0.094	Band	Yes
FW-02.4 SG INLET HEADER	FW-02.4-07E	U/S Main	RO16		1.260	0.158	Blanket	Yes
FW-02.4 SG INLET HEADER	FW-02.4-08P	U/S Main	RO16		1.260	0.041	Band	No (1)
FW-02.4 SG INLET HEADER	FW-02.4-09E	D/S Ext.	RO15		1.260	0.035	Band	Yes
FW-02.4 SG INLET HEADER	FW-02.4-09E	U/S Main	RO15		1.260	0.192	Blanket	Yes
FW-02.4 SG INLET HEADER	FW-02.4-11E	FW-02.4-11E	RO14		1.260	0.206	BLANKET	Yes
FW-02.4 SG INLET HEADER	FW-02.4-11E	FW-02.4-11E-DSX	RO14		1.260	0.026	Max BAND	No(1)
FW-02.4 SG INLET HEADER	FW-02.4-11E	FW-02.4-11E-USX	RO14		1.260	0.052	Max BAND	No(2)
FW-02.4 SG INLET HEADER	FW-02.4-19T	U/S Main	RO16		1.260	0.027	Max PtP	No (1)
FW-02.4 SG INLET HEADER	FW-02.4-19T	D/S Main	RO16		1.260	0.041	Band	No (1)
FW-02.4 SG INLET HEADER	FW-02.4-19T	Branch	RO16		0.944	0.140	Band	Yes
FW-02.4 SG INLET HEADER	FW-02.4-19T	D/S Ext.	RO16		1.260	0.037	Band	No (1)

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-02.4 SG INLETHEADER	FW-02.4-19T	Branch Ext.	RO16		0.944	0.119	Band	No (2)
FW-02.4 SG INLETHEADER	FW-02.1C-11T	Branch	RO8		0.975	0.066	T DAT	No (17)
FW-02.4 SG INLETHEADER	FW-02.1C-11T	N/A	RO8		1.375	0.041	T DAT	No (1)
FW-02.4 SG INLETHEADER	FW-02.4-01P	N/A	RO8		1.359	0.051	T DAT	No (14)
FW-02.4 SG INLETHEADER	FW-02.4-02T	Branch	RO13	05UT071	0.944	0.110	Band	Yes
FW-02.4 SG INLETHEADER	FW-02.4-02T	DS Main	RO13	05UT071	1.260	0.043	Band	Yes
FW-02.4 SG INLETHEADER	FW-02.4-02T	US Main	RO13	05UT071	1.260	0.053	Band	Yes
FW-02.4 SG INLETHEADER	FW-02.4-04E	Main	RO9		1.260	0.091	Blanket	Yes
FW-02.4 SG INLETHEADER	FW-02.4-05E	Main	RO9		1.260	0.238	Blanket	Yes
FW-02.4 SG INLETHEADER	FW-02.4-06P	Entered as D/S Ext. of FW-02.4-05E	RO9		1.260	0.069	Band	Yes
FW-02.4 SG INLETHEADER	FW-02.4-14P	Entered as the U/S Ext of FW-02.4-15E	RO12	03UT081	1.260	0.014	Band	No(1,2)
FW-02.4 SG INLETHEADER	FW-02.4-15E	Main	RO12	03UT081	1.260	0.212	Blanket	Yes
FW-02.4 SG INLETHEADER	FW-02.4-16P	Entered as the D/S Ext of FW-02.4-15E	RO12	03UT081	1.260	0.044	Band	No(1)

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-02.4 SG INLETHEADER	FW-02.4-16P	Entered as US Ext ofFW-02.4-17E	RO13	05UT057	1.260	0.173	Band	No(1)
FW-02.4 SG INLETHEADER	FW-02.4-17E	Main	RO13	05UT057	1.260	0.145	Blanket	Yes
FW-02.4 SG INLETHEADER	FW-02.4-18P	N/A	RO8		1.365	0.027	T DAT	No (1)
FW-02.4 SG INLETHEADER	FW-02.4-18P	Entered as DS Ext ofFW-02.4-17E	RO13	05UT057	1.365	0.040	Band	Yes
FW-02.4 SG INLETHEADER	FW-02.4-19T	Branch	RO8		0.974	0.131	T DAT	Yes
FW-02.4 SG INLETHEADER	FW-02.4-19T	N/A	RO8		1.368	0.026	T DAT	No (1)
FW-02.4 SG INLETHEADER	FW-02.4-19T	Br. Ext.	RO10	99UT269	0.968	0.096	Band	No (2)
FW-02.4 SG INLETHEADER	FW-02.4-19T	Branch	RO10	99UT269	0.974	0.145	Band	Yes
FW-02.4 SG INLETHEADER	FW-02.4-19T	D/S Main	RO10	99UT269	1.368	0.033	Band	No (1)
FW-02.4 SG INLETHEADER	FW-02.4-19T	U/S Ext.	RO10	99UT269	1.365	0.022	Band	No (2)
FW-02.4 SG INLETHEADER	FW-02.4-19T	U/S Main	RO10	99UT269	1.368	0.022	Band	No (1)
FW-02.5 SG INLET HEADER	FW-02.5-03T	FW-02.5-03T	RO14		1.260	0.035	Max BAND	Yes
FW-02.5 SG INLETHEADER	FW-02.5-01T	Branch	RO10	99UT269	0.432	0.048	Blanket	No (4)
FW-02.5 SG INLETHEADER	FW-02.5-01T	D/S Main	RO10	99UT269	1.372	0.036	Band	No (1)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-02.5 SG INLETHEADER	FW-02.5-01T	U/S Main		RO10	99UT269	1.372	0.036	Band	No (1)
FW-02.5 SG INLETHEADER	FW-02.5-04T	Branch		RO8		1.002	0.075	T DAT	No (17)
FW-02.5 SG INLETHEADER	FW-02.5-04T	N/A		RO8		1.368	0.041	T DAT	No (1)
FW-02.5 SG INLETHEADER	FW-02.5-04T	Branch		RO12	03UT096	1.002	0.086	Band	Yes
FW-02.5 SG INLETHEADER	FW-02.5-04T	D/S Main		RO12	03UT096	1.368	0.021	Band	No(1)
FW-02.5 SG INLETHEADER	FW-02.5-04T	U/S Main		RO12	03UT096	1.368	0.032	Band	No(1)
FW-02.5 SG INLETHEADER	FW-02.5-05P	N/A		RO8		1.372	0.034	T DAT	No (14)
FW-02.5 SG INLETHEADER	FW-02.5-06P	N/A		RO8		1.365	0.030	T DAT	No (1)
FW-02.6 SG INLET HEADER	FW-02.6-03T	Br. Ext		RO15		0.944	0.056	Band	No (2)
FW-02.6 SG INLET HEADER	FW-02.6-03T	Branch		RO15		0.944	0.166	Band	Yes
FW-02.6 SG INLET HEADER	FW-02.6-03T	D/S Main		RO15		1.260	0.038	Band	Yes
FW-02.6 SG INLET HEADER	FW-02.6-03T	U/S Main		RO15		1.260	0.024	Band	No (1)
FW-02.6 SG INLETHEADER	FW-02.6-01P	N/A		RO8		1.361	0.019	T DAT	No (1)
FW-02.6 SG INLETHEADER	FW-02.6-03T	Branch		RO8		1.006	0.139	T DAT	No (17)
FW-02.6 SG INLETHEADER	FW-02.6-03T	N/A		RO8		1.361	0.030	T DAT	No (1)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-02.8A SG HDR to SG 31	FW-02.8A-12F	D/S Ext	RO15			0.938	0.125	Band	Yes
FW-02.8A SG HDR to SG 31	FW-02.8A-25R	D/S Main	RO15			0.844	0.184	Band	Yes
FW-02.8A SG HDR to SG 31	FW-02.8A-25R	U/S Main	RO15			0.938	0.448	Band	No (7)
FW-02.8A SG HDR to SG 31	FW-02.8A-26R	FW-02.8A-26R	RO14			0.844	0.210	Max BAND	No (3)
FW-02.8A SG HDR to SG 31	FW-02.8A-26R	FW-02.8A-26R-DS	RO14			0.938	0.252	Max BAND	Yes
FW-02.8A SG HDR to SG 31	FW-02.8A-26R	D/S Ext	RO15			0.938	0.098	Band	Yes
FW-02.8A SG HDR to SG 31	FW-02.8A-26R	D/S Main	RO15			0.938	0.289	Band	Yes
FW-02.8A SG HDR to SG 31	FW-02.8A-26R	U/S Main	RO15			0.844	0.212	Band	No (3)
FW-02.8A SG HDR to SG 31	FW-02.8A-26R	U/S Main	RO16			0.844	0.522	Band	No (3)
FW-02.8A SG HDR to SG 31	FW-02.8A-26R	D/S Main	RO16			0.938	0.157	Band	No (3)
FW-02.8A SG HDR to SG 31	FW-02.8A-26R	D/S Ext.	RO16			0.938	0.105	Band	No (3)
FW-02.8A SG HDR to SG 31	FW-03.1A-08B	U/S Main	RO15			0.750	0.140	Max PTP	Yes
FW-02.8A SG HDR toSG 31	FW-02.8A-01 P	Main	RO8			0.968	0.097	T DAT	Yes
FW-02.8A SG HDR toSG 31	FW-02.8A-01P	Entered as the U/S Ext of FW-02.8A-02E	RO12	03UT135		0.938	0.052	Band	No(2)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-02.8A SG HDR toSG 31	FW-02.8A-02E	Main		RO12	03UT135	0.938	0.129	Blanket	Yes
FW-02.8A SG HDR toSG 31	FW-02.8A-03T	D/S Main		RO12	03UT135	0.938	0.056	Band	Yes
FW-02.8A SG HDR toSG 31	FW-02.8A-03T	U/S Main		RO12	03UT135	0.938	0.075	Band	Yes
FW-02.8A SG HDR toSG 31	FW-02.8A-06E	Main		RO12	03UT135	0.938	0.158	Blanket	Yes
FW-02.8A SG HDR toSG 31	FW-02.8A-07P	Entered as the D/S Ext of FW-02.8A-06E		RO12	03UT135	0.938	0.058	Band	Yes
FW-02.8A SG HDR toSG 31	FW-02.8A-25R	D/S Main		RO12	03UT135	1.312	0.476	Band	No(3)
FW-02.8A SG HDR toSG 31	FW-02.8A-25R	U/S Main		RO12	03UT135	0.938	0.421	Band	No(3)
FW-02.8A SG HDR toSG 31	FW-02.8A-26R	D/S Main		RO12	03UT135	0.938	0.271	Band	Yes
FW-02.8A SG HDR toSG 31	FW-02.8A-26R	U/S Main		RO12	03UT135	1.312	0.615	Band	No(3)
FW-02.8A SG HDR toSG 31	FW-03.1A-08B	Main		RO9		0.750	0.172	Blanket	Yes
FW-02.8A SG HDR toSG 31	FW-03.1A-09N	Main		RO9		0.750	0.120	Band	No (11)
FW-02.8B SG HDR to SG 32	FW-02.8B-01P	U/S Main		RO16		0.938	0.055	Band	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-07E	U/S Main		RO15		0.938	0.221	Blanket	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-13F	FW-02.8B-13F		RO14		0.938	0.154	SCAN/RT/VT	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-02.8B SG HDR to SG 32	FW-02.8B-13F	FW-02.8B-13F-DSX	RO14			0.938	0.075	Max BAND	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-13F	FW-02.8B-13F-USX	RO14			0.938	0.038	Max BAND	No(2)
FW-02.8B SG HDR to SG 32	FW-02.8B-23E	U/S Ext	RO15			0.750	0.051	Band	No (2)
FW-02.8B SG HDR to SG 32	FW-02.8B-23E	U/S Main	RO15			0.750	0.281	Blanket	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-25R	FW-02.8B-25R	RO14			0.938	0.234	Max BAND	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-25R	FW-02.8B-25R-DS	RO14			0.844	0.399	Max BAND	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-25R	D/S Main	RO15			0.844	0.289	Band	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-25R	U/S Main	RO15			0.938	0.208	Band	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-25R	U/S Main	RO16			0.938	0.216	Band	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-25R	D/S Main	RO16			0.844	0.425	Band	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-26R	D/S Main	RO15			0.938	0.467	Band	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-26R	U/S Main	RO15			0.844	0.386	Band	No (3)
FW-02.8B SG HDR toSG 32	FW-02.8B-01 P	Main	RO8			0.938	0.078	T DAT	Yes
FW-02.8B SG HDR toSG 32	FW-02.8B-01P	Entered as the Br Exttof FW-02.5-04T	RO12	03UT096		0.944	0.064	Band	No(1)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-02.8B SG HDR toSG 32	FW-02.8B-07E	Main		RO9		0.938	0.188	Blanket	Yes
FW-02.8B SG HDR toSG 32	FW-02.8B-08P	Entered as D/S Ext. ofFW-02.8B-07E		RO9		0.938	0.069	Band	Yes
FW-02.8B SG HDR toSG 32	FW-02.8B-09T	Br. Ext		RO12	03UT058	0.432	0.049	Band	No (2)
FW-02.8B SG HDR toSG 32	FW-02.8B-09T	D/S Main		RO12	03UT058	0.938	0.041	Band	Yes
FW-02.8B SG HDR toSG 32	FW-02.8B-09T	U/S Main		RO12	03UT058	0.938	0.060	Band	Yes
FW-02.8B SG HDR toSG 32	FW-02.8B-12P_2	Entered as U/S Ext. ofFW-02.8B-13F		RO8		0.938	0.078	Band	No (2)
FW-02.8B SG HDR toSG 32	FW-02.8B-12P_2	Entered as U/S Ext. ofFW-02.8B-13F		RO9		0.938	0.085	Band	No (2)
FW-02.8B SG HDR toSG 32	FW-02.8B-12P_2	Entered as U/S Ext. ofFW-02.8B-13F		RO10	99UT232	0.938	0.125	Max PTP	No (2)
FW-02.8B SG HDR toSG 32	FW-02.8B-13F	Main		RO8		0.938	0.167	Band	Yes
FW-02.8B SG HDR toSG 32	FW-02.8B-13F	Main		RO9		0.938	0.175	Band	Yes
FW-02.8B SG HDR toSG 32	FW-02.8B-13F	Main		RO10	99UT232	0.938	0.222	Max PTP	Yes
FW-02.8B SG HDR toSG 32	FW-02.8B-14P	Entered as D/S Ext. ofFW-02.8B-13F		RO8		0.990	0.093	Band	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-02.8B SG HDR toSG 32	FW-02.8B-14P	Entered as D/S Ext. ofFW-02.8B-13F	RO9		0.990	0.109	Band	Yes
FW-02.8B SG HDR toSG 32	FW-02.8B-14P	Entered as D/S Ext. ofFW-02.8B-13F	RO10	99UT232	0.990	0.103	Band	Yes
FW-02.8B SG HDR toSG 32	FW-02.8B-22T	D/S Main	RO8		0.750	0.059	Band	Yes
FW-02.8B SG HDR toSG 32	FW-02.8B-22T	U/S Main	RO8		0.750	0.039	Band	Yes
FW-02.8B SG HDR toSG 32	FW-02.8B-23E	Main	RO8		0.924	0.176	Blanket	Yes
FW-02.8B SG HDR toSG 32	FW-02.8B-25R	DS Main	RO13	05UT045	0.844	0.447	Band	N(4)
FW-02.8B SG HDR toSG 32	FW-02.8B-25R	US Main	RO13	05UT045	0.938	0.352	Band	N(4)
FW-02.8B SG HDR toSG 32	FW-02.8B-26R	D/S Main	RO9		0.844	0.256	Band	Yes
FW-02.8B SG HDR toSG 32	FW-02.8B-26R	U/S Main	RO9		0.938	0.238	Band	Yes
FW-02.8B SG HDR toSG 32	FW-03.1B-07B	Entered as U/S Ext ofFW-03.1B-08E	RO13	05UT054	0.750	0.065	Band	No(1)
FW-02.8B SG HDR toSG 32	FW-03.1B-08E	Main	RO13	05UT054	0.750	0.099	Blanket	Yes
FW-02.8B SG HDR toSG 32	FW-03.1B-09P	Entered as D/S Ext ofFW-03.1B-08E	RO13	05UT054	0.750	0.068	Band	Yes
FW-02.8C SG HDR to SG 34	FW-02.8C-13F	D/S Ext	RO15		0.938	0.123	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-02.8C SG HDR to SG 34	FW-02.8C-20P	U/S Main	RO16			0.750	0.034	Band	No (1)
FW-02.8C SG HDR to SG 34	FW-02.8C-25R	D/S Ext	RO15			0.938	0.149	Band	No (3)
FW-02.8C SG HDR to SG 34	FW-02.8C-25R	D/S Main	RO15			0.938	0.252	Band	No (3)
FW-02.8C SG HDR to SG 34	FW-02.8C-25R	U/S Main	RO15			0.844	0.169	Band	No (3)
FW-02.8C SG HDR to SG 34	FW-02.8C-25R	U/S Main	RO16			0.844	0.176	Max PtP	No (3)
FW-02.8C SG HDR to SG 34	FW-02.8C-25R	D/S Main	RO16			0.938	0.293	Band	No (3)
FW-02.8C SG HDR to SG 34	FW-02.8C-25R	D/S Ext.	RO16			0.938	0.242	Band	No (3)
FW-02.8C SG HDR to SG 34	FW-03.1C-12E	U/S Main	RO15			0.750	0.149	Blanket	Yes
FW-02.8C SG HDR to SG 34	FW-03.1C-13P	FW-03.1C-13P	RO14			0.750	0.129	SCAN/RT/VT	Yes
FW-02.8C SG HDR to SG 34	FW-03.1C-14E	U/S Main	RO16			0.750	0.034	Max PtP	No (1)
FW-02.8C SG HDR to SG 34	FW-02.8C-01 P	Main	RO8			0.946	0.071	T DAT	Yes
FW-02.8C SG HDR to SG 34	FW-02.8C-05V	Main	RO11	01 UT1 20		0.938	N/A	x	No (12)
FW-02.8C SG HDR to SG 34	FW-02.8C-06V	Main	RO11	01 UT1 20		1.312	N/A	x	No (12)
FW-02.8C SG HDR to SG 34	FW-02.8C-07E	Main	RO11	01UT120		0.938	0.121	Blanket	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-02.8C SG HDR toSG 34	FW-02.8C-08P	Entered as D/S Ext. ofFW-02.8C-07E	RO11	01 UT1 20	0.938	0.053	Band	Yes
FW-02.8C SG HDR toSG 34	FW-02.8C-24R	D/S Main	RO11	01 UT1 20	0.844	0.148	Band	Yes
FW-02.8C SG HDR toSG 34	FW-02.8C-24R	U/S Main	RO11	01 UT1 20	0.938	0.247	Band	No (3)
FW-02.8C SG HDR toSG 34	FW-02.8C-25R	D/S Main	RO11	01 UT1 20	0.938	0.151	Band	Yes
FW-02.8C SG HDR toSG 34	FW-02.8C-25R	U/S Main	RO11	01 UT1 20	0.844	0.087	Band	Yes
FW-02.8C SG HDR toSG 34	FW-03.1C-10E	Main	RO12	03UT126	0.750	0.215	Blanket	Yes
FW-02.8C SG HDR toSG 34	FW-03.1C-11P	Entered as the D/S Extof FW-03.1C-10E	RO12	03UT126	0.750	0.041	Band	Yes
FW-02.8C SG HDR toSG 34	FW-03.1C-12E	Main	RO12	03UT126	0.750	0.166	Blanket	Yes
FW-02.8C SG HDR toSG 34	FW-03.1C-13P	Entered as the D/S Extof FW-03.1C-12E	RO12	03UT126	0.750	0.086	Band	Yes
FW-02.8C SG HDR toSG 34	FW-03.1C-14E	Main	RO12	03UT126	0.750	0.273	Blanket	No (3)
FW-02.8C SG HDR toSG 34	FW-03.1C-15N	Main	RO12	03UT126	0.750	0.110	Band	No(11)
FW-02.8D SG HDR to SG 33	FW-02.7-04T	U/S Main	RO16		1.260	0.037	Band	No (1)
FW-02.8D SG HDR to SG 33	FW-02.7-04T	D/S Main	RO16		1.260	0.023	Band	No (1)

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-02.8D SG HDR to SG 33	FW-02.7-04T	Branch	RO16		0.944	0.168	Band	Yes
FW-02.8D SG HDR to SG 33	FW-02.7-04T	Branch Ext.	RO16		0.944	0.077	Band	No (2)
FW-02.8D SG HDR to SG 33	FW-02.8D-07E	U/S Main	RO16		0.938	0.192	Blanket	Yes
FW-02.8D SG HDR to SG 33	FW-02.8D-08P	U/S Main	RO16		0.938	0.069	Band	Yes
FW-02.8D SG HDR to SG 33	FW-02.8D-13F	D/S Ext	RO15		0.938	0.125	Band	Yes
FW-02.8D SG HDR to SG 33	FW-02.8D-19P	U/S Main	RO16		0.750	0.073	Band	Yes
FW-02.8D SG HDR to SG 33	FW-02.8D-24R	FW-02.8D-24R	RO14		0.938	0.273	Max BAND	Yes
FW-02.8D SG HDR to SG 33	FW-02.8D-24R	FW-02.8D-24R-DS	RO14		0.844	0.460	Max BAND	Yes
FW-02.8D SG HDR to SG 33	FW-02.8D-24R	U/S Main	RO16		0.938	0.089	Local PtP	Yes
FW-02.8D SG HDR to SG 33	FW-02.8D-24R	D/S Main	RO16		0.844	0.047	Max PtP	Yes
FW-02.8D SG HDR to SG 33	FW-02.8D-25R	FW-02.8D-25R	RO14		0.844	0.110	Max BAND	Yes
FW-02.8D SG HDR to SG 33	FW-02.8D-25R	FW-02.8D-25R-DS	RO14		0.938	0.201	Max BAND	Yes
FW-02.8D SG HDR to SG 33	FW-02.8D-25R	D/S Ext	RO15		0.938	0.205	Band	No (19)
FW-02.8D SG HDR to SG 33	FW-02.8D-25R	D/S Main	RO15		0.938	0.156	Band	Yes
FW-02.8D SG HDR to SG 33	FW-02.8D-25R	U/S Main	RO15		0.844	0.132	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-02.8D SG HDR to SG 33	FW-03.1D-08B	FW-03.1D-08B		RO14		0.750	0.315	BLANKET	Yes
FW-02.8D SG HDR to SG 33	FW-03.1D-08B	FW-03.1D-08B-DSX		RO14		0.750	0.089	SCAN/RT/VT	Yes
FW-02.8D SG HDR to SG 33	FW-03.1D-08B	U/S Main		RO15		0.750	0.176	Blanket	Yes
FW-02.8D SG HDR to SG 33	FW-02.7-01 P	N/A		RO8		1.372	0.034	T DAT	No (1)
FW-02.8D SG HDR to SG 33	FW-02.7-03P	N/A		RO8		1.372	0.041	T DAT	No (1)
FW-02.8D SG HDR to SG 33	FW-02.7-04T	Branch		RO8		1.013	0.153	T DAT	No (17)
FW-02.8D SG HDR to SG 33	FW-02.7-04T	N/A		RO8		1.395	0.053	T DAT	No (1)
FW-02.8D SG HDR to SG 33	FW-02.8D-01 P	Main		RO8		0.964	0.052	T DAT	Yes
FW-02.8D SG HDR to SG 33	FW-02.8D-24R	DS Main		RO13	05UT049	0.844	0.414	Band	N(4)
FW-02.8D SG HDR to SG 33	FW-02.8D-24R	US Main		RO13	05UT049	0.938	0.159	Band	N(4)
FW-02.8D SG HDR to SG 33	FW-02.8D-25R	DS Main		RO13	05UT049	0.938	0.175	Band	Yes
FW-02.8D SG HDR to SG 33	FW-02.8D-25R	US Main		RO13	05UT049	0.844	0.237	Band	Yes
FW-04.1 B BFP 32RECIRC	FW-04.1B-01E	Main		RO8		0.979	0.186	T DAT	No (11)
FW-04.1 B BFP 32RECIRC	FW-04.1B-01E	Main		RO8		0.979	0.224	Blanket	No (11)
FW-04.1 B BFP 32RECIRC	FW-04.1B-01E	Main		RO11	01UT064	0.979	0.228	Blanket	No (11)

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-04.1 B BFP 32RECIRC	FW-04.1B-02P	Entered as D/S Ext. ofFW-04.1B-01E	RO8		0.912	0.058	Band	No (11)
FW-04.1 B BFP 32RECIRC	FW-04.1B-02P	Entered as D/S Ext. ofFW-04.1B-01E	RO11	01UT064	0.912	0.041	Band	No (11)
FW-04.1 B BFP 32RECIRC	FW-04.1B-03E	Main	RO8		1.083	0.113	Blanket	No (11)
FW-04.1 B BFP 32RECIRC	FW-04.1B-03E	Main	RO11	01UT064	1.083	0.266	Blanket	No (11)
FW-04.1 B BFP 32RECIRC	FW-04.1B-04P	Entered as D/S Ext. ofFW-04.1B-03E	RO11	01UT064	0.864	0.131	Band	No (11)
FW-04.1 B BFP 32RECIRC	FW-04.1B-10P	Entered as U/S Ext. ofFW-04.1B-01E	RO8		0.864	0.093	Band	No (11)
FW-04.1 B BFP 32RECIRC	FW-04.1B-10P	N/A	RO8		0.864	0.093	T DAT	No (11)
FW-04.1 B BFP 32RECIRC	FW-04.1B-10P	Entered as U/S Ext. ofFW-04.1B-01E	RO11	01UT064	0.864	0.090	Band	No (11)
FW-04.1 B BFP 32RECIRC	FW-04.2B-22P	Entered as U/S Ext. ofFW-04.2B-23R	RO8		0.716	0.065	Band	No (11)
FW-04.1 B BFP 32RECIRC	FW-04.2B-23R	D/S Main	RO8		0.962	0.123	Band	No (11)
FW-04.1 B BFP 32RECIRC	FW-04.2B-23R	U/S Main	RO8		0.674	0.082	Band	No (11)
FW-04.1 B BFP 32RECIRC	FW-05.1B-02P	Main	RO8		0.864	0.079	T DAT	No (11)

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-04.1A BFP 31 RECIRC	FW-04.1A-01E	U/S Main	RO16		0.864	0.133	Blanket	Yes
FW-04.1A BFP 31 RECIRC	FW-05.1A-02P	U/S Main	RO15		0.864	0.091	Band	No (11)
FW-04.1A BFP 31RECIRC	FW-04.1A-01E	Main	RO8		0.954	0.180	T DAT	No (11)
FW-04.1A BFP 31RECIRC	FW-04.1A-09P	Main	RO8		0.896	0.046	T DAT	No (11)
FW-04.1A BFP 31RECIRC	FW-04.1A-10P	Main	RO8		0.864	0.098	T DAT	No (11)
FW-04.1A BFP 31RECIRC	FW-04.2A-01R	U/S Main	RO8		0.864	0.290	T DAT	No (11)
FW-04.1A BFP 31RECIRC	FW-04.2A-02P	Main	RO8		0.709	0.065	T DAT	No (11)
FW-04.1A BFP 31RECIRC	FW-04.2A-21P	Main	RO8		0.700	0.045	Band	No (11)
FW-04.1A BFP 31RECIRC	FW-04.2A-22B	Main	RO8		0.782	0.172	Blanket	No (11)
FW-04.1A BFP 31RECIRC	FW-04.2A-23P	Entered as D/S Ext. ofFW-04.2A-22B	RO8		0.724	0.086	Band	No (11)
FW-04.1A BFP 31RECIRC	FW-05.1A-02P	Main	RO8		0.886	0.064	T DAT	No (11)
HD-01 .1 B FWH 36B toHD TK	HD-01 .2B-01 R		RO9		0.307	0.046	Band	Yes
HD-01 .1 B FWH 36B toHD TK	HD-01 .2B-01 R		RO9		0.280	0.062	Band	Yes
HD-01 .1 B FWH 36B toHD TK	HD-01.1B-06P		RO9		0.307	0.036	Band	No (2)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
HD-01 .1 B FWH 36B toHD TK	HD-01.1B-07E			RO9		0.307	0.061	Blanket	Yes
HD-01 .1 B FWH 36B toHD TK	HD-02.1B-01V			RO9		0.280	0.036	Blanket	No (10)
HD-01 .1C FWH 36C toHD TK	HD-01.1C-10P;			RO11	01UT134	0.307	0.063	Band	No (2)
HD-01 .1C FWH 36C toHD TK	HD-01.1C-11E			RO11	01UT134	0.421	0.131	Blanket	Yes
HD-01 .1C FWH 36C toHD TK	HD-01.2C-01R			RO11	01UT134	0.307	0.064	Band	Yes
HD-01 .1C FWH 36C toHD TK	HD-01.2C-01R			RO11	01UT134	0.280	0.071	Band	Yes
HD-01 .1C FWH 36C toHD TK	HD-02.1C-02R			RO11	01UT134	0.280	0.040	Band	No(3)
HD-01 .1C FWH 36C toHD TK	HD-02.1C-02R			RO11	01UT134	0.365	0.060	Band	Yes
HD-01 .1C FWH 36C toHD TK	HD-02.2C-02N			RO11	01UT135	0.365	0.089	Band	Yes
HD-01.1A FWH 36A toHD TK	HD-01.1A-08P	Entered as U/S ext ofHD-01.1A-09E		RO12	03UT069	0.307	0.033	Band	Yes
HD-01.1A FWH 36A toHD TK	HD-01.1A-09E	Main		RO12	03UT069	0.307	0.082	Blanket	Yes
HD-01.1A FWH 36A toHD TK	HD-01.2A-01R	D/S Main		RO12	03UT069	0.280	0.122	Band	Yes
HD-01.1A FWH 36A toHD TK	HD-01.2A-01R	U/S Main		RO12	03UT069	0.307	0.066	Band	Yes
HD-01.1A FWH 36A toHD TK	HD-02.1A-02R	D/S Main		RO12	03UT069	0.365	0.086	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
HD-01.1A FWH 36A toHD TK	HD-02.1A-02R	U/S Main		RO12	03UT069	0.280	0.073	Band	Yes
HD-01.1A FWH 36A toHD TK	HD-02.2A-02N	Main		RO12	03UT069	0.365	0.110	Band	Yes
HD-01.1B FWH 36B to HD TK	HD-02.1B-02R	HD-02.1B-02R		RO14		0.307	0.028	Max BAND	No(1)
HD-01.1B FWH 36B to HD TK	HD-02.1B-02R	HD-02.1B-02R-DS		RO14		0.280	0.039	Max BAND	Yes
HD-01.1B FWH 36B to HD TK	HD-02.1B-02R	D/S Main		RO15		0.365	0.057	Band	Yes
HD-01.1B FWH 36B to HD TK	HD-02.1B-02R	U/S Main		RO15		0.280	0.094	Band	Yes
HD-01.1C FWH 36C toHD TK	HD-01.1C-11E						0.119	T DAT	Yes
HD-03.1 C FWH 35C toHD TK	HD-03.1C-12P	Entered as US Ext ofHD-03.1C-13E		RO13	05UT040	0.250	0.037	Band	No(1)
HD-03.1 C FWH 35C toHD TK	HD-03.1C-13E	Main		RO13	05UT040	0.250	0.059	Blanket	Yes
HD-03.1 C FWH 35C toHD TK	HD-03.1C-14E	Main		RO13	05UT040	0.250	0.084	Blanket	Yes
HD-03.1 C FWH 35C toHD TK	HD-03.1C-15P	Main		RO13	05UT040	0.250	0.038	Band	Yes
HD-03.1A FWH 35A toHD TK	HD-03.1A-10P			RO8		0.250	0.032	Band	No (2)
HD-03.1A FWH 35A toHD TK	HD-03.1A-11E			RO8		0.250	0.040	Blanket	Yes
HD-03.1A FWH 35A toHD TK	HD-03.1A-12E			RO8		0.250	0.043	Blanket	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
HD-03.1A FWH 35A toHD TK	HD-03.1A-13P		RO8		0.250	0.032	Band	Yes
HD-03.1A FWH 35A toHD TK	HD-03.1A-14E		RO8		0.250	0.032	Blanket	Yes
HD-03.1A FWH 35A toHD TK	HD-03.1A-16N		RO8		0.250	0.103	Band	No(9)
HD-03.1B FWH 35B to HD TK	HD-03.1B-09E	HD-03.1B-09E	RO14		0.250	0.048	BLANKET	Yes
HD-03.1B FWH 35B to HD TK	HD-03.1B-09E	HD-03.1B-09E-DSX	RO14		0.250	0.054	BLANKET	Yes
HD-03.1B FWH 35B to HD TK	HD-03.1B-09E	HD-03.1B-09E-USX	RO14		0.250	0.061	Max BAND	No(2)
HD-03.1C FWH 35C toHD TK	HD-03.1C-16E	Main	RO13	05UT040	0.250	0.031	Blanket	Yes
HD-04.1 B FWH 34B toFWH 33B	HD-04.2B-01E	D/S Main	RO12	O3UT034	0.237	0.102	Blanket	Yes
HD-04.1 B FWH 34B toFWH 33B	HD-04.2B-01E	U/S Main	RO12	O3UT034	0.280	0.053	Blanket	Yes
HD-04.1 B FWH 34B toFWH 33B	HD-04.3B-01R	D/S Main	RO12	O3UT034	0.216	0.065	Band	No(3)
HD-04.1 B FWH 34B toFWH 33B	HD-04.3B-01R	U/S Main	RO12	O3UT034	0.237	0.132	Band	Yes
HD-04.1 B FWH 34B toFWH 33B	HD-05.1B-01V		RO9		0.216	0.034	Blanket	No (10)
HD-04.1 B FWH 34B toFWH 33B	HD-05.1B-02R		RO9		0.216	0.082	Band	No (7)
HD-04.1 B FWH 34B toFWH 33B	HD-05.1B-02R		RO9		0.280	0.093	Band	No (7)
HD-04.1 B FWH 34B toFWH 33B	HD-05.1B-02R	D/S main	RO12	O3UT034	0.280	0.125	Band	No (7)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
HD-04.1 B FWH 34B toFWH 33B	HD-05.1B-02R	U/S Main		RO12	O3UT034	0.216	0.135	Band	No (7)
HD-04.1 B FWH 34B toFWH 33B	HD-05.2B-01T			RO9		0.280	0.125	Blanket	Yes
HD-04.1 B FWH 34B toFWH 33B	HD-05.2B-01T			RO9		0.280	0.076	Blanket	No (6)
HD-04.1 B FWH 34B toFWH 33B	HD-05.2B-01T			RO9		0.280	0.141	Blanket	Yes
HD-04.1 B FWH 34B toFWH 33B	HD-05.2B-01T	Branch		RO12	O3UT034	0.280	0.098	Blanket	Yes
HD-04.1 B FWH 34B toFWH 33B	HD-05.2B-01T	D/S Main		RO12	O3UT034	0.280	0.072	Blanket	No (6)
HD-04.1 B FWH 34B toFWH 33B	HD-05.2B-01T	U/S Main		RO12	O3UT034	0.280	0.074	Blanket	Yes
HD-04.1 B FWH 34B toFWH 33B	HD-05.2B-02P			RO9		0.280	0.058	Band	No (2)
HD-04.1 B FWH 34B toFWH 33B	HD-05.2B-02P	Entered as branch ext.of HD-05.2B-01T		RO12	03UT034	0.280	0.054	Band	No (2)
HD-04.1 C FWH 34C toFWH 33C	HD-04.1C-23P			RO9		0.280	0.044	Band	No (2)
HD-04.1 C FWH 34C toFWH 33C	HD-04.1C-23P	Entered as U/S ext. ofHD-04.2C-01E		RO12	03UT028	0.280	0.067	Max PTP	No (2)
HD-04.1 C FWH 34C toFWH 33C	HD-04.2C-01E			RO9		0.280	0.073	Band	Yes
HD-04.1 C FWH 34C toFWH 33C	HD-04.2C-01E			RO9		0.237	0.118	Band	Yes
HD-04.1 C FWH 34C toFWH 33C	HD-04.2C-01E	D/S Main		RO12	03UT028	0.237	0.175	Max PTP	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
HD-04.1 C FWH 34C toFWH 33C	HD-04.2C-01E	U/S Main	RO12	03UT028	0.280	0.104	Max PTP	Yes	
HD-04.1 C FWH 34C toFWH 33C	HD-04.3C-01 R		RO11	01 UT065	0.237	0.043	Band	No(3)	
HD-04.1 C FWH 34C toFWH 33C	HD-04.3C-01R		RO11	01UT065	0.216	0.057	Band	Yes	
HD-04.1 C FWH 34C toFWH 33C	HD-04.3C-01R	D/S Main	RO12	03UT028	0.216	0.027	Band	No(1)	
HD-04.1 C FWH 34C toFWH 33C	HD-04.3C-01R	U/S Main	RO12	03UT028	0.237	0.032	Band	No(1)	
HD-04.1 C FWH 34C toFWH 33C	HD-05.1C-01V		RO9		0.216	0.046	Blanket	No (10)	
HD-04.1 C FWH 34C toFWH 33C	HD-05.1C-02R		RO9		0.280	0.116	Band	Yes	
HD-04.1 C FWH 34C toFWH 33C	HD-05.1C-02R		RO9		0.216	0.071	Band	Yes	
HD-04.1 C FWH 34C toFWH 33C	HD-05.1C-02R		RO10	99UT080	0.216	0.050	Band	No(3)	
HD-04.1 C FWH 34C toFWH 33C	HD-05.1C-02R		RO10	99UT080	0.280	0.112	Band	Yes	
HD-04.1 C FWH 34C toFWH 33C	HD-05.1C-02R		RO10	99UT080	0.216	0.082	Band	No (3)	
HD-04.1 C FWH 34C toFWH 33C	HD-05.1C-02R		RO11	01UT065	0.216	0.050	Band	Yes	
HD-04.1 C FWH 34C toFWH 33C	HD-05.1C-02R	D/S main	RO12	03UT028	0.280	0.140	Band	No(3)	
HD-04.1 C FWH 34C toFWH 33C	HD-05.1C-02R	U/S Main	RO12	03UT028	0.216	0.063	Band	Yes	
HD-04.1 C FWH 34C toFWH 33C	HD-05.1C-02R	D/S main	Cycle 13	05UT023	0.280	0.157	Band	Yes	

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
HD-04.1 C FWH 34C toFWH 33C	HD-05.1C-02R	U/S Main	Cycle 13	05UT023	0.216	0.066	Band	Yes	
HD-04.1 C FWH 34C toFWH 33C	HD-05.2C-01T		RO9		0.280	0.064	Blanket	Yes	
HD-04.1 C FWH 34C toFWH 33C	HD-05.2C-01T		RO9		0.280	0.099	Blanket	No (6)	
HD-04.1 C FWH 34C toFWH 33C	HD-05.2C-01T		RO9		0.280	0.100	Blanket	Yes	
HD-04.1 C FWH 34C toFWH 33C	HD-05.2C-01T		RO10	99UT080	0.280	0.085	Blanket	Yes	
HD-04.1 C FWH 34C toFWH 33C	HD-05.2C-01T		RO10	99UT080	0.280	0.107	Blanket	No (6)	
HD-04.1 C FWH 34C toFWH 33C	HD-05.2C-01T		RO10	99UT080	0.280	0.153	Blanket	Yes	
HD-04.1 C FWH 34C toFWH 33C	HD-05.2C-01T		RO10	99UT080	0.280	0.049	Band	No (9)	
HD-04.1 C FWH 34C toFWH 33C	HD-05.2C-01T	Branch	RO12	03UT028	0.280	0.141	Blanket	Yes	
HD-04.1 C FWH 34C toFWH 33C	HD-05.2C-01T	D/S main	RO12	03UT028	0.280	0.071	Blanket	No (6)	
HD-04.1 C FWH 34C toFWH 33C	HD-05.2C-01T	U/S Main	RO12	03UT028	0.280	0.063	Blanket	Yes	
HD-04.1 C FWH 34C toFWH 33C	HD-05.2C-02P		RO9		0.280	0.031	Band	No (2)	
HD-04.1 C FWH 34C toFWH 33C	HD-05.2C-02P	Branch ext. of HD-05.2C-01T	RO12	03UT028	0.280	0.035	Band	No (2)	
HD-04.1A FWH 34A to FWH 33A	HD-05.2A-01T	Br. Ext	RO15		0.280	0.048	Band	No (2)	
HD-04.1A FWH 34A to FWH 33A	HD-05.2A-01T	Branch	RO15		0.280	0.139	Band	Yes	

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
HD-04.1A FWH 34A to FWH 33A	HD-05.2A-01T	D/S Main		RO15		0.280	0.064	Band	Yes
HD-04.1A FWH 34A to FWH 33A	HD-05.2A-01T	U/S Main		RO15		0.280	0.086	Band	Yes
HD-04.1A FWH 34A toFWH 33A	HD-04.1A-15P			RO11	01UT133	0.280	0.080	Band	No (2)
HD-04.1A FWH 34A toFWH 33A	HD-04.2A-01E			RO11	01UT133	0.280	0.106	Blanket	No
HD-04.1A FWH 34A toFWH 33A	HD-04.2A-01E			RO11	01UT133	0.237	0.102	Blanket	No
HD-04.1A FWH 34A toFWH 33A	HD-04.3A-01R			RO11	01UT133	0.237	0.053	Band	No(3)
HD-04.1A FWH 34A toFWH 33A	HD-04.3A-01R			RO11	01UT133	0.216	0.044	Band	No(3)
HD-04.1A FWH 34A toFWH 33A	HD-05.1A-01V			RO9		0.216	0.034	Blanket	No (10)
HD-04.1A FWH 34A toFWH 33A	HD-05.1A-02R			RO9		0.216	0.124	Band	Yes
HD-04.1A FWH 34A toFWH 33A	HD-05.1A-02R			RO9		0.280	0.083	Band	Yes
HD-04.1A FWH 34A toFWH 33A	HD-05.1A-02R			RO11	01UT133	0.216	0.161	Band	No (20)
HD-04.1A FWH 34A toFWH 33A	HD-05.1A-02R			RO11	01UT133	0.280	0.074	Band	Yes
HD-04.1A FWH 34A toFWH 33A	HD-05.1A-02R	Baseline D/S Main		RO12	03UT122				
HD-04.1A FWH 34A toFWH 33A	HD-05.1A-02R	Baseline U/S Main		RO12	03UT122				
HD-04.1A FWH 34A toFWH 33A	HD-05.2A-01T			RO9		0.280	0.088	Blanket	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
HD-04.1A FWH 34A toFWH 33A	HD-05.2A-01T			RO9		0.280	0.066	Blanket	No (6)
HD-04.1A FWH 34A toFWH 33A	HD-05.2A-01T			RO9		0.280	0.130	Blanket	Yes
HD-04.1A FWH 34A toFWH 33A	HD-05.2A-01T			RO11	01 UT133	0.280	0.111	Blanket	Yes
HD-04.1A FWH 34A toFWH 33A	HD-05.2A-01T			RO11	01UT133	0.280	0.078	Blanket	No (6)
HD-04.1A FWH 34A toFWH 33A	HD-05.2A-01T			RO11	01UT133	0.280	0.104	Blanket	Yes
HD-04.1A FWH 34A toFWH 33A	HD-05.2A-02P			RO9		0.280	0.040	Band	Yes
HD-04.1A FWH 34A toFWH 33A	HD-05.2A-02P			RO11	01UT133	0.280	0.039	Band	Yes
HD-04.1C FWH 34C to FWH 33C	HD-05.1C-02R	HD-05.1C-02R		RO14		0.216	0.065	Max BAND	Yes
HD-04.1C FWH 34C to FWH 33C	HD-05.1C-02R	HD-05.1C-02R-DS		RO14		0.280	0.150	Max BAND	Yes
HD-04.1C FWH 34C toFWH 33C	HD-05.1C-02R			RO11	01UT065	0.280	0.133	Band	Yes
HD-06.1 B FWH 33B toFWH 32B	HD-07.2B-02P			RO9		0.250	0.047	Band	No (2)
HD-06.1 B FWH 33B toFWH 32B	HD-07.2B-03T			RO9		0.250	0.107	Blanket	Yes
HD-06.1 B FWH 33B toFWH 32B	HD-07.2B-03T			RO9		0.250	0.204	Blanket	No (6)
HD-06.1 B FWH 33B toFWH 32B	HD-07.2B-03T			RO9		0.250	0.153	Blanket	Yes
HD-06.1 B FWH 33B toFWH 32B	HD-07.2B-04P			RO9		0.250	0.049	Band	No (2)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
HD-06.1 C FWH 33C toFWH 32C	HD-07.1C-02R			RO11	01UT101	0.280	0.083	Band	Yes
HD-06.1 C FWH 33C toFWH 32C	HD-07.1C-02R			RO11	01UT101	0.250	0.066	Band	Yes
HD-06.1 C FWH 33C toFWH 32C	HD-07.2C-02P			RO9		0.250	0.024	Band	No (1)
HD-06.1 C FWH 33C toFWH 32C	HD-07.2C-02P			RO11	01UT101	0.250	0.039	Band	Yes
HD-06.1 C FWH 33C toFWH 32C	HD-07.2C-03T			RO9		0.250	0.171	Blanket	Yes
HD-06.1 C FWH 33C toFWH 32C	HD-07.2C-03T			RO9		0.250	0.152	Blanket	No (6)
HD-06.1 C FWH 33C toFWH 32C	HD-07.2C-03T			RO9		0.250	0.159	Blanket	Yes
HD-06.1 C FWH 33C toFWH 32C	HD-07.2C-04P			RO9		0.250	0.048	Band	No (2)
HD-06.1 C FWH 33C toFWH 32C	HD-6.1C-33P			RO11	01UT101	0.250	0.038	Band	No (2)
HD-06.1 C FWH 33C toFWH 32C	HD-6.2C-01E			RO11	01UT101	0.250	0.063	Blanket	Yes
HD-06.1 C FWH 33C toFWH 32C	HD-6.2C-01E			RO11	01UT101	0.280	0.117	Blanket	Yes
HD-06.1A FWH 33A toFWH 32A	HD-06.1A-41E	Main		RO12	03UT059	0.250	0.056	Blanket	Yes
HD-06.1A FWH 33A toFWH 32A	HD-06.1A-42P	Entered as D/S ext. ofHD-06.1A-41 E		RO12	03UT059	0.250	0.047	Band	Yes
HD-06.1A FWH 33A toFWH 32A	HD-06.2A-01E	D/S Main		RO12	03UT059	0.280	0.164	Blanket	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
HD-06.1A FWH 33A toFWH 32A	HD-06.2A-01E	U/S Main		RO12	03UT059	0.250	1.061	Blanket	Yes
HD-06.1A FWH 33A toFWH 32A	HD-07.1A-02R	D/S Main		RO12	03UT059	0.250	0.107	Band	Yes
HD-06.1A FWH 33A toFWH 32A	HD-07.1A-02R	U/S Main		RO12	03UT059	0.280	0.089	Band	Yes
HD-06.1A FWH 33A toFWH 32A	HD-07.1B-02R	D/S Main		Cycle 13	05UT026	0.250	0.110	Band	Yes
HD-06.1A FWH 33A toFWH 32A	HD-07.1B-02R	U/S Main		Cycle 13	05UT026	0.280	0.088	Band	Yes
HD-06.1A FWH 33A toFWH 32A	HD-07.2A-02P			RO9		0.250	0.065	Band	No (2)
HD-06.1A FWH 33A toFWH 32A	HD-07.2A-02P	Main		RO12	03UT059	0.250	0.067	Band	Yes
HD-06.1A FWH 33A toFWH 32A	HD-07.2A-03T			RO9		0.250	0.081	Blanket	Yes
HD-06.1A FWH 33A toFWH 32A	HD-07.2A-03T			RO9		0.250	0.076	Blanket	No (6)
HD-06.1A FWH 33A toFWH 32A	HD-07.2A-03T			RO9		0.250	0.170	Blanket	Yes
HD-06.1A FWH 33A toFWH 32A	HD-07.2A-04P			RO9		0.250	0.084	Band	No (2)
HD-08.1 B FWH 32B toFWH 31B	HD-09.1B-02R			RO8		0.250	0.078	Band	Yes
HD-08.1 B FWH 32B toFWH 31B	HD-09.1B-02R			RO8		0.250	0.050	Band	Yes
HD-08.1 C FWH 32C toFWH 31C	HD-09.1C-02R			RO8		0.250	0.108	Band	No(9)
HD-08.1 C FWH 32C toFWH 31C	HD-09.1C-02R			RO8		0.250	0.087	Band	No(9)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
HD-08.1A FWH 32A toFWH 31A	HD-09.1A-02R			RO8		0.250	0.131	Band	No(9)
HD-08.1A FWH 32A toFWH 31A	HD-09.1A-02R			RO8		0.250	0.069	Band	Yes
HD-08.1A FWH 32A toFWH 31A	HD-09.2A-03E						0.024	T DAT	No (1)
HD-08.1C FWH 32C to FWH 31C	HD-09.1C-02R	D/S Main		RO15		0.250	0.074	Max PTP	No (3)
HD-08.1C FWH 32C to FWH 31C	HD-09.1C-02R	U/S Main		RO15		0.250	0.030	Max PTP	No (1)
HD-09.3A FWH 32A to FWH 31A	HD-09.3A-02N	HD-09.3A-02N		RO14		0.375	0.049	Max BAND	Yes
HD-09.3A FWH 32A toFWH 31A	HD-09.3A-01P						0.019	T DAT	No (1)
HD-09.4A FWH 32A to FWH 31A	HD-09.4A-04N	HD-09.4A-04N		RO14		0.375	0.075	Max BAND	Yes
HD-09.4A FWH 32A toFWH 31A	HD-09.4A-02E						0.080	T DAT	No (3)
HD-10.1A HD TK toHD PMP 31	HD-10.1A-02P	Main		RO13	05UT056	0.375	0.029	Band	No(2)
HD-10.1A HD TK toHD PMP 31	HD-10.2A-01E	DS Main		RO13	05UT056	0.312	0.041	Blanket	Yes
HD-10.1A HD TK toHD PMP 31	HD-10.2A-01E	US Main		RO13	05UT056	0.375	0.045	Blanket	Yes
HD-10.1A HD TK toHD PMP 31	HD-10.2A-02E	Main		RO13	05UT056	0.312	0.067	Blanket	Yes
HD-10.1A HD TK toHD PMP 31	HD-10.2A-03P	Main		RO13	05UT056	0.312	0.050	Band	Yes
HD-11.1A HD PMP 31 to HDR	HD-11.2A-01R	U/S Main		RO16		0.500	0.080	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
HD-11.1A HD PMP 31 to HDR	HD-11.2A-01R	D/S Main		RO16		0.322	0.011	Band	No (1)
HD-11.1A HD PMP 31 to HDR	HD-12.1A-02R	D/S Main		RO15		0.500	0.092	Band	Yes
HD-11.1A HD PMP 31 to HDR	HD-12.1A-02R	U/S Main		RO15		0.322	0.086	Band	Yes
HD-11.1A HD PMP 31 to HDR	HD-12.2A-03E	U/S Main		RO16		0.500	0.084	Blanket	Yes
HD-11.1A HD PMP 31 to HDR	HD-12.2A-03E	U/S Ext.		RO16		0.500	0.059	Band	No (2)
HD-11.1A HD PMP 31to HDR	HD-11.1A-01N			RO12	03UT103	0.500	0.023	Band	No (1)
HD-11.1A HD PMP 31to HDR	HD-11.1A-02V	Valve Body		RO12	03UT103				No (10)
HD-11.1A HD PMP 31to HDR	HD-11.2A-01R	D/S Main		RO12	03UT103	0.322	0.027	Band	No (1)
HD-11.1A HD PMP 31to HDR	HD-11.2A-01R	U/S Main		RO12	03UT103	0.500	0.091	Band	Yes
HD-11.1A HD PMP 31to HDR	HD-12.1A-01R	Entered as D/S ext. of HD-11.2A-01R		RO12	03UT103	0.322	0.041	Band	Yes
HD-11.1A HD PMP 31to HDR	HD-12.1A-01V			RO8		0.500	0.108	Blanket	No (10)
HD-11.1A HD PMP 31to HDR	HD-12.1A-01V	D/S Valve (flange)		RO12	03UT103	0.322	0.208	Blanket	No (10)
HD-11.1A HD PMP 31to HDR	HD-12.1A-02R			RO8		0.500	0.299	Band	No (3)
HD-11.1A HD PMP 31to HDR	HD-12.1A-02R			RO8		0.322	0.019	Band	No (1)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
HD-11.1A HD PMP 31to HDR	HD-12.1A-02R	D/S Main	RO12	03UT103	0.500	0.099	Band	Yes	
HD-11.1A HD PMP 31to HDR	HD-12.1A-02R	U/S Main	RO12	03UT103	0.322	0.032	Band	No(3)	
HD-11.1A HD PMP 31to HDR	HD-12.2A-05P		RO8		0.664	0.094	Band	No (2)	
HD-11.1A HD PMP 31to HDR	HD-12.2A-06O		RO11	01UT122	0.500	0.083	Band	No (10)	
HD-11.1A HD PMP 31to HDR	HD-12.2A-06O		RO11	01UT122	0.500	0.058	Band	No (2)	
HD-11.1A HD PMP 31to HDR	HD-12.2A-07P		RO8		0.569	0.077	Band	Yes	
HD-11.1A HD PMP 31to HDR	HD-12.2A-07P		RO11	01UT122	0.500	0.073	Band	Yes	
HD-11.1B HD PMP 32 to HDR	HD-11.2B-01R	U/S Main	RO16		0.500	0.044	Max PtP	Yes	
HD-11.1B HD PMP 32 to HDR	HD-11.2B-01R	D/S Main	RO16		0.322	0.038	Max PtP	Yes	
HD-11.1B HD PMP 32 to HDR	HD-12.2B-03E	U/S Main	RO15		0.500	0.045	Max PTP	Yes	
HD-11.1B HD PMP 32 to HDR	HD-12.2B-04T	Br. Ext	RO15		0.500	0.065	Band	No (2)	
HD-11.1B HD PMP 32 to HDR	HD-12.2B-04T	Branch	RO15		0.500	0.667	Band	Yes	
HD-11.1B HD PMP 32 to HDR	HD-12.2B-04T	D/S Ext	RO15		0.500	0.039	Band	Yes	
HD-11.1B HD PMP 32 to HDR	HD-12.2B-04T	D/S Main	RO15		0.500	0.231	Blanket	No (7)	
HD-11.1B HD PMP 32 to HDR	HD-12.2B-04T	U/S Main	RO15		0.500	0.210	Blanket	No (7)	

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
HD-11.1B HD PMP 32 to HDR	HD-12.2B-06O	U/S Ext.	RO16		0.500	0.083	Band	No (2)
HD-11.1B HD PMP 32 to HDR	HD-12.2B-06O	D/S Ext.	RO16		0.500	0.071	Band	Yes
HD-11.1B HD PMP 32 to HDR	HD-12.2B-08T	U/S Main	RO16		0.656	0.041	Band	Yes
HD-11.1B HD PMP 32 to HDR	HD-12.2B-08T	D/S Main	RO16		0.656	0.043	Band	Yes
HD-11.1B HD PMP 32 to HDR	HD-12.2B-08T	Branch	RO16		0.500	0.060	Band	Yes
HD-11.1B HD PMP 32 to HDR	HD-12.3-01P	U/S Main	RO16		0.656	0.065	Band	Yes
HD-11.1B HD PMP 32to HDR	HD-1 1 .2B-01 R		RO8		0.322	0.051	Band	Yes
HD-11.1B HD PMP 32to HDR	HD-11.2B-01R	U/S Main	RO8		0.500	0.109	Band	No (8)
HD-11.1B HD PMP 32to HDR	HD-11.2B-01R	U/S Main	RO10	99UT242	0.500	0.161	Max PTP	No (8)
HD-11.1B HD PMP 32to HDR	HD-11.2B-01R	D/S Main	RO10	99UT242	0.322	0.097	Max PTP	Yes
HD-11.1B HD PMP 32to HDR	HD-12.1B-01V		RO8		0.322	0.066	Blanket	No (10)
HD-11.1B HD PMP 32to HDR	HD-12.1B-01V		RO11	99UT242	0.322	0.115	Band	No (10)
HD-11.1B HD PMP 32to HDR	HD-12.1B-02R	DS Main	RO13	05UT107	0.500	0.056	Band	Yes
HD-11.1B HD PMP 32to HDR	HD-12.1B-02R	US Main	RO13	05UT107	0.322	0.070	Band	No(3)
HD-11.1B HD PMP 32to HDR	HD-12.2B-02P		RO8		0.539	0.042	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
HD-11.1B HD PMP 32to HDR	HD-12.2B-03E			RO8		0.535	0.087	Blanket	Yes
HD-11.1B HD PMP 32to HDR	HD-12.2B-04T			RO8		0.500	0.289	Blanket	No (3)
HD-11.1B HD PMP 32to HDR	HD-12.2B-04T			RO8		0.500	0.280	Blanket	No (3)
HD-11.1B HD PMP 32to HDR	HD-12.2B-04T			RO8		0.500	0.498	Blanket	No (3)
HD-11.1B HD PMP 32to HDR	HD-12.2B-05P			RO8		0.500	0.043	Band	Yes
HD-11.1B HD PMP 32to HDR	HD-12.2B-06O			RO10	99UT256	0.516	0.088	Band	No (10)
HD-11.1B HD PMP 32to HDR	HD-12.2B-06O			RO10	99UT256	0.527	0.090	Band	Yes
HD-11.1B HD PMP 32to HDR	HD-12.2B-06O						0.079	T DAT	Yes
HD-11.1B HD PMP 32to HDR	HD-12.2B-08T						0.045	T DAT	No (6)
HD-11.1B HD PMP 32to HDR	HD-12.2B-08T						0.082	T DAT	Yes
HD-11.1B HD PMP 32to HDR	HD-12.3-01P						0.038	T DAT	Yes
HD-12.2A HD PMP HDR to CD SYS	HD-12.2A-08T	HD-12.2A-08T		RO14		0.656	0.056	Max BAND	Yes
HD-12.2A HD PMP HDR to CD SYS	HD-12.2A-08T	HD-12.2A-08T-BR		RO14		0.500	0.064	Max BAND	Yes
HD-12.2A HD PMP HDR to CD SYS	HD-12.4-01E	U/S Ext		RO15		0.656	0.053	Band	No (2)
HD-12.2A HD PMP HDR to CD SYS	HD-12.4-01E	U/S Main		RO15		0.656	0.132	Blanket	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
HD-12.2A HD PMPHDR to CD SYS	HD-12.2A-08T						0.069	T DAT	Yes
HD-12.2A HD PMPHDR to CD SYS	HD-12.2A-08T						0.096	T DAT	Yes
HD-12.2A HD PMPHDR to CD SYS	HD-12.4-01E						0.162	T DAT	Yes
MSD-01 .1 4B TK 33B to HD TK	MSD-01 .1 5B-07E		RO8			0.309	0.094	Blanket	Yes
MSD-01 .1 4B TK 33B to HD TK	MSD-01 .1 5B-07E		RO9	97UT182		0.309	N/A	N/A	No (8)
MSD-01 .3A HDR toMSEP TK 31A	MSD-01 .3A-01T	Branch	RO13	05UT067		0.250	0.388	Band	No(7)
MSD-01 .3A HDR toMSEP TK 31A	MSD-01 .3A-01T	DS Main	RO13	05UT067		0.250	0.307	Band	No(16)
MSD-01 .3A HDR toMSEP TK 31A	MSD-01 .3A-01T	US Main	RO13	05UT067		0.250	0.140	Band	No(22)
MSD-01 .3A HDR toMSEP TK 31A	MSD-01 .3A-02P	Main	RO13	05UT067		0.250	0.060	Band	Yes
MSD-01 .3A HDR toMSEP TK 31A	MSD-01 .3A-03E	Main	RO13	05UT067		0.250	0.055	Blanket	Yes
MSD-01 .4A TK 31 A toHD TK	MSD-01 .4A-04P		RO8			0.349	0.050	Band	No (1)
MSD-01 .4A TK 31 A toHD TK	MSD-01 .5A-01 E		RO8			0.322	0.064	Blanket	Yes
MSD-01 .4A TK 31 A toHD TK	MSD-01 .5A-01 E		RO8			0.280	0.094	Blanket	Yes
MSD-01 .4A TK 31 A toHD TK	MSD-01 .5A-02P		RO8			0.314	0.035	Band	Yes
MSD-01 .4A TK 31 A toHD TK	MSD-01 .5A-04P		RO8			0.349	0.046	Band	No (1)

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
MSD-01 .4A TK 31 A toHD TK	MSD-01 .5A-05E		RO8		0.319	0.086	Blanket	Yes
MSD-01 .4A TK 31 A toHD TK	MSD-01 .5A-07P		RO8		0.289	0.044	Band	Yes
MSD-01 .4A TK 31 A toHD TK	MSD-01 .5A-08E		RO8		0.319	0.038	Blanket	Yes
MSD-01 .4A TK 31 A toHD TK	MSD-01 .5A-09P		RO8		0.317	0.037	Band	Yes
MSD-01 .4A TK 31 A toHD TK	MSD-01 .5A-23P		RO8		0.314	0.051	Band	No (1)
MSD-01 .4A TK 31 A toHD TK	MSD-01 .5A-24E		RO8		0.302	0.064	Blanket	Yes
MSD-01 .4A TK 31 A toHD TK	MSD-01 .5A-25P		RO8		0.318	0.041	Band	Yes
MSD-01 .4A TK 31 A toHD TK	MSD-01 .5A-25P		RO8		0.280	0.064	Band	No (1)
MSD-01 .4A TK 31 A toHD TK	MSD-01 .5A-26E		RO8		0.280	0.065	Blanket	Yes
MSD-01 .4A TK 31 A toHD TK	MSD-01 .5A-27N		RO8		0.280	0.077	Band	Yes
MSD-01 .4B TK 31 B toHD TK	MSD-01 .5B-05P		RO8		0.307	0.038	Band	No (1)
MSD-01 .4B TK 31 B toHD TK	MSD-01 .5B-06E		RO8		0.303	0.055	Blanket	Yes
MSD-01 .4B TK 31 B toHD TK	MSD-01 .5B-12E		RO10	N/A (6)	0.280	0.031	Blanket	No (16)
MSD-01 .4B TK 31 B toHD TK	MSD-01 .5B-12E		RO10	N/A (6)	0.280	0.025	Band	No (2)
MSD-01 .4B TK 31 B toHD TK	MSD-01 .5B-25P		RO8		0.302	0.052	Band	No (1)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
MSD-01 .4B TK 31 B toHD TK	MSD-01 .5B-25P			RO8		0.302	0.035	Band	No (1)
MSD-01 .4B TK 31 B toHD TK	MSD-01 .5B-26E			RO8		0.280	0.149	Blanket	Yes
MSD-01 .4B TK 31 B toHD TK	MSD-01 .5B-26E			RO8		0.280	N/A	N/A	No (3)
MSD-01 .4B TK 31 B toHD TK	MSD-01 .5B-27P			RO8		0.311	0.072	Band	Yes
MSD-01 .4B TK 31 B toHD TK	MSD-01 .5B-32P			RO8		0.302	N/A	N/A	No (1)
MSD-01 .6B_1 MSEP32B to HDR	MSD-01 .6B-03P	Entered as DS Ext ofMSD-01.7B-01T		RO13	05UT066	0.304	0.087	Band	Yes
MSD-01 .6B_3 MSEP32B to HDR	MSD-01 .6B-07P			RO11	01 UT096	0.304	0.094	Band	Yes
MSD-01 .7A MSEP32A DR HDR	MSD-01 .7A-01T			RO10	N/A (6)	0.250	0.155	Band	No (1)
MSD-01 .7A MSEP32A DR HDR	MSD-01 .7A-01T			RO10	N/A (6)	0.250	0.117	Band	Yes
MSD-01 .7B MSEP32B DR HDR	MSD-01 .7B-01T			RO10	N/A (6)	0.250	0.143	Blanket	No (16)
MSD-01 .7B MSEP32B DR HDR	MSD-01 .7B-01T			RO10	N/A (6)	0.250	0.135	Blanket	No (16)
MSD-01 .7B MSEP32B DR HDR	MSD-01 .7B-01T			RO10	N/A (6)	0.312	0.062	Band	No (1)
MSD-01 .7B MSEP32B DR HDR	MSD-01 .7B-01T			RO10	N/A (6)	0.304	0.054	Band	No (16)
MSD-01 .7B MSEP32B DR HDR	MSD-01 .7B-01T	Branch		RO13	05UT066	0.250	0.299	Band	No(8)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
MSD-01 .7B MSEP32B DR HDR	MSD-01 .7B-01T	DS Main		RO13	05UT066	0.250	0.088	Band	Yes
MSD-01 .7B MSEP32B DR HDR	MSD-01 .7B-01T	US Main		RO13	05UT066	0.250	0.043	Band	Yes
MSD-01 .7B MSEP32B DR HDR	MSD-01 .7B-01T					0.304	0.084	T DAT	Yes
MSD-01 .7B MSEP32B DR HDR	MSD-01 .7B-02P			RO11	01 UT096	0.264	0.047	Band	Yes
MSD-01 .7B MSEP32B DR HDR	MSD-01 .7B-02P	Entered as US Ext ofMSD-01.7B-01T		RO13	05UT066	0.312	0.092	Band	No(1)
MSD-01 .8A HDR toMSEP TK 32A	MSD-01 .8A-01T			RO10	N/A (6)	0.250	0.159	Blanket	Yes
MSD-01 .8A HDR toMSEP TK 32A	MSD-01 .8A-01T			RO10	N/A (6)	0.250	0.178	Blanket	Yes
MSD-01 .8A HDR toMSEP TK 32A	MSD-01 .8A-01T			RO10	N/A (6)	0.250	0.091	Band	No (1)
MSD-01 .8A HDR toMSEP TK 32A	MSD-01 .8A-01T			RO10	N/A (6)	0.250	0.085	Band	No (1)
MSD-01 .8A HDR toMSEP TK 32A	MSD-01 .8A-01T	D/S Main		RO12	03UT098	0.250	0.086	Band	Yes
MSD-01 .8A HDR toMSEP TK 32A	MSD-01 .8A-01T	U/S Main		RO12	03UT098	0.250	0.143	Band	Yes
MSD-01 .8A HDR toMSEP TK 32A	MSD-01 .8A-02P	Main				0.250	0.068	Band	Yes
MSD-01 .8A HDR toMSEP TK 32A	MSD-01 .8A-03E	Main				0.250	0.090	Blanket	Yes
MSD-01 .8A HDR toMSEP TK 32A	MSD-01 .8A-05P	Main				0.250	0.061	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
MSD-01 .8B HDR toMSEP TK 32B	MSD-01 .8B-01T		RO10	N/A (6)	0.250	0.122	Blanket	No (16)	
MSD-01 .8B HDR toMSEP TK 32B	MSD-01 .8B-01T		RO10	N/A (6)	0.250	0.018	Blanket	No (16)	
MSD-01 .8B HDR toMSEP TK 32B	MSD-01 .8B-01T		RO10	N/A (6)	0.264	0.029	Band	No (2)	
MSD-01 .8B HDR toMSEP TK 32B	MSD-01 .8B-01T		RO10	N/A (6)	0.304	0.071	Band	No (16)	
MSD-01 .8B HDR toMSEP TK 32B	MSD-01 .8B-01T		RO11	01UT096	0.250	0.104	Band	Yes	
MSD-01 .8B HDR toMSEP TK 32B	MSD-01 .8B-01T		RO11	01UT096	0.250	0.073	Band	Yes	
MSD-01 .8B HDR toMSEP TK 32B	MSD-01 .8B-01T		RO11	01UT096	0.250	0.218	Blanket	No (4)	
MSD-01 .8B HDR toMSEP TK 32B	MSD-01 .8B-01T				0.285	0.058	T DAT	Yes	
MSD-01 .8B HDR toMSEP TK 32B	MSD-01 .8B-02P		RO9	97UT1 22	0.285	0.057	Band	No (1)	
MSD-01 .8B HDR toMSEP TK 32B	MSD-01 .8B-02P		RO11	01 UT096	0.285	0.061	Band	Yes	
MSD-01 .8B HDR toMSEP TK 32B	MSD-01 .8B-03E		RO9	97UT122	0.250	0.172	Blanket	Yes	
MSD-01 .8B HDR toMSEP TK 32B	MSD-01 .8B-07P		RO9	97UT121	0.250	0.069	Band	Yes	
MSD-01 .9A TK 32A to HD TK	MSD-01 .1 0A-02P		RO8		0.304	0.037	Band	No (1)	
MSD-01 .9A TK 32A to HD TK	MSD-01 .1 0A-03E		RO8		0.309	0.103	Blanket	Yes	
MSD-01 .9A TK 32A to HD TK	MSD-01 .1 0A-04P		RO8		0.280	0.025	Band	No (2)	

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
MSD-01 .9A TK 32A to HD TK	MSD-01 .1 0A-07P		RO8		0.293	0.048	Band	Yes
MSD-01 .9A TK 32A to HD TK	MSD-01 .1 0A-07P		RO9	97UT056	0.293	N/A	N/A	No (8)
MSD-01 .9A TK 32A to HD TK	MSD-01 .1 0A-08E		RO8		0.307	0.166	Blanket	Yes
MSD-01 .9A TK 32A to HD TK	MSD-01 .1 0A-08E		RO9	97UT056	0.307	N/A	N/A	No (8)
MSD-01 .9A TK 32A to HD TK	MSD-01 .1 0A-21P		RO8		0.294	0.039	Band	No (1)
MSD-01 .9A TK 32A to HD TK	MSD-01 .1 0A-21P		RO9	97UT064	0.294	0.041	Band	No (1)
MSD-01 .9A TK 32A to HD TK	MSD-01 .1 0A-9P		RO8		0.293	0.074	Band	Yes
MSD-01 .9A TK 32A to HD TK	MSD-01 .1 0A-9P		RO9	97UT056	0.293	N/A	N/A	No (8)
MSD-01 .9A TK 32B to HD TK	MSD-01 .1 0B-10P		RO11	01UT136	0.280	0.056	Band	No (1)
MSD-01 .9A TK 32B to HD TK	MSD-01 .1 0B-11E		RO10	N/A (6)	0.280	0.050	Blanket	No (16)
MSD-01 .9A TK 32B to HD TK	MSD-01 .1 0B-11E		RO10	N/A (6)	0.280	0.078	Band	No (1)
MSD-01 .9A TK 32B to HD TK	MSD-01 .1 0B-1E		RO9	97UT189	0.322	0.086	Blanket	Yes
MSD-01 .9A TK 32B to HD TK	MSD-01 .1 0B-1E		RO9	97UT189	0.280	0.119	Blanket	Yes
MSD-01 .9B TK 32B HD TK	MSD-01 .1 0B-11E		RO10	N/A (6)	0.280	0.051	Band	Yes
MSD-01 .9B TK 32B to	MSD-01 .1 0B-				0.280	N/A	N/A	No (3)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
MSD-01 .9B TK 32B toHD TK	MSD-01 .1 0B-24P			RO8		0.285	0.069	Band	No (1)
MSD-01 .9B TK 32B toHD TK	MSD-01 .1 0B-25E			RO8		0.316	0.136	Blanket	Yes
MSD-01 .9B TK 32B toHD TK	MSD-01 .1 0B-26P			RO8		0.290	0.072	Band	Yes
MSD-01 .9B TK 32B toHD TK	MSD-01 .9B-04P			RO9	97UT189	0.322	0.034	Band	No (1)
MSD-01.13A HDR to MSEP TK 33A	MSD-01.13A-01T	U/S Main		RO16		0.250	0.215	Blanket	No (9)
MSD-01.13A HDR to MSEP TK 33A	MSD-01.13A-01T	D/S Main		RO16		0.250	0.188	Blanket	No (9)
MSD-01.13A HDR to MSEP TK 33A	MSD-01.13A-01T	Branch		RO16		0.250	0.135	Blanket	No (9)
MSD-01.13A HDR to MSEP TK 33A	MSD-01.13A-07P					0.268	0.236	T DAT	Yes
MSD-01.13A HDR to MSEP TK 33A	MSD-01.13A-08E	U/S Main		RO15		0.250	0.127	Blanket	Yes
MSD-01.13A HDR to MSEP TK 33A	MSD-01.13A-08E					0.437	0.279	T DAT	Yes
MSD-01.13A HDR to MSEP TK 33A	MSD-01.13A-09P	U/S Main		RO15		0.250	0.036	Band	Yes
MSD-01.13A HDR to MSEP TK 33A	MSD-01.13A-09P					0.382	0.291	T DAT	Yes
MSD-01.13A HDR toMSEP TK 33A	MSD-01.13A-01T			RO9	97UT107	0.250	0.148	Blanket	Yes
MSD-01.13A HDR toMSEP TK 33A	MSD-01.13A-02P			RO9	97UT107	0.250	0.046	Band	Yes
MSD-01.13A HDR toMSEP TK 33A	MSD-01.13A-03E			RO9	97UT1 08	0.250	0.089	Blanket	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
MSD-01.13B HDR to MSEP TK 33B	MSD-01.13B-01T	Branch	RO12	03UT098	0.250	0.221	Blanket	No (4)	
MSD-01.13B HDR to MSEP TK 33B	MSD-01.13B-01T	D/S Ext.	RO12	03UT098	0.250	0.052	Band	Yes	
MSD-01.13B HDR to MSEP TK 33B	MSD-01.13B-01T	D/S Main	RO12	03UT098	0.250	0.222	Blanket	No (4)	
MSD-01.13B HDR to MSEP TK 33B	MSD-01.13B-01T	U/S Ext.	RO12	03UT098	0.250	0.057	Band	Yes	
MSD-01.13B HDR to MSEP TK 33B	MSD-01.13B-01T	U/S Main	RO12	03UT098	0.250	0.065	Blanket	Yes	
MSD-01.13B HDR to MSEP TK 33B	MSD-01.13B-10N	U/S Main	RO16		0.250	0.063	Band	Yes	
MSD-01.13B HDR to MSEP TK 33B	MSD-01.13B-10N	U/S Ext.	RO16		0.250	0.055	Band	No (2)	
MSD-01.14A TK 33A to HD TK	MSD-01.14A-04P		RO8		0.324	0.033	Band	No (1)	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-01E		RO8		0.322	0.108	Blanket	Yes	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-01E		RO8		0.280	0.138	Blanket	Yes	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-04E		RO8		0.341	0.157	Blanket	Yes	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-05E		RO8		0.322	0.102	Blanket	Yes	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-06P		RO8		0.285	0.092	Band	Yes	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-08P		RO8		0.280	0.044	Band	No (1)	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-09E		RO8		0.302	0.075	Blanket	Yes	

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-10P		RO8		0.306	0.049	Band	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-10P		RO8		0.306	0.027	Band	No (1)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-10P		RO9	97UT061	0.306	0.032	Band	No (1)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-11E		RO8		0.290	0.121	Blanket	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-11E		RO9	97UT061	0.290	N/A	N/A	No (8)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-12P		RO8		0.272	0.083	Band	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-12P		RO8		0.272	0.057	Band	No (1)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-12P		RO9	97UT061	0.272	N/A	N/A	No (8)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-12P		RO9	97UT093	0.272	N/A	N/A	No (8)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-13E		RO8		0.334	0.133	Blanket	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-13E		RO9	97UT093	0.334	0.151	Blanket	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-14P		RO8		0.281	0.157	Band	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-14P		RO9	97UT062	0.281	0.151	Band	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-14P		RO9	97UT062	0.281	N/A	N/A	No (8)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-15E		RO8		0.331	0.084	Blanket	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-15E		RO9	97UT062	0.331	0.084	Blanket	Yes	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-16P		RO8		0.284	0.084	Band	Yes	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-16P		RO8		0.284	0.061	Band	No (1)	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-17E		RO8		0.280	0.061	Blanket	Yes	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-18P		RO8		0.280	0.164	Band	Yes	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-18P		RO8		0.280	N/A	N/A	No (3)	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-18P		RO8		0.280	0.036	Band	No (1)	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-18P		RO8		0.280	N/A	N/A	No (3)	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-19E		RO8		0.331	0.227	Blanket	Yes	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-19E		RO8		0.331	N/A	N/A	No (3)	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-20N		RO8		0.280	0.064	Band	Yes	
MSD-01.14A TK 33A to HD TK	MSD-01.15A-22P		RO8		0.281	0.027	Band	No (1)	
MSD-01.14B TK 33B to HD TK	MSD-01.14B-02P	Main	RO12	03UT098	0.250	0.048	Band	Yes	
MSD-01.14B TK 33B to HD TK	MSD-01.15B-01E		RO9	97UT097	0.322	0.084	Blanket	Yes	
MSD-01.14B TK 33B to HD TK	MSD-01.15B-01E		RO9	97UT097	0.280	0.127	Blanket	Yes	

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
MSD-01.14B TK 33B to HD TK	MSD-01.15B-02E		RO9	97UT096	0.280	0.049	Blanket	Yes
MSD-01.14B TK 33B to HD TK	MSD-01.15B-03P		RO9	97UT096	0.280	0.114	Band	Yes
MSD-01.14B TK 33B to HD TK	MSD-01.15B-04P		RO9	97UT097	0.322	0.045	Band	No (1)
MSD-01.14B TK 33B to HD TK	MSD-01.15B-06P		RO8		0.265	0.058	Band	Yes
MSD-01.14B TK 33B to HD TK	MSD-01.15B-06P		RO9	97UT182	0.265	N/A	N/A	No (8)
MSD-01.14B TK 33B to HD TK	MSD-01.15B-1 4P		RO11	01 UT1 37	0.280	0.071	Band	Yes
MSD-01.14B TK 33B to HD TK	MSD-01.15B-1 4P		RO11	01 UT1 37	0.280	0.095	Band	No (1)
MSD-01.14B TK 33B to HD TK	MSD-01.15B-1 6P		RO11	01 UT1 37	0.280	0.049	Band	Yes
MSD-01.14B TK 33B to HD TK	MSD-01.15B-13E		RO10	N/A (6)	0.280	0.046	Blanket	No (16)
MSD-01.14B TK 33B to HD TK	MSD-01.15B-13E		RO10	N/A (6)	0.280	0.067	Band	No (1)
MSD-01.14B TK 33B to HD TK	MSD-01.15B-13E		RO10	N/A (6)	0.280	0.045	Band	No (16)
MSD-01.14B TK 33B to HD TK	MSD-01.15B-13E		RO11	01 UT1 37	0.280	0.094	Blanket	Yes
MSD-01.14B TK 33B to HD TK	MSD-01.15B-15E		RO11	01UT137	0.280	0.120	Blanket	Yes
MSD-01.14B TK 33B to HD TK	MSD-01.15B-26P		RO8		0.278	0.077	Band	No (1)
MSD-01.14B TK 33B to HD TK	MSD-01.15B-27E		RO8		0.341	0.150	Blanket	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
MSD-01.14B TK 33Bto HD TK	MSD-01.15B-28P		RO8		0.282	0.096	Band	Yes
MSD-01.1A_1 MSEP 31A to HDR	MSD-01.1A-02T	Branch	RO15		0.250	0.405	Band	No (9)
MSD-01.1A_1 MSEP 31A to HDR	MSD-01.1A-02T	D/S Ext	RO15		0.250	0.073	Band	Yes
MSD-01.1A_1 MSEP 31A to HDR	MSD-01.1A-02T	D/S Main	RO15		0.250	0.443	Band	No (9)
MSD-01.1A_1 MSEP 31A to HDR	MSD-01.1A-02T	U/S Main	RO15		0.250	0.347	Band	No (9)
MSD-01.1B_3 MSEP 31B to HDR	MSD-01.1B-06T	MSD-01.1B-06T	RO14		0.250	0.136	Max BAND	Yes
MSD-01.1B_3 MSEP 31B to HDR	MSD-01.1B-06T	MSD-01.1B-06T-BR	RO14		0.250	0.384	Max BAND	Yes
MSD-01.1B_3 MSEP 31B to HDR	MSD-01.1B-06T	MSD-01.1B-06T-DSX	RO14		0.250	0.043	Max BAND	Yes
MSD-01.3B HDR to MSEP TK 31B	MSD-01.3B-03E	MSD-01.3B-03E	RO14		0.250	0.113	BLANKET	Yes
MSD-01.3B HDR to MSEP TK 31B	MSD-01.3B-03E	MSD-01.3B-03E-USX	RO14		0.250	0.042	Max BAND	No(2)
MSD-01.3B HDR to MSEP TK 31B	MSD-01.3B-08N	U/S Main	RO16		0.250	0.181	Band	Yes
MSD-01.3B HDR to MSEP TK 31B	MSD-01.3B-08N	U/S Ext.	RO16		0.250	0.052	Band	No (2)
MSD-01.4B TK 31 B toHD TK	MSD-01.5B-07P		RO8		0.313	0.057	Band	Yes
MSD-01.4B TK 31 B toHD TK	MSD-01.5B-11P		RO11	01 UT1 36	0.280	0.037	Band	No (1)
MSD-01.4B TK 31B to HD TK	MSD-01.5B-11P_2	U/S Main	RO16		0.280	0.046	Band	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
MSD-01.4B TK 31B toHD TK	MSD-01.5B-11P_1		RO10	99UT280	0.280	0.046	Band	Yes
MSD-01.4B TK 31B toHD TK	MSD-01.5B-11P_1		RO10	99UT280	0.280	N/A	N/A	No (3)
MSD-01.4B TK 31B toHD TK	MSD-01.5B-12E		RO10	N/A (6)	0.280	0.031	Band	Yes
MSD-01.4B TK 31B toHD TK	MSD-01.5B-12E		RO11	01UT136	0.280	0.065	Blanket	Yes
MSD-01.4B TK 31B toHD TK	MSD-01.5B-13P		RO11	01UT136	0.280	0.045	Band	Yes
MSD-01.6B_1 MSEP32B to HDR	MSD-01.6B-03P				0.312	0.079	T DAT	No (8)
MSD-01.6B_3 MSEP32B to HDR	MSD-01.6B-07P				0.264	0.062	T DAT	Yes
MSD-01.7A MSEP32A DR HDR	MSD-01.7A-01T		RO10	N/A (6)	0.250	0.276	Blanket	No (16)
MSD-01.7A MSEP32A DR HDR	MSD-01.7A-01T		RO10	N/A (6)	0.250	0.184	Blanket	No (16)
MSD-01.8A HDR to MSEP TK 32A	MSD-01.8A-08N	U/S Main	RO15		0.250	0.102	Band	Yes
MSD-01.8B HDR to MSEP TK 32B	MSD-01.8B-03E	U/S Ext	RO15		0.250	0.045	Band	No (2)
MSD-01.8B HDR to MSEP TK 32B	MSD-01.8B-03E	U/S Main	RO15		0.250	0.178	Blanket	Yes
MSD-01.8B HDR to MSEP TK 32B	MSD-01.8B-08N	U/S Main	RO16		0.250	0.086	Band	Yes
MSD-01.8B HDR toMSEP TK 32B	MSD-01.8B-08N		RO9	97UT121	0.250	0.057	Band	Yes
MSD-01.9A TK 32A to HD TK	MSD-01.1 0A-22E		RO8		0.317	0.150	Blanket	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
MSD-01.9A TK 32A to HD TK	MSD-01.10A-22E			RO9	97UT064	0.317	0.158	Blanket	Yes
MSD-01.9A TK 32A to HD TK	MSD-01.10A-23P			RO8		0.289	0.050	Band	Yes
MSD-01.9A TK 32A to HD TK	MSD-01.10A-23P			RO8		0.289	0.054	Band	No (1)
MSD-01.9A TK 32A to HD TK	MSD-01.10A-23P			RO9	97UT064	0.289	0.063	Band	Yes
MSD-01.9A TK 32A to HD TK	MSD-01.10A-24E			RO8		0.280	0.224	Blanket	Yes
MSD-01.9A TK 32A to HD TK	MSD-01.10A-24E			RO8		0.280	N/A	N/A	No (3)
MSD-01.9A TK 32A to HD TK	MSD-01.10A-25N			RO8		0.280	0.111	Band	No (9)
MSD-01.9A TK 32A to HD TK	MSD-01.10A-25N	U/S Main		RO16		0.280	0.068	Band	No (9)
MSD-01.9B TK 32B to	MSD-01.10B-					0.280	0.135	Band	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-02E			RO9	97UT189	0.280	0.102	Blanket	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-02E			RO10	99UT283	0.280	N/A	N/A	No (3)
MSD-01.9B TK 32B to HD TK	MSD-01.10B-02E			RO10	99UT283	0.280	N/A	N/A	No (3)
MSD-01.9B TK 32B to HD TK	MSD-01.10B-02E	U/S Main		RO16		0.280	0.073	Blanket	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-02E	D/S Ext.		RO16		0.280	0.053	Band	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-03P			RO9	97UT197	0.280	0.135	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
MSD-01.9B TK 32B to HD TK	MSD-01.10B-04E			RO9	97UT1 97	0.280	0.083	Blanket	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-06P			RO8		0.299	0.070	Band	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-07E			RO8		0.328	0.083	Blanket	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-07E			RO10	99UT284	0.328	N/A	N/A	No (3)
MSD-01.9B TK 32B to HD TK	MSD-01.10B-07E			RO10	99UT284	0.299	N/A	N/A	No (3)
MSD-01.9B TK 32B to HD TK	MSD-01.10B-07E			RO10	99UT284	0.289	N/A	N/A	No (3)
MSD-01.9B TK 32B to HD TK	MSD-01.10B-07E	U/S Main		RO16		0.280	0.065	Blanket	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-07E	U/S Ext.		RO16		0.280	0.043	Band	No (2)
MSD-01.9B TK 32B to HD TK	MSD-01.10B-07E	D/S Ext.		RO16		0.280	0.037	Band	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-08P			RO8		0.289	0.078	Band	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-12P			RO11	01UT136	0.280	0.070	Band	Yes
PD-01 .5 PRESEP 2BDR to HDR	PD-01 .6-11 P	Entered as U/S Ext of PD-01 .6-1 2E		RO12	03UT1 10	0.365	0.043	Band	No (2)
PD-01 .5 PRESEP 2BDR to HDR	PD-01 .6-14O	Main		RO12	03UT1 10	0.365	0.021	Band	No (10)
PD-01 .5 PRESEP 2BDR to HDR	PD-01.6-12E	Main		RO12	03UT110	0.365	0.053	Blanket	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
PD-01 .7 PRESEP 2ADR to HDR	PD-01 .8-14O	Main		RO8		0.365	0.020	Band	No (1)
PD-01.1 PRESEP 1B DR to HDR	PD-01.2-100	PD-01.2-100		RO14		0.365	0.029	Max BAND	No(1)
PD-01.3 PRESEP 1ADR to HDR	PD-01 .4-01 R	D/S Main		RO11	01 UT1 11	0.365	0.050	Band	Yes
PD-01.3 PRESEP 1ADR to HDR	PD-01 .4-01 R	U/S Main		RO11	01 UT1 11	0.375	0.040	Band	Yes
PD-01.3 PRESEP 1ADR to HDR	PD-01 .4-02B	Main		RO11	01 UT1 11	0.365	0.039	Blanket	Yes
PD-01.3 PRESEP 1ADR to HDR	PD-01 .4-03P	Entered as D/S Ext. of PD-01 .4-02B		RO11	01 UT1 11	0.365	0.047	Band	Yes
PD-01.3 PRESEP 1ADR to HDR	PD-01 .4-10O	Main		RO8		0.380	0.023	Band	No (1)
PD-02.2 PRESEP HDR to HD TK	PD-02.2-01T	Branch		RO15		0.365	0.058	Band	Yes
PD-02.2 PRESEP HDR to HD TK	PD-02.2-01T	D/S Main		RO15		0.375	0.115	Band	Yes
PD-02.2 PRESEP HDR to HD TK	PD-02.2-01T	U/S Main		RO15		0.375	0.120	Band	Yes
PD-02.2 PRESEPHDR to HD TK	PD-02.2-01T	Branch		RO8		0.365	0.027	Blanket	No (3)
PD-02.2 PRESEPHDR to HD TK	PD-02.2-01T	D/S Main		RO8		0.375	0.190	Blanket	No (3)
PD-02.2 PRESEPHDR to HD TK	PD-02.2-01T	U/S Main		RO8		0.375	0.139	Blanket	No (3)
PD-02.3 PRESEP HDR to HD TK	PD-02.3-01T	U/S Main		RO16		0.375	0.165	Blanket	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
PD-02.3 PRESEP HDR to HD TK	PD-02.3-01T	D/S Main		RO16		0.375	0.210	Blanket	Yes
PD-02.3 PRESEP HDR to HD TK	PD-02.3-01T	Branch		RO16		0.365	0.151	Blanket	Yes
PD-02.3 PRESEPHDR to HD TK	PD-02.3-01T	D/S Main		RO8		0.375	0.244	Blanket	No (3)
PD-02.3 PRESEPHDR to HD TK	PD-02.3-01T	U/S Main		RO8		0.375	0.066	Blanket	No (3)
PD-02.3 PRESEPHDR to HD TK	PD-02.3-01T	D/S Main		RO10	99UT279	0.375	0.330	Max PTP	No (3)
PD-02.3 PRESEPHDR to HD TK	PD-02.3-01T	U/S Main		RO10	99UT279	0.375	0.061	Blanket	No (3)
PD-02.4 PRESEP HDR to HD TK	PD-02.4-01T	Branch		RO15		0.365	0.032	Blanket	Yes
PD-02.4 PRESEP HDR to HD TK	PD-02.4-01T	D/S Main		RO15		0.365	0.226	Blanket	Yes
PD-02.4 PRESEP HDR to HD TK	PD-02.4-01T	U/S Main		RO15		0.365	0.139	Blanket	Yes
PD-02.4 PRESEPHDR to HD TK	PD-02.4-01T	Branch		RO8		0.365	0.188	Blanket	No (3)
PD-02.4 PRESEPHDR to HD TK	PD-02.4-01T	D/S Main		RO8		0.375	0.143	Blanket	No (3)
PD-02.4 PRESEPHDR to HD TK	PD-02.4-01T	U/S Main		RO8		0.375	0.139	Blanket	No (3)
PD-02.4 PRESEPHDR to HD TK	PD-02.4-01T	Branch		RO10	99UT279	0.365	0.309	Max PTP	No (3)
PD-02.4 PRESEPHDR to HD TK	PD-02.4-01T	Branch Ext.		RO10	99UT281	0.365	0.019	Band	No (2)
PD-02.4 PRESEPHDR to HD TK	PD-02.4-01T	D/S Main		RO10	99UT279	0.375	0.284	Max PTP	No (3)

CHECWORKS Line Name			Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
PD-02.4 PRESEPHDR to HD TK	PD-02.4-01T	U/S Main	RO10	99UT279	0.375	0.207	Max PTP	No (3)		
PD-02.4 PRESEPHDR to HD TK	PD-02.4-02E	Main	RO10	99UT279	0.375	0.154	Max PTP	Yes		
PD-02.4 PRESEPHDR to HD TK	PD-02.4-1 9P	Entered as U/S Ext. ofPD-02.4-200	RO11	01 UT1 23	0.375	0.055	Band	No (2)		
PD-02.4 PRESEPHDR to HD TK	PD-02.4-15P	Entered as U/S Ext. ofPD-02.4-16E	RO10	99UT216	0.375	0.045	Band	No (2)		
PD-02.4 PRESEPHDR to HD TK	PD-02.4-16E	Main	RO10	99UT216	0.375	0.044	Blanket	Yes		
PD-02.4 PRESEPHDR to HD TK	PD-02.4-17P	Entered as D/S Ext. ofPD-02.4-16E	RO10	99UT216	0.375	0.067	Band	Yes		
PD-02.4 PRESEPHDR to HD TK	PD-02.4-200	N/A	RO8		0.421	0.072	T DAT	No (3)		
PD-02.4 PRESEPHDR to HD TK	PD-02.4-200	Main	RO11	01 UT1 23	0.421	0.054	Band	No (10)		
PD-02.4 PRESEPHDR to HD TK	PD-02.4-21 N	Main	RO8		0.899	0.084	T DAT	Yes		
PD-02.4 PRESEPHDR to HD TK	PD-02.4-21 N	Main	RO11	01 UT1 23	0.899	0.084	Band	Yes		
RHD-01 .1 0A_2 TK33A to A HDR	RHD01 .1 1A-02P	Entered as DS Ext of RHD01.11A-01E	RO13	05UT077	0.500	0.088	Band	Yes		
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD01 .1 B-38P_2	Entered as U/S Ext. of RHD01.1B-39E	RO11	01UT109	0.432	0.053	Band	No (2)		

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD01 .1 B-42P_1	Entered as D/S Ext. of RHD01.1B-41E	RO11	01UT109	0.432	0.067	Band	Yes	
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD01.1B-17P	Entered as DS Ext of RHD01.1B-16E	RO13	05UT075	0.432	0.041	Band	Yes	
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD01.1B-29P	Entered as U/S Ext. of RHD01.1B-30E	RO8		0.473	0.046	Band	No (2)	
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD01.1B-31P	Entered as D/S Ext. of RHD01.1B-30E	RO8		0.469	0.042	Band	Yes	
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD01.1B-40P	Entered as D/S Ext. of RHD01.1B-39E	RO11	01UT109	0.432	0.073	Band	Yes	
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD01.1B-50P	Entered as U/S Ext. of RHD01.1B-51E	RO10	99UT174	0.432	0.064	Band	No (2)	
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD01.1B-52P	Entered as D/S Ext. of RHD01.1B-51E	RO8		0.432	0.051	T DAT	Yes	
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD01.1B-52P	Entered as D/S Ext. of RHD01.1B-51E	RO10	99UT174	0.476	0.054	Band	Yes	
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD02.1B-01V	Main	RO10	99UT167	0.337	0.077	Max PTP	No (10)	
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD02.1B-02R	D/S Main	RO10	99UT167	0.432	0.210	Max PTP	No (3)	
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD02.2B-01 P	Entered as D/S Ext. of RHD02.1 B-02R	RO11	01 UT093	0.432	0.040	Band	Yes	

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD02.2B-01P	Entered as D/S Ext. of RHD02.1B-02R	RO8			0.432	0.042	Band	Yes
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD02.2B-01P	Entered as D/S Ext. of RHD02.1B-02R	RO9	97UT051		0.432	0.042	Band	Yes
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD02.2B-01P	Entered as D/S Ext. of RHD02.1B-02R	RO10	99UT167		0.432	0.042	Band	Yes
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD02.2B-03P	Entered as D/S Ext. of RHD02.2B-02E	RO10	99UT167		0.432	0.118	Band	Yes
RHD-01 .1 B_2 TK 31 Bto B HDR	RHD02.2B-03P	Entered as D/S Ext. of RHD02.2B-02E	RO11	01UT093		0.432	0.126	Band	Yes
RHD-01 .10A_2 TK33A to A HDR	RHD02.5A-01 V	Main	RO8			0.337	0.011	Band	No (10)
RHD-01 .10A_2 TK33A to A HDR	RHD02.5A-01 V	Main	RO10	99UT255		0.337	0.067	Band	No (10)
RHD-01 .10A_2 TK33A to A HDR	RHD02.5A-02R	D/S Main	RO8			0.432	0.157	Band	No (3)
RHD-01 .10A_2 TK33A to A HDR	RHD02.5A-02R	U/S Main	RO8			0.337	0.081	Band	No (7)
RHD-01 .10A_2 TK33A to A HDR	RHD02.5A-02R	D/S Main	RO11	01UT078		0.432	0.113	Band	Yes
RHD-01 .10A_2 TK33A to A HDR	RHD02.5A-02R	U/S Main	RO11	01UT078		0.337	0.128	Band	No (7)
RHD-01 .10A_2 TK33A to A HDR	RHD02.6A-02E	Main	RO9	97UT081		0.432	0.096	Blanket	Yes
RHD-01 .10A_2 TK33A to A HDR	RHD02.6A-02E	Main	RO11	01 UT078		0.432	0.127	Blanket	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01 .10B_2 TK33B to B HDR	RHD01 .10B-27P	Entered as D/S Ext of RHD01.10B-26F	RO13	05UT074	0.432	0.031	Band	Yes	
RHD-01 .10B_2 TK33B to B HDR	RHD02.5B-01V	Main	RO8		0.337	0.035	Band	No (10)	
RHD-01 .10B_2 TK33B to B HDR	RHD02.5B-01V	Main	RO9	97UT052	0.337	0.053	Band	No (10)	
RHD-01 .10B_2 TK33B to B HDR	RHD02.5B-01V	Main	RO10	99UT149	0.337	0.097	Max PTP	No (10)	
RHD-01 .10B_2 TK33B to B HDR	RHD02.5B-02R	D/S Main	RO8		0.500	0.194	Band	No (3)	
RHD-01 .10B_2 TK33B to B HDR	RHD02.5B-02R	U/S Main	RO8		0.337	0.101	Band	Yes	
RHD-01 .10B_2 TK33B to B HDR	RHD02.5B-02R	D/S Main	RO9	97UT052	0.500	0.190	Band	No (3)	
RHD-01 .10B_2 TK33B to B HDR	RHD02.5B-02R	U/S Main	RO9	97UT052	0.337	0.105	Band	Yes	
RHD-01 .10B_2 TK33B to B HDR	RHD02.5B-02R	D/S Main	RO10	99UT149	0.500	0.303	Max PTP	No (3)	
RHD-01 .10B_2 TK33B to B HDR	RHD02.5B-02R	U/S Main	RO10	99UT149	0.337	0.154	Max PTP	No (3)	
RHD-01 .10B_2 TK33B to B HDR	RHD02.5B-02R	D/S Main	RO11	01UT081	0.500	0.135	Band	No (3)	
RHD-01 .10B_2 TK33B to B HDR	RHD02.5B-02R	U/S Main	RO11	01 UT081	0.337	0.095	Band	Yes	
RHD-01 .10B_2 TK33B to B HDR	RHD02.5B-02R	D/S Main	RO12	03UT029	0.500	0.077	Band	Yes	
RHD-01 .10B_2 TK33B to B HDR	RHD02.5B-02R	U/S Main	RO12	03UT029	0.337	0.051	Band	Yes	

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01 .10B_2 TK33B to B HDR	RHD02.6B-01 E	Main		RO11	01 UT080	0.559	0.217	Blanket	Yes
RHD-01 .10B_2 TK33B to B HDR	RHD02.6B-01E	Main		RO8		0.559	0.183	Blanket	Yes
RHD-01 .10B_2 TK33B to B HDR	RHD02.6B-01E	Main		RO9	97UT050	0.559	0.188	Blanket	Yes
RHD-01 .10B_2 TK33B to B HDR	RHD02.6B-01E	Main		RO10	99UT150	0.559	0.210	Blanket	Yes
RHD-01 .10B_2 TK33B to B HDR	RHD02.6B-01E	Main		RO12	03UT029	0.559	0.215	Blanket	Yes
RHD-01 .1A_2 TK 31Ato A HDR	RHD02.1A-02R	D/S Main		RO10	99UT147	0.432	0.220	Max PTP	No (3)
RHD-01 .3A_2 TK 32Ato A HDR	RHD01 .4A-01P_2	Entered as U/S Ext of RHD01.5A-01R		RO12	03UT129	0.500	0.073	Band	No(2)
RHD-01 .3A_2 TK 32Ato A HDR	RHD01 .7A-04E	Main		RO8		0.458	0.051	Blanket	Yes
RHD-01 .3A_2 TK 32Ato A HDR	RHD01 .7A-04E	Main		RO10	99UT1 73	0.458	0.060	Blanket	Yes
RHD-01 .3A_2 TK 32Ato A HDR	RHD01 .8A-01 R	D/S Main		RO8		0.337	0.085	Band	Yes
RHD-01 .3A_2 TK 32Ato A HDR	RHD01 .8A-01 R	U/S Main		RO8		0.432	0.085	Band	Yes
RHD-01 .3A_2 TK 32Ato A HDR	RHD01 .8A-02P	Entered as D/S Ext. of RHD01 .8A-01 R		RO8		0.376	0.054	Band	Yes
RHD-01 .3A_2 TK 32Ato A HDR	RHD01.5A-01R	D/S Main		RO12	03UT129	0.432	0.154	Band	No (7)
RHD-01 .3A_2 TK 32Ato A HDR	RHD01.5A-01R	U/S Main		RO12	03UT129	0.500	0.109	Band	No (7)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Timit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01 .3A_2 TK 32Ato A HDR	RHD01.5A-02P	Entered as D/S Ext of RHD01.5A-01R	RO12	03UT129	0.432	0.083	Band	Yes	
RHD-01 .3A_2 TK 32Ato A HDR	RHD01.5A-02P	Entered as U/S Ext of RHD01.5A-03F	RO12	03UT129	0.432	0.046	Band	No(2)	
RHD-01 .3A_2 TK 32Ato A HDR	RHD01.5A-04P	Entered as D/S Ext of RHD01.5A-03F	RO12	03UT128	0.432	0.053	Band	Yes	
RHD-01 .3A_2 TK 32Ato A HDR	RHD01.5A-04P	Entered as U/S Ext of RHD01.5A-05R	RO12	03UT128	0.432	0.043	Band	No(2)	
RHD-01 .3A_2 TK 32Ato A HDR	RHD01.5A-05R	D/S Main	RO12	03UT128	0.500	0.067	Band	Yes	
RHD-01 .3A_2 TK 32Ato A HDR	RHD01.5A-05R	U/S Main	RO12	03UT128	0.432	0.057	Band	Yes	
RHD-01 .3A_2 TK 32Ato A HDR	RHD01.6A-01P	Entered as D/S Ext of RHD01.5A-05R	RO12	03UT128	0.500	0.065	Band	Yes	
RHD-01 .3A_2 TK 32Ato A HDR	RHD01.7A-04E	U/S Ext.	RO10	99UT173	0.432	0.075	Band	No (2)	
RHD-01 .3A_2 TK 32Ato A HDR	RHD01.8A-01R	D/S Main	RO10	99UT173	0.337	0.135	Max PTP	Yes	
RHD-01 .3A_2 TK 32Ato A HDR	RHD01.8A-01R	U/S Main	RO10	99UT173	0.432	0.133	Max PTP	Yes	
RHD-01 .3A_2 TK 32Ato A HDR	RHD01.8A-02P	Entered as D/S Ext. of RHD01.8A-01R	RO10	99UT173	0.376	0.097	Max PTP	Yes	
RHD-01 .3A_2 TK 32Ato A HDR	RHD02.3A-01V	Main	RO8		0.337	0.070	Band	No (10)	

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01 .3A_2 TK 32Ato A HDR	RHD02.3A-01V	Main	RO10	99UT166	0.337	0.159	Band	No (10)	
RHD-01 .3A_2 TK 32Ato A HDR	RHD02.3A-01V	U/S Ext.	RO10	99UT173	0.337	0.065	Band	No (10)	
RHD-01 .3A_2 TK 32Ato A HDR	RHD02.3A-02R	D/S Main	RO8		0.432	0.198	Band	No (3)	
RHD-01 .3A_2 TK 32Ato A HDR	RHD02.3A-02R	U/S Main	RO8		0.337	0.089	Band	No (3)	
RHD-01 .3A_2 TK 32Ato A HDR	RHD02.3A-02R	D/S Main	RO10	99UT166	0.432	0.223	Band	No (3)	
RHD-01 .3A_2 TK 32Ato A HDR	RHD02.3A-02R	U/S Main	RO10	99UT166	0.337	0.100	Band	No (7)	
RHD-01 .3A_2 TK 32Ato A HDR	RHD02.4A-01 P	Entered as D/S Ext. of RHD02.3A-02R	RO8		0.432	0.047	Band	Yes	
RHD-01 .3A_2 TK 32Ato A HDR	RHD02.4A-01P	Entered as D/S Ext. of RHD02.3A-02R	RO10	99UT166	0.432	0.065	Band	Yes	
RHD-01 .3A_2 TK 32Ato A HDR	RHD02.4A-02E	Main	RO8		0.473	0.054	Blanket	No (3)	
RHD-01 .3B_1 RH 32Bto TK 32B	RHD01.3B-02P	Entered as D/S Ext. of RHD01.3B-01N	RO9	97UT120	0.432	0.050	Band	Yes	
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.4B-01P_1	Entered as D/S Ext. of RHD01.3B-20R	RO11	01UT100	0.594	0.059	Band	Yes	
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.5B-04P	Entered as D/S Ext. of RHD01.5B-03F	RO8		0.475	0.070	Band	Yes	
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.5B-05R	D/S Main	RO8		0.594	0.093	Band	Yes	

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-04N	Main		RO12	03UT074	0.432	0.074	Band	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-05P	Entered as D/S Ext of RHD01.3B-04N		RO12	03UT074	0.432	0.039	Band	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-06E	Main		RO10	99UT251	0.432	0.131	Blanket	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-06E	U/S Ext.		RO10	99UT252	0.432	0.050	Band	No (2)
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-07P	Entered as D/S Ext. of RHD01.3B-06E		RO10	99UT251	0.432	0.047	Band	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-08E	Main		RO10	99UT245	0.432	0.041	Blanket	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-08E	U/S Ext.		RO10	99UT245	0.432	0.061	Band	No (2)
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-09P	Entered as D/S Ext. of RHD01.3B-08E		RO10	99UT245	0.432	0.053	Band	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-09P	Entered as U/S Ext of RHD01.3B-10E		RO12	03UT119	0.432	0.040	Band	No(2)
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-10E	Main		RO12	03UT119	0.432	0.056	Blanket	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-11P	Entered as D/S Ext of RHD01.3B-10E		RO12	03UT119	0.432	0.036	Band	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-11P	Entered as U/S Ext of RHD01.3B-12E		RO12	03UT119	0.432	0.041	Band	No(2)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-12E	Main		RO12	03UT119	0.432	0.066	Blanket	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-13P	Entered as D/S Ext of RHD01.3B-12E		RO12	03UT119	0.432	0.041	Band	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-13P	Entered as U/S Ext of RHD01.3B-14E		RO12	03UT119	0.432	0.047	Band	No(2)
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-14E	Main		RO12	03UT119	0.432	0.085	Blanket	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-15P	Entered as U/S Ext. of RHD01.3B-16E		RO11	01UT100	0.432	0.046	Band	No (2)
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-15P	Entered as D/S Ext of RHD01.3B-14E		RO12	03UT119	0.432	0.067	Band	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-16E	Main		RO11	01UT100	0.432	0.111	Blanket	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-18E	Main		RO11	01UT100	0.432	0.097	Blanket	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-19P	Entered as D/S Ext. of RHD01.3B-18E		RO11	01UT100	0.432	0.069	Band	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-20R	D/S Main		RO11	01UT100	0.594	0.104	Band	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.3B-20R	U/S Main		RO11	01UT100	0.432	0.099	Band	Yes
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.5B-02P	Entered as U/S Ext. of RHD01.5B-03F		RO8		0.458	0.135	Band	No (2)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.5B-04P	Entered as DS Ext of RHD01.5B-03F	RO13	05UT082	0.432	0.049	Band	Yes	
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.5B-04P	Entered as US Ext of RHD01.5B-05R	RO13	05UT082	0.432	0.064	Band	No(1)	
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.5B-05R	U/S Main	RO8		0.432	0.182	Band	No (3)	
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.5B-05R	DS Main	RO13	05UT082	0.594	0.106	Band	Yes	
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.5B-05R	US Main	RO13	05UT082	0.432	0.111	Band	Yes	
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.6B-01P	Entered as DS Ext of RHD01.5B-05R	RO13	05UT082	0.634	0.073	Band	Yes	
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.6B-01P	Entered as US Ext of RHD01.6B-02E	RO13	05UT082	0.594	0.060	Band	No(1)	
RHD-01 .3B_2 TK 32Bto B HDR	RHD01.7B-03R	U/S Main	RO10	99UT277	0.432	0.311	Band	No(3)	
RHD-01 .3B_2 TK 32Bto B HDR	RHD02.4B-02E	Main	RO8		0.594	0.126	Blanket	No (8)	
RHD-01 .3B_2 TK 32Bto B HDR	RHD02.4B-02E	Main	RO11	01UT097	0.594	0.151	Blanket	Yes	
RHD-01 .3B_2 TK 32Bto B HDR	RHD02.4B-03P	Entered as D/S Ext. of RHD02.4B-02E	RO11	01 UT097	0.594	0.056	Band	Yes	
RHD-01 .3B_2 TK 32Bto B HDR	RHD02.4B-07P	Entered as Br Ext. of RHD02.7B-08L	RO8		0.609	0.054	Band	No (2)	

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01.1 B_2 TK 31 Bto B HDR	RHD01.1B-15P	Entered as DS Ext of RHD01.1B-14F	RO13	05UT075	0.432	0.055	Band	Yes
RHD-01.1 B_2 TK 31 Bto B HDR	RHD01.1B-15P	Entered as US Ext of RHD01.1B-16E	RO13	05UT075	0.432	0.058	Band	No (1)
RHD-01.10A_2 TK 33A to A HDR	RHD01.10A-04N	U/S Main	RO16		0.432	0.055	Band	No (9)
RHD-01.10A_2 TK 33A to A HDR	RHD01.10A-05P	U/S Main	RO16		0.432	0.062	Band	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD01.10A-06E	U/S Main	RO16		0.432	0.085	Blanket	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD01.10A-06E	U/S Ext.	RO16		0.432	0.055	Band	No (2)
RHD-01.10A_2 TK 33A to A HDR	RHD01.10A-06E	D/S Ext.	RO16		0.432	0.051	Band	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD01.10A-18F	D/S Ext.	RO16		0.432	0.021	Max PtP	No (1)
RHD-01.10A_2 TK 33A to A HDR	RHD01.10A-20R	U/S Main	RO16		0.432	0.019	Max PtP	No (1)
RHD-01.10A_2 TK 33A to A HDR	RHD01.10A-20R	D/S Main	RO16		0.500	0.099	Max PtP	No (3)
RHD-01.10A_2 TK 33A to A HDR	RHD01.10A-20R	U/S Ext.	RO16		0.432	0.021	Max PtP	No (1)
RHD-01.10A_2 TK 33A to A HDR	RHD01.11A-01E	U/S Main	RO16		0.500	0.034	Max PtP	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD01.11A-01E	D/S Ext.	RO16		0.500	0.112	Band	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD01.13A-01R	U/S Main	RO16		0.432	0.057	Band	No (3)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01.10A_2 TK 33A to A HDR	RHD01.13A-01R	D/S Main	RO16			0.337	0.059	Band	No (3)
RHD-01.10A_2 TK 33A to A HDR	RHD02.5A-02R	RHD02.5A-02R	RO14			0.337	0.105	Max PTP	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD02.5A-02R	RHD02.5A-02R-DS	RO14			0.432	0.152	Max BAND	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD02.5A-02R	U/S Main	RO16			0.337	0.051	Band	No (3)
RHD-01.10A_2 TK 33A to A HDR	RHD02.5A-02R	D/S Main	RO16			0.432	0.073	Band	No (3)
RHD-01.10A_2 TK 33A to A HDR	RHD02.6A-02E	RHD02.6A-02E	RO14			0.432	0.030	Max PTP	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD02.6A-02E	RHD02.6A-02E-DSX	RO14			0.432	0.041	Max PTP	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD02.6A-02E	RHD02.6A-02E-USX	RO14			0.432	0.026	Max PTP	No(2)
RHD-01.10A_2 TK 33A to A HDR	RHD02.6A-03P	RHD02.6A-03P	RO14			0.432	0.069	Max BAND	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD02.6A-03P	RHD02.6A-03P-DSX	RO14			0.432	0.039	BLANKET	Yes
RHD-01.10A_2 TK33A to A HDR	RHD01.10A-19P	Entered as DS Ext of RHD01.10A-18F	RO13	05UT077		0.432	0.062	Band	Yes
RHD-01.10A_2 TK33A to A HDR	RHD01.10A-19P	Entered as US Ext of RHD01.10A-18F	RO13	05UT077		0.432	0.072	Band	No(1)
RHD-01.10A_2 TK33A to A HDR	RHD01.10A-20R	DS Main	RO13	05UT077		0.500	0.065	Band	No (3)
RHD-01.10A_2 TK33A to A HDR	RHD01.10A-20R	US Main	RO13	05UT077		0.432	0.020	Band	No (2)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01.10A_2 TK33A to A HDR	RHD01.11A-01 E	Main		RO13	05UT077	0.500	0.110	Blanket	Yes
RHD-01.10A_2 TK33A to A HDR	RHD01.12A-01T	Branch		RO10	99UT263	0.432	0.069	Band	No (4)
RHD-01.10A_2 TK33A to A HDR	RHD01.12A-01T	Branch Ext.		RO10	99UT263	0.432	0.053	Band	No (4)
RHD-01.10A_2 TK33A to A HDR	RHD01.12A-01T	D/S Main		RO10	99UT263	0.500	0.078	Blanket	No (4)
RHD-01.10A_2 TK33A to A HDR	RHD01.12A-01T	U/S Ext.		RO10	99UT263	0.500	0.062	Band	No (4)
RHD-01.10A_2 TK33A to A HDR	RHD01.12A-01T	U/S Main		RO10	99UT263	0.500	0.085	Blanket	No (4)
RHD-01.10A_2 TK33A to A HDR	RHD01.12A-02P		Entered as D/S Ext. of RHD01.12A-01T	RO10	99UT263	0.500	0.054	Band	No (4)
RHD-01.10A_2 TK33A to A HDR	RHD01.12A-08E	Main		RO10	99UT255	0.432	0.110	Blanket	Yes
RHD-01.10A_2 TK33A to A HDR	RHD01.13A-01 R	U/S Main		RO10	99UT255	0.432	0.041	Band	Yes
RHD-01.10A_2 TK33A to A HDR	RHD01.13A-01R	D/S Main		RO10	99UT255	0.337	0.180	Band	Yes
RHD-01.10A_2 TK33A to A HDR	RHD02.6A-01 P		Entered as D/S Ext. of RHD02.5A-02R	RO8		0.432	0.051	Band	Yes
RHD-01.10A_2 TK33A to A HDR	RHD02.6A-01 P		Entered as U/S Ext. of RHD02.6A-02E	RO9	97UT081	0.432	0.035	Band	No (2)
RHD-01.10A_2 TK33A to A HDR	RHD02.6A-01 P		Entered as D/S Ext. of RHD02.5A-02R	RO11	01 UT078	0.432	0.050	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01.10A_2 TK33A to A HDR	RHD02.6A-01 P	Entered as U/S Ext. of RHD02.6A-02E	RO11	01 UT078	0.432	0.034	Band	No (2)	
RHD-01.10A_2 TK33A to A HDR	RHD02.6A-03P	Entered as D/S Ext. of RHD02.6A-02E	RO9	97UT081	0.432	0.104	Band	Yes	
RHD-01.10A_2 TK33A to A HDR	RHD02.6A-03P	Entered as D/S Ext. of RHD02.6A-02E	RO11	01UT078	0.432	0.102	Band	Yes	
RHD-01.10B_1 RH33B to TK 33B	RHD01.10B-01N	Main	RO10	99UT275	0.432	0.142	Band	Yes	
RHD-01.10B_1 RH33B to TK 33B	RHD01.10B-02P	Entered as D/S Ext. of RHD01.10B-01N	RO10	99UT275	0.432	0.084	Band	Yes	
RHD-01.10B_1 RH33B to TK 33B	RHD01.10B-03N	Main	RO10	99UT276	0.432	0.058	Band	No (7)	
RHD-01.10B_2 TK 33B to B HDR	RHD01.10B-26F	U/S Ext.	RO16		0.432	0.078	Band	No (2)	
RHD-01.10B_2 TK 33B to B HDR	RHD01.10B-26F	D/S Ext.	RO16		0.432	0.055	Band	Yes	
RHD-01.10B_2 TK33B to B HDR	RHD01.10B-27P	Entered as U/S Ext of RHD01.10B-28E	RO13	05UT074	0.432	0.027	Band	No(1)	
RHD-01.10B_2 TK33B to B HDR	RHD01.10B-29P	Entered as D/S Ext of RHD01.10B-28E	RO13	05UT074	0.432	0.098	Band	Yes	
RHD-01.10B_2 TK33B to B HDR	RHD01.10B-28E	Main	RO13	05UT074	0.432	0.180	Blanket	Yes	
RHD-01.10B_2 TK33B to B HDR	RHD01.10B-52T	Branch	RO10	99UT268	0.432	0.144	Blanket	Yes	

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01.10B_2 TK33B to B HDR	RHD01.10B-52T	Branch Ext.		RO10	99UT268	0.432	0.038	Band	No (2)
RHD-01.10B_2 TK33B to B HDR	RHD01.10B-52T	D/S Main		RO10	99UT268	0.432	0.119	Blanket	Yes
RHD-01.10B_2 TK33B to B HDR	RHD01.10B-52T	U/S Ext.		RO10	99UT268	0.432	0.031	Band	No (2)
RHD-01.10B_2 TK33B to B HDR	RHD01.10B-52T	U/S Main		RO10	99UT268	0.432	0.119	Blanket	No (6)
RHD-01.10B_2 TK33B to B HDR	RHD01.10B-53P	Entered as D/S Ext. of RHD01.10B-52T		RO10	99UT268	0.432	0.051	Band	Yes
RHD-01.10B_2 TK33B to B HDR	RHD02.6B-02P	Entered as D/S Ext. of RHD02.6B-01 E		RO8		0.528	0.086	Band	Yes
RHD-01.10B_2 TK33B to B HDR	RHD02.6B-02P	Entered as D/S Ext. of RHD02.6B-01 E		RO9	97UT050	0.528	0.094	Band	Yes
RHD-01.10B_2 TK33B to B HDR	RHD02.6B-02P	Entered as D/S Ext. of RHD02.6B-01E		RO10	99UT150	0.528	0.104	Band	Yes
RHD-01.10B_2 TK33B to B HDR	RHD02.6B-02P	Entered as D/S Ext. of RHD02.6B-01 E		RO11	01 UT080	0.559	0.099	Band	Yes
RHD-01.1A_1 RH 31Ato TK 31A	RHD01.1A-01N	Main		RO11	01UT132	0.432	0.127	Band	Yes
RHD-01.1A_1 RH 31Ato TK 31A	RHD01.1A-02P	Entered as D/S Ext. of RHD01.1A-01N		RO11	01UT132	0.432	0.088	Band	Yes
RHD-01.1A_1 RH 31Ato TK 31A	RHD01.1A-03N	Main		RO11	01UT132	0.432	0.070	Band	No (8)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01.1A_2 TK 31A to A HDR	RHD01.1A-35F	U/S Ext.	RO16			0.432	0.078	Band	No (2)
RHD-01.1A_2 TK 31A to A HDR	RHD01.1A-35F	D/S Ext.	RO16			0.432	0.032	Band	Yes
RHD-01.1A_2 TK 31A to A HDR	RHD02.1A-02R	D/S Main	RO15			0.432	0.135	Band	No (7)
RHD-01.1A_2 TK 31A to A HDR	RHD02.1A-02R	U/S Main	RO15			0.337	0.158	Band	Yes
RHD-01.1A_2 TK 31A to A HDR	RHD02.2A-02E	RHD02.2A-02E	RO14			0.432	0.045	Max PTP	Yes
RHD-01.1A_2 TK 31A to A HDR	RHD02.2A-02E	RHD02.2A-02E-DSX	RO14			0.432	0.134	SCAN/RT/VT	Yes
RHD-01.1A_2 TK 31A to A HDR	RHD02.2A-02E	RHD02.2A-02E-USX	RO14			0.432	0.046	Max BAND	No(2)
RHD-01.1A_2 TK 31A to A HDR	RHD02.2A-04E	RHD02.2A-04E	RO14			0.432	0.066	BLANKET	Yes
RHD-01.1A_2 TK 31A to A HDR	RHD02.2A-04E	RHD02.2A-04E-DSX	RO14			0.432	0.098	Max BAND	Yes
RHD-01.1A_2 TK 31A to A HDR	RHD01.1A-04N	U/S Main	RO10	99UT230		0.432	0.067	Band	Yes
RHD-01.1A_2 TK 31A to A HDR	RHD01.1A-34P_2	Entered as U/S Ext. of RHD01.1A-35F	RO8			0.475	0.074	Band	No (2)
RHD-01.1A_2 TK 31A to A HDR	RHD01.1A-34P_2	Entered as U/S Ext. of RHD01.1A-35F	RO10	99UT230		0.432	0.037	Band	No (2)
RHD-01.1A_2 TK 31A to A HDR	RHD01.1A-36P	Entered as D/S Ext. of RHD01.1A-35F	RO8			0.462	0.033	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01.1A_2 TK 31Ato A HDR	RHD02.1A-01V	Main		RO8		0.337	0.031	Band	No (10)
RHD-01.1A_2 TK 31Ato A HDR	RHD02.1A-01V	Main		RO10	99UT147	0.337	0.051	Band	No (10)
RHD-01.1A_2 TK 31Ato A HDR	RHD02.1A-01V	Main		RO11		0.337	N/A	N/A	No (10)
RHD-01.1A_2 TK 31Ato A HDR	RHD02.1A-02R	D/S Main		RO8		0.432	0.085	Band	No (3)
RHD-01.1A_2 TK 31Ato A HDR	RHD02.1A-02R	U/S Main		RO8		0.337	0.161	Band	No (3)
RHD-01.1A_2 TK 31Ato A HDR	RHD02.1A-02R	U/S Main		RO10	99UT147	0.337	0.098	Band	Yes
RHD-01.1A_2 TK 31Ato A HDR	RHD02.1A-02R	D/S Main		RO11	01UT079	0.432	0.168	Band	No (3)
RHD-01.1A_2 TK 31Ato A HDR	RHD02.1A-02R	U/S Main		RO11	01UT079	0.337	0.089	Band	Yes
RHD-01.1A_2 TK 31Ato A HDR	RHD02.2A-01P	Entered as D/S Ext. of RHD02.1A-02R		RO8		0.432	0.047	Band	Yes
RHD-01.1A_2 TK 31Ato A HDR	RHD02.2A-01P	Entered as D/S Ext. of RHD02.1A-02R		RO10	99UT147	0.432	0.080	Band	Yes
RHD-01.1A_2 TK 31Ato A HDR	RHD02.2A-01P	Entered as D/S Ext. of RHD02.1A-02R		RO11	01UT079	0.432	0.048	Band	Yes
RHD-01.1A_2 TK 31Ato A HDR	RHD02.2A-02E	Main		RO8		0.473	0.077	Blanket	Yes
RHD-01.1A_2 TK 31Ato A HDR	RHD02.2A-02E	Main		RO10	99UT155	0.473	0.155	Blanket	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01.1A_2 TK 31Ato A HDR	RHD02.2A-02E	Main		RO11	01UT079	0.473	0.148	Blanket	Yes
RHD-01.1A_2 TK 31Ato A HDR	RHD02.2A-03P	Entered as D/S Ext. of RHD02.2A-02E		RO10	01UT079	0.432	0.114	Band	Yes
RHD-01.1A_2 TK 31Ato A HDR	RHD02.2A-03P	Entered as D/S Ext. of RHD02.2A-02E		RO11	99UT155	0.432	0.108	Band	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD01.1B-30E	U/S Main		RO15		0.432	0.059	Blanket	Yes
RHD-01.1B_2 TK 31Bto B HDR	RHD01.1B-16E	Main		RO13	05UT075	0.432	0.162	Blanket	Yes
RHD-01.1B_2 TK 31Bto B HDR	RHD01.1B-30E	Main		RO8		0.473	0.083	Blanket	Yes
RHD-01.1B_2 TK 31Bto B HDR	RHD01.1B-39E	Main		RO11	01UT109	0.432	0.074	Blanket	Yes
RHD-01.1B_2 TK 31Bto B HDR	RHD01.1B-41E	Main		RO11	01UT109	0.432	0.057	Blanket	Yes
RHD-01.1B_2 TK 31Bto B HDR	RHD01.1B-51E	Main		RO10	99UT174	0.432	0.051	Blanket	Yes
RHD-01.1B_2 TK 31Bto B HDR	RHD01.2B-01R	U/S Main		RO8		0.432	0.047	T DAT	No (17)
RHD-01.1B_2 TK 31Bto B HDR	RHD01.2B-01R	D/S Ext.		RO10	99UT174	0.337	0.051	Band	No (4)
RHD-01.1B_2 TK 31Bto B HDR	RHD01.2B-01R	D/S Main		RO10	99UT174	0.401	0.052	Band	Yes
RHD-01.1B_2 TK 31Bto B HDR	RHD01.2B-01R	U/S Main		RO10	99UT174	0.432	0.047	Band	Yes
RHD-01.1B_2 TK 31Bto B HDR	RHD02.1B-01V	Main		RO8		0.337	0.027	Band	No (10)

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01.1B_2 TK 31Bto B HDR	RHD02.1B-01V	Main	RO9	97UT051	0.337	0.043	Band	No (10)
RHD-01.1B_2 TK 31Bto B HDR	RHD02.1B-02R	D/S Main	RO8		0.432	0.176	Band	No (3)
RHD-01.1B_2 TK 31Bto B HDR	RHD02.1B-02R	U/S Main	RO8		0.337	0.120	Band	No (3)
RHD-01.1B_2 TK 31Bto B HDR	RHD02.1B-02R	D/S Main	RO9	97UT051	0.432	0.183	Band	No (3)
RHD-01.1B_2 TK 31Bto B HDR	RHD02.1B-02R	U/S Main	RO9	97UT051	0.337	0.112	Band	No (3)
RHD-01.1B_2 TK 31Bto B HDR	RHD02.1B-02R	U/S Main	RO10	99UT167	0.337	0.117	Band	No (3)
RHD-01.1B_2 TK 31Bto B HDR	RHD02.1B-02R	D/S Main	RO11	01UT093	0.432	0.195	Band	No (3)
RHD-01.1B_2 TK 31Bto B HDR	RHD02.1B-02R	U/S Main	RO11	01UT093	0.337	0.113	Band	No (3)
RHD-01.1B_2 TK 31Bto B HDR	RHD02.2B-02E	Main	RO10	99UT167	0.432	0.088	Blanket	Yes
RHD-01.1B_2 TK 31Bto B HDR	RHD02.2B-02E	U/S Ext.	RO10	99UT167	0.432	0.046	Band	No (2)
RHD-01.1B_2 TK 31Bto B HDR	RHD02.2B-02E	Main	RO11	01 UT093	0.432	0.083	Blanket	Yes
RHD-01.3A_1 RH 32A to TK 32A	RHD01.3A-01N	RHD01.3A-01N	RO14		0.432	0.000	SCAN/RT/VT	No(1)
RHD-01.3A_1 RH 32A to TK 32A	RHD01.3A-02P	RHD01.3A-02P	RO14		0.432	0.060	Max BAND	Yes
RHD-01.3A_1 RH 32A to TK 32A	RHD01.3A-03N	RHD01.3A-03N	RO14		0.432	0.054	SCAN/RT/VT	No (7)
RHD-01.3A_2 TK 32A to A HDR	RHD01.3A-04N	U/S Main	RO16		0.432	0.074	Band	No (9)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01.3A_2 TK 32A to A HDR	RHD01.3A-05P	U/S Main		RO16		0.432	0.040	Band	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD01.3A-06E	U/S Main		RO16		0.432	0.071	Blanket	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD01.3A-06E	U/S Ext.		RO16		0.432	0.050	Band	No (2)
RHD-01.3A_2 TK 32A to A HDR	RHD01.3A-06E	D/S Ext.		RO16		0.432	0.060	Band	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD02.3A-02R	RHD02.3A-02R		RO14		0.337	0.170	Max BAND	No (7)
RHD-01.3A_2 TK 32A to A HDR	RHD02.3A-02R	RHD02.3A-02R-DS		RO14		0.432	0.151	Max BAND	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD02.3A-02R	RHD02.3A-02R-DSX		RO14		0.432	0.080	Max BAND	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD02.3A-02R	U/S Main		RO16		0.337	0.035	Band	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD02.3A-02R	D/S Main		RO16		0.432	0.042	Band	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD02.4A-06L	RHD02.4A-06L		RO14		0.594	0.065	Max BAND	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD02.4A-06L	RHD02.4A-06L-BR		RO14		0.432	0.098	Max BAND	Yes
RHD-01.3B_1 RH 32Bto TK 32B	RHD01.3B-01N	Main		RO9	97UT120	0.432	0.084	Band	Yes
RHD-01.3B_1 RH 32Bto TK 32B	RHD01.3B-03N	Main		RO9	97UT123	0.432	0.066	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.3B-06E	U/S Main		RO16		0.432	0.152	Blanket	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.3B-06E	D/S Ext.		RO16		0.432	0.057	Band	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01.3B_2 TK 32B to B HDR	RHD01.5B-03F	U/S Ext.	RO16		0.432	0.067	Band	No (2)
RHD-01.3B_2 TK 32B to B HDR	RHD01.5B-03F	D/S Ext.	RO16		0.432	0.051	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.7B-03R	U/S Main	RO16		0.432	0.301	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.7B-03R	D/S Main	RO16		0.594	0.104	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.9B-01R	D/S Main	RO15		0.337	0.019	Max PTP	No (1)
RHD-01.3B_2 TK 32B to B HDR	RHD01.9B-01R	U/S Main	RO15		0.594	0.062	Max PTP	Yes
RHD-01.3B_2 TK 32Bto B HDR	RHD01.6B-01P	Entered as D/S Ext. of RHD01.5B-05R	RO8		0.634	0.073	Band	Yes
RHD-01.3B_2 TK 32Bto B HDR	RHD01.6B-03P_1	Entered as DS Ext of RHD01.6B-02E	RO13	05UT082	0.594	0.132	Band	Yes
RHD-01.3B_2 TK 32Bto B HDR	RHD01.8B-01 P_1	Entered as D/S Ext. of RHD01.7B-03R	RO10	99UT277	0.594	0.076	Band	Yes
RHD-01.3B_2 TK 32Bto B HDR	RHD01.8B-06E	Main	RO9	97UT073	0.594	0.087	Blanket	Yes
RHD-01.3B_2 TK 32Bto B HDR	RHD01.9B-01R	D/S Main	RO9	97UT073	0.337	0.202	Band	Yes
RHD-01.3B_2 TK 32Bto B HDR	RHD01.9B-01R	U/S Main	RO9	97UT073	0.594	0.067	Band	Yes
RHD-01.3B_2 TK 32Bto B HDR	RHD01.3B-17P	Entered as D/S Ext. of RHD01.3B-16E	RO11	01UT100	0.432	0.054	Band	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01.3B_2 TK 32Bto B HDR	RHD01.6B-02E	Main	RO13	05UT082	0.594	0.086	Blanket	Yes	
RHD-01.3B_2 TK 32Bto B HDR	RHD01.7B-03R	D/S Main	RO10	99UT277	0.594	0.079	Band	Yes	
RHD-01.3B_2 TK 32Bto B HDR	RHD01.7B-03R	U/S Ext.	RO10	99UT277	0.432	0.044	Band	No (2)	
RHD-01.3B_2 TK 32Bto B HDR	RHD02.3B-01V	Main	RO8		0.337	0.042	Band	No (10)	
RHD-01.3B_2 TK 32Bto B HDR	RHD02.3B-01V	Main	RO9	97UT073	0.337	0.063	Band	No (10)	
RHD-01.3B_2 TK 32Bto B HDR	RHD02.3B-02R	D/S Main	RO8		0.594	0.226	Band	No (3)	
RHD-01.3B_2 TK 32Bto B HDR	RHD02.3B-02R	U/S Main	RO8		0.337	0.104	Band	No (3)	
RHD-01.3B_2 TK 32Bto B HDR	RHD02.3B-02R	D/S Main	RO11	01 UT097	0.594	0.227	Band	No (7)	
RHD-01.3B_2 TK 32Bto B HDR	RHD02.3B-02R	U/S Main	RO11	01 UT097	0.337	0.083	Band	No (7)	
RHD-01.3B_2 TK 32Bto B HDR	RHD02.3B-02R	D/S Main	RO12	03UT027	0.594	0.230	Band	No(3)	
RHD-01.3B_2 TK 32Bto B HDR	RHD02.3B-02R	U/S Main	RO12	03UT027	0.337	0.072	Band	No (7)	
RHD-01.3B_2 TK 32Bto B HDR	RHD02.3B-02R	D/S Main	RO15		0.594	0.095	Band	No (7)	
RHD-01.3B_2 TK 32Bto B HDR	RHD02.3B-02R	U/S Main	RO15		0.337	0.127	Band	No (7)	
RHD-01.3B_2 TK 32Bto B HDR	RHD02.4B-01P	Entered as D/S Ext. of RHD02.3B-02R	RO8		0.594	0.055	Band	Yes	

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-01.3B_2 TK 32Bto B HDR	RHD02.4B-01P	Entered as D/S Ext. of RHD02.3B-02R	RO11	01UT097	0.594	0.107	Band	Yes	
RHD-01.3B_2 TK 32Bto B HDR	RHD02.4B-01P	Entered as D/S Ext of RHD02.3B-02R	RO12	03UT027	0.594	0.111	Band	Yes	
RHD-01.3B_2 TK 32Bto B HDR	RHD02.4B-01P	U/S Main	RO15		0.594	0.112	Band	No (22)	
RHD-01.3B_2 TK 32Bto B HDR	RHD02.4B-02E	U/S Main	RO15		0.594	0.146	Blanket	Yes	
RHD-02.1 1A A HDR to FWH 36A	RHD02.1 1A-16P	Entered as U/S Ext. of RHD02.11A-17T	RO8		0.489	0.066	Band	No (2)	
RHD-02.1 1A A HDR to FWH 36A	RHD02.1 1A-18P	Entered as Br Ext. of RHD02.11A-17T	RO8		0.473	0.066	Band	No (2)	
RHD-02.10A TK A HDR to FWH 36	RHD02.10A-11T	RHD02.10A-11T	RO14		0.500	0.159	Max BAND	Yes	
RHD-02.10A TK A HDR to FWH 36	RHD02.10A-11T	RHD02.10A-11T-BR	RO14		0.432	0.316	Max BAND	Yes	
RHD-02.10A TK A HDR to FWH 36	RHD02.10A-11T	RHD02.10A-11T-USX	RO14		0.500	0.048	Max BAND	No(2)	
RHD-02.10A TK A HDR to FWH 36	RHD02.10A-11T	U/S Main	RO16		0.500	0.035	Max PtP	Yes	
RHD-02.10A TK A HDR to FWH 36	RHD02.10A-11T	D/S Main	RO16		0.500	0.028	Max PtP	No (1)	
RHD-02.10A TK A HDR to FWH 36	RHD02.10A-11T	Branch	RO16		0.432	0.084	Max PtP	Yes	
RHD-02.10A TK A HDR to FWH 36	RHD02.10A-11T	U/S Ext.	RO16		0.500	0.010	Max PtP	No (1)	

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-02.10B B HDR toFWH 36A	RHD02.10B-14T	Branch	RO13	05UT073	0.432	0.295	Band	Yes	
RHD-02.10B B HDR toFWH 36A	RHD02.10B-14T	D/S Main	RO13	05UT073	0.432	0.281	Band	Yes	
RHD-02.10B B HDR toFWH 36A	RHD02.10B-14T	U/S Main	RO13	05UT073	0.432	0.213	Band	Yes	
RHD-02.10B B HDR toFWH 36A	RHD02.10B-14T	Branch	RO15		0.432	0.269	Band	Yes	
RHD-02.10B B HDR toFWH 36A	RHD02.10B-14T	D/S Ext.	RO15		0.432	0.096	Band	Yes	
RHD-02.10B B HDR toFWH 36A	RHD02.10B-14T	D/S Main	RO15		0.432	0.227	Band	Yes	
RHD-02.10B B HDR toFWH 36A	RHD02.10B-14T	U/S Main	RO15		0.432	0.178	Band	Yes	
RHD-02.10B B HDR toFWH 36A	RHD02.10B-16T	Branch	RO13	05UT073	0.432	0.248	Band	Yes	
RHD-02.10B B HDR toFWH 36A	RHD02.10B-16T	D/S Main	RO13	05UT073	0.432	0.196	Band	Yes	
RHD-02.10B B HDR toFWH 36A	RHD02.10B-16T	U/S Main	RO13	05UT073	0.432	0.220	Band	Yes	
RHD-02.10B B HDR toFWH 36A	RHD02.10B-16T	U/S Main	RO15		0.432	0.184	Band	Yes	
RHD-02.10B B HDR toFWH 36A	RHD02.10B-16T	D/S Main	RO15		0.432	0.210	Band	Yes	
RHD-02.10B B HDR toFWH 36A	RHD02.10B-16T	Branch	RO15		0.432	0.221	Band	Yes	
RHD-02.10B B HDR toFWH 36A	RHD02.10B-16T	D/S Ext	RO15		0.432	0.064	Band	Yes	
RHD-02.10B B HDR toFWH 36A	RHD02.10B-16T	U/S Ext	RO15		0.432	0.077	Band	No (2)	

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-02.10B B HDR to FWH 36A	RHD02.10B-17R	D/S Main	RO13	05UT073	0.500	0.141	Band	Yes	
RHD-02.10B B HDR to FWH 36A	RHD02.10B-17R	U/S Main	RO13	05UT073	0.432	0.112	Band	Yes	
RHD-02.11A A HDR to FWH 36A	RHD02.11A-17T	Br. Ext	RO15		0.432	0.195	Band	No (2)	
RHD-02.11A A HDR to FWH 36A	RHD02.11A-17T	Branch	RO15		0.432	0.073	Blanket	No (7)	
RHD-02.11A A HDR to FWH 36A	RHD02.11A-17T	D/S Main	RO15		0.432	0.158	Blanket	Yes	
RHD-02.11A A HDR to FWH 36A	RHD02.11A-17T	U/S Main	RO15		0.432	0.142	Blanket	Yes	
RHD-02.11A A HDR to FWH 36A	RHD02.11A-19T	RHD02.11A-19T-BR-DSX	RO14		0.432	0.058	Max BAND	Yes	
RHD-02.11A A HDR to FWH 36A	RHD02.11A-19T	Br. Ext	RO15		0.432	0.151	Band	No (2)	
RHD-02.11A A HDR to FWH 36A	RHD02.11A-19T	Branch	RO15		0.432	0.198	Blanket	Yes	
RHD-02.11A A HDR to FWH 36A	RHD02.11A-19T	D/S Main	RO15		0.432	0.140	Blanket	Yes	
RHD-02.11A A HDR to FWH 36A	RHD02.11A-19T	U/S Main	RO15		0.432	0.131	Blanket	Yes	
RHD-02.11A A HDR to FWH 36A	RHD02.11A-17T	Branch	RO8		0.432	0.062	Blanket	Yes	
RHD-02.11A A HDR to FWH 36A	RHD02.11A-17T	D/S Main	RO8		0.432	0.097	Blanket	No (6)	
RHD-02.11A A HDR to FWH 36A	RHD02.11A-17T	U/S Main	RO8		0.432	0.120	Blanket	Yes	
RHD-02.12B B HDR to FWH 36B	RHD02.12B-01P	RHD02.12B-01P	RO14		0.432	0.000		No(1)	

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-02.12B B HDR to FWH 36B	RHD02.12B-02E	RHD02.12B-02E		RO14		0.432	0.122	BLANKET	Yes
RHD-02.12B B HDR to FWH 36B	RHD02.12B-02E	RHD02.12B-02E-DSX		RO14		0.432	0.062	Max BAND	Yes
RHD-02.12B B HDR to FWH 36B	RHD02.12B-11T	RHD02.12B-11T		RO14		0.432	0.293	Max BAND	Yes
RHD-02.12B B HDR to FWH 36B	RHD02.12B-11T	RHD02.12B-11T-BR		RO14		0.432	0.282	Max BAND	Yes
RHD-02.12B B HDR to FWH 36B	RHD02.12B-11T	RHD02.12B-11T-BR-DSX		RO14		0.432	0.203	Max BAND	Yes
RHD-02.12B B HDR to FWH 36B	RHD02.12B-11T	RHD02.12B-11T-USX		RO14		0.432	0.189	Max BAND	No(2)
RHD-02.12B B HDR to FWH 36B	RHD02.12B-11T	Br. Ext		RO15		0.432	0.138	Band	Yes
RHD-02.12B B HDR to FWH 36B	RHD02.12B-11T	Branch		RO15		0.432	0.282	Band	Yes
RHD-02.12B B HDR to FWH 36B	RHD02.12B-11T	DS Main		RO15		0.432	0.287	Band	Yes
RHD-02.12B B HDR to FWH 36B	RHD02.12B-11T	US Main		RO15		0.432	0.249	Band	Yes
RHD-02.12B B HDR to FWH 36B	RHD02.12B-11T	U/S Ext		RO16		0.432	0.077	Band	No (2)
RHD-02.12B B HDR to FWH 36B	RHD02.12B-11T	U/S Main		RO16		0.432	0.057	Max PtP	Yes
RHD-02.12B B HDR to FWH 36B	RHD02.12B-11T	D/S Main		RO16		0.432	0.060	Max PtP	Yes
RHD-02.12B B HDR to FWH 36B	RHD02.12B-11T	Branch		RO16		0.432	0.176	Max PtP	Yes
RHD-02.12B B HDR to FWH 36B	RHD02.12B-11T	U/S Ext.		RO16		0.432	0.044	Max PtP	No (2)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-02.12B B HDR to FWH 36B	RHD02.12B-11T	Branch Ext.		RO16		0.432	0.087	Band	No (2)
RHD-02.12B B HDR to FWH 36B	RHD02.12B-13T	Br. Ext		RO15		0.432	0.161	Band	No (2)
RHD-02.12B B HDR to FWH 36B	RHD02.12B-13T	Branch		RO15		0.432	0.207	Band	Yes
RHD-02.12B B HDR to FWH 36B	RHD02.12B-13T	D/S Main		RO15		0.432	0.144	Band	Yes
RHD-02.12B B HDR to FWH 36B	RHD02.12B-13T	U/S Main		RO15		0.432	0.149	Band	Yes
RHD-02.12B B HDR to FWH 36B	RHD02.13B-01N	RHD02.13B-01N		RO14		0.432	0.022	Max BAND	No(1)
RHD-02.12B B HDR to FWH 36B	RHD02.13B-01N	RHD02.13B-01N-USX		RO14		0.432	0.096	Max BAND	No(2)
RHD-02.13A A HDR to FWH 36B	RHD02.13A-01P	RHD02.13A-01P		RO14		0.432	0.083	Max BAND	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-02E	RHD02.13A-02E		RO14		0.432	0.064	BLANKET	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-02E	RHD02.13A-02E-DSX		RO14		0.432	0.046	Max BAND	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-14T	Br. Ext		RO15		0.432	0.088	Band	No (2)
RHD-02.13A A HDR to FWH 36B	RHD02.13A-14T	Branch		RO15		0.432	0.373	Band	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-14T	D/S Main		RO15		0.432	0.374	Band	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-14T	U/S Main		RO15		0.432	0.280	Band	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-16T	Br. Ext		RO15		0.432	0.171	Band	No (2)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-02.13A A HDR to FWH 36B	RHD02.13A-16T	Branch		RO15		0.432	0.316	Band	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-16T	D/S Main		RO15		0.432	0.182	Band	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-16T	U/S Main		RO15		0.432	0.183	Band	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-16T	U/S Main		RO16		0.432	0.190	Blanket	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-16T	D/S Main		RO16		0.432	0.132	Blanket	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-16T	Branch		RO16		0.432	0.217	Blanket	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-16T	Branch Ext.		RO16		0.432	0.170	Band	No (2)
RHD-02.13A A HDR to FWH 36B	RHD02.14A-01N	RHD02.14A-01N		RO14		0.432	0.052	Max BAND	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.14A-01N	RHD02.14A-01N-USX		RO14		0.432	0.160	Max BAND	No(2)
RHD-02.13A A HDR to FWH 36B	RHD02.14A-01N	U/S Main		RO16		0.500	0.060	Band	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-03P	Entered as U/S Ext. of RHD02.13A-04E		RO9	97UT180	0.432	0.033	Band	No (2)
RHD-02.13A A HDR to FWH 36B	RHD02.13A-03P	Entered as U/S Ext. of RHD02.13A-04E		RO11	01UT033	0.432	0.043	Band	No (2)
RHD-02.13A A HDR to FWH 36B	RHD02.13A-04E	Main		RO9	97UT180	0.432	0.050	Blanket	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-04E	Main		RO11	01 UT033	0.432	0.045	Blanket	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-02.13A A HDR toFWH 36B	RHD02.13A-05E	Main		RO9	97UT181	0.432	0.087	Blanket	Yes
RHD-02.13A A HDR toFWH 36B	RHD02.13A-05E	Main		RO11	01 UT054	0.432	0.086	Blanket	Yes
RHD-02.13A A HDR toFWH 36B	RHD02.13A-06P_1	Entered as D/S Ext. of RHD02.13A-05E		RO9	01UT053	0.432	0.042	Band	Yes
RHD-02.13A A HDR toFWH 36B	RHD02.13A-06P_1	Entered as D/S Ext. of RHD02.13A-05E		RO11	97UT181	0.432	0.042	Band	Yes
RHD-02.14B B HDR to FWH 36C	RHD02.14B-01P	RHD02.14B-01P		RO14		0.432	0.000		No(1)
RHD-02.14B B HDR to FWH 36C	RHD02.14B-02E	RHD02.14B-02E		RO14		0.432	0.282	BLANKET	Yes
RHD-02.14B B HDR to FWH 36C	RHD02.14B-02E	RHD02.14B-02E-DSX		RO14		0.432	0.067	Max BAND	Yes
RHD-02.14B B HDR to FWH 36C	RHD02.14B-10T	Br. Ext		RO15		0.432	0.298	Band	No (2)
RHD-02.14B B HDR to FWH 36C	RHD02.14B-10T	Branch		RO15		0.432	0.320	Band	Yes
RHD-02.14B B HDR to FWH 36C	RHD02.14B-10T	D/S Main		RO15		0.432	0.143	Band	No (6)
RHD-02.14B B HDR to FWH 36C	RHD02.14B-10T	U/S Main		RO15		0.432	0.166	Band	Yes
RHD-02.14B B HDR to FWH 36C	RHD02.14B-12T	RHD02.14B-12T		RO14		0.432	0.215	Max BAND	Yes
RHD-02.14B B HDR to FWH 36C	RHD02.14B-12T	RHD02.14B-12T-BR		RO14		0.432	0.304	Max BAND	Yes
RHD-02.14B B HDR to FWH 36C	RHD02.14B-12T	RHD02.14B-12T-BR-DSX		RO14		0.432	0.261	Max BAND	Yes

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-02.14B B HDR to FWH 36C	RHD02.14B-12T	RHD02.14B-12T-USX	RO14			0.432	0.091	Max BAND	No(2)
RHD-02.14B B HDR to FWH 36C	RHD02.15B-01N	RHD02.15B-01N	RO14			0.432	0.060	Max BAND	Yes
RHD-02.15A A HDR to FWH 36C	RHD02.15A-02E	RHD02.15A-02E	RO14			0.432	0.393	BLANKET	Yes
RHD-02.15A A HDR to FWH 36C	RHD02.15A-02E	RHD02.15A-02E	RO14			0.432	0.000	Baseline	No(5)
RHD-02.15A A HDR to FWH 36C	RHD02.15A-02E	RHD02.15A-02E-DSX	RO14			0.432	0.116	Max BAND	Yes
RHD-02.15A A HDR to FWH 36C	RHD02.15A-02E	RHD02.15A-02E-USX	RO14			0.432	0.193	Max BAND	No(2)
RHD-02.15A A HDR to FWH 36C	RHD02.15A-02E	RHD02.15A-02E-USX	RO14			0.432	0.036	Max BAND	No(2)
RHD-02.15A A HDR to FWH 36C	RHD02.15A-09T	Br. Ext	RO15			0.432	0.222	Band	No (2)
RHD-02.15A A HDR to FWH 36C	RHD02.15A-09T	Branch	RO15			0.432	0.237	Band	Yes
RHD-02.15A A HDR to FWH 36C	RHD02.15A-09T	D/S Main	RO15			0.432	0.165	Band	No (6)
RHD-02.15A A HDR to FWH 36C	RHD02.15A-09T	U/S Main	RO15			0.432	0.178	Band	Yes
RHD-02.15A A HDR to FWH 36C	RHD02.16A-01N	RHD02.16A-01N	RO14			0.432	0.052	Max BAND	Yes
RHD-02.15A A HDR to FWH 36C	RHD02.16A-01N	RHD02.16A-01N-USX	RO14			0.432	0.240	Max BAND	No(2)
RHD-02.7B TK B HDR to FWH 36	RHD02.2B-06L	Br. Ext	RO15			0.432	0.066	Band	No (2)
RHD-02.7B TK B HDR to FWH 36	RHD02.2B-06L	Branch	RO15			0.432	0.048	Band	No (7)

CHECWORKS Line Name		Component Name	Component Section	Period	Report Number	Timit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-02.7B TK B HDR to FWH 36	RHD02.2B-06L	D/S Main		RO15		0.500	0.042	Band	Yes
RHD-02.7B TK B HDR to FWH 36	RHD02.2B-06L	U/S Main		RO15		0.500	0.048	Band	No (7)
RHD-02.7B TK B HDRto FWH 36	RHD02.7B-07P	Entered as U/S Ext. of RHD02.7B-08L		RO8		0.543	0.054	Band	No (2)
RHD-02.8A TK A HDR to FWH 36	RHD02.6A-06L	RHD02.6A-06L		RO14		0.594	0.071	Max BAND	Yes
RHD-02.8A TK A HDR to FWH 36	RHD02.6A-06L	RHD02.6A-06L-BR		RO14		0.432	0.206	Max BAND	Yes
RHD-02.8B TK B HDR to FWH 36	RHD02.8B-06T	RHD02.8B-06T		RO14		0.594	0.265	Max BAND	Yes
RHD-02.8B TK B HDR to FWH 36	RHD02.8B-06T	RHD02.8B-06T-BR		RO14		0.432	0.095	Max BAND	Yes
RHD-02.8B TK B HDR to FWH 36	RHD02.8B-06T	RHD02.8B-06T-DSX		RO14		0.594	0.095	Max BAND	Yes
RHD-02.8B TK B HDR to FWH 36	RHD02.8B-06T	RHD02.8B-06T-USX		RO14		0.594	0.085	Max BAND	No(2)
RHD-02.8B TK B HDRto FWH 36	RHD02.7B-08L	Branch		RO8		0.500	0.031	Band	No(9)
RHD-02.8B TK B HDRto FWH 36	RHD02.7B-08L	D/S Main		RO8		0.605	0.054	Band	Yes
RHD-02.8B TK B HDRto FWH 36	RHD02.7B-08L	U/S Main		RO8		0.605	0.046	Band	Yes
RHD-02.8B TK B HDRto FWH 36	RHD02.8B-01 P	Entered as D/S Ext. of RHD02.7B-08L		RO8		0.609	0.058	Band	Yes
RHD-02.9A TK A HDR to FWH 36	RHD02.9A-11T	RHD02.9A-11T		RO14		0.594	0.201	Max BAND	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
RHD-02.9A TK A HDR to FWH 36	RHD02.9A-11T	RHD02.9A-11T-BR	RO14		0.432	0.296	Max BAND	Yes
RHD-02.9B TK B HDR to FWH 36	RHD02.9B-02T	RHD02.9B-02T	RO14		0.594	0.212	Max BAND	Yes
RHD-02.9B TK B HDR to FWH 36	RHD02.9B-02T	RHD02.9B-02T-BR	RO14		0.432	0.197	Max BAND	Yes
RHD-02.9B TK B HDR to FWH 36	RHD02.9B-02T	RHD02.9B-02T-USX	RO14		0.594	0.056	Max BAND	No(2)

In LCF Calc "No	Description
1	EPRI recommends not to use any calculated lifetime wear less than or equal to 0.030" or 5% of Tnom.
2	CHECWORKS does not use the U/S Ext. or Br. Ext. in the calculation of the LCF.
3	The UT data readings do not provide an accurate representation of actual wear for this component.
4	CHECWORKS does not have a geometry code that accurately represents this component.
5	This inspection is a baseline inspection.
6	This section is modeled having no normal flow.
7	This wear is not indicative of FAC wear because wear readings are most likely due to manufacturing variances.
8	This component was only partially inspected and has an incomplete grid.
9	Inspection on tee or nozzle does not correlate well with inspections on other geometry types.
10	This component is an unusual geometry (valve, flange, orifice, etc.) and should not be used in calibration of the model.
11	Non-susceptible material
12	Scanned value imported for informational purposes only.
13	Two inspections were performed during the same outage. Only one was imported to CHECWORKS.
14	Inspected component is not modeled in CHECWORKS
15	No UT data package could be found for importation.
16	This component was inspected using Pulsed Eddy Current.
17	Due to a bug in CHECWORKS, inspections of tees with no data on the U/S Main are not used in the LCF
18	D/S Ext not used in LCF due to CHECWORKS bug involving downstream extensions of type14 tees
19	D/S Ext is not a pipe
20	Unable to exclude counterbore
21	Small-bore components
22	Suspicious Tnom inflating measured wear to an excessive level.

Appendix G

Water Chemistry Analysis Reports

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Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4)

Report Date/Time: 21-Jul-2011 3:03 pm
 Analysis Date/Time: 21-Jul-2011 2:22 pm
 CHECWORKS SFA Version 3.0 SP-2 (build 200)

Water Treatment : Cycle 1
 Power Level : 100.00%
 Plant Type : PWR

Chemistry Condition :

Condensate Dissolved Oxygen (ppb) : 15.670
 Concentration of 1st Constituent (ppm) : None
 Concentration of 2nd Constituent (ppm) : None
 Concentration of Ammonia (ppm) :
 Concentration of Hydrazine (ppb) :
 Hydrazine at SG (ppb) :
 Hydrazine at MSR drain (ppb) :
 Concentration of Boron (ppm) :
 Boron Injection Rate (lbm/hr) :

, Sampling at Not Used
 , Sampling at Not Used
 , Sampling at Final Feed Water
 , Sampling at Final Feed Water
 , Sampling at Steam outlet
 , Sampling at Not Used

Chemistry Analysis Report

Chemistry Analysis Results :

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent None (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
Blowdown Line	8.89	5.75	0.00	0.00	0.19	53.07	0.000	n/a	0.1	778.6	518.0	0.0000	----
Main Steam Line 1	9.28	5.75	0.00	0.00	0.19	53.07	0.000	n/a	13.02415	----	518.0	0.9999	----
Main Steam Line 2	9.28	5.89	0.00	0.00	0.17	55.42	0.000	n/a	10.59295	340.4	429.1	0.9161	1136.9
Main Steam Line 3	9.31	6.00	0.00	0.00	0.17	22.27	0.000	n/a	9.375758	----	390.6	0.9900	----
Main Steam Line 4	9.31	7.62	0.00	0.00	0.18	9.62	0.000	n/a	7.205196	5.0	162.6	0.7270	858.0
HP Extraction Steam Line 1	9.28	6.06	0.00	0.00	0.16	83.03	0.000	n/a	0.92908	185.6	375.6	0.9540	1158.3
HP Extraction Steam Line 2	9.28	5.89	0.00	0.00	0.17	55.42	0.000	n/a	0.706255	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line 1	8.86	6.00	0.00	0.00	0.17	24.00	0.000	n/a	1.217196	221.9	390.6	0.0000	363.3
Reheater Steam & Drain Line 1	9.28	5.95	0.00	0.00	0.65	12.20	0.000	n/a	0.795863	644.7	494.0	0.0201	495.3
LP Extraction Steam Line 1	9.31	6.45	0.00	0.00	0.17	45.88	0.000	n/a	0.502856	65.0	298.0	0.9981	1177.4
LP Extraction Steam Line 2	9.31	6.81	0.00	0.00	0.17	34.34	0.000	n/a	0.475653	27.9	246.1	0.9557	1120.6
LP Extraction Steam Line 3	9.31	7.29	0.00	0.00	0.20	7.80	0.000	n/a	0.408297	10.7	196.5	0.6642	815.4
LP Extraction Steam Line 4	9.31	7.62	0.00	0.00	0.18	9.62	0.000	n/a	0.667055	5.0	162.6	0.7270	858.0
FWH Tube Side Line 1	9.28	6.16	0.00	0.00	0.68	20.06	0.000	0.00	13.12415	----	423.2	0.0000	----
FWH Tube Side Line 2	9.30	6.40	0.00	0.00	0.74	25.57	0.000	0.00	9.475758	----	371.6	0.0000	----

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent None (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	9.28	6.29	0.00	0.00	0.68	20.06	0.000	0.00	13.12415	----	392.1	0.0000	----
FWH Tube Side Line 3	9.30	6.86	0.00	0.00	0.74	31.54	0.000	0.00	9.475758	----	293.6	0.0000	----
FWH Tube Side Line 4	9.30	7.24	0.00	0.00	0.74	34.85	0.000	0.00	9.475758	----	243.8	0.0000	----
FWH Tube Side Line 5	9.30	7.73	0.00	0.00	0.74	37.34	0.000	0.00	9.475758	----	191.8	0.0000	----
FWH Tube Side Line 6	9.30	8.14	0.00	0.00	0.74	38.45	0.000	0.00	9.475758	----	155.7	0.0000	----
FWH Shell Side Line 1	9.28	6.31	0.00	0.00	0.69	12.00	0.000	n/a	1.502118	----	386.7	0.0000	----
FWH Shell Side Line 2	9.28	6.37	0.00	0.00	0.69	12.00	0.000	n/a	0.92908	----	374.1	0.0000	----
FWH Shell Side Line 3	9.31	7.19	0.00	0.00	0.75	2.74	0.000	n/a	0.502856	----	250.0	0.0000	----
FWH Shell Side Line 4	9.31	7.68	0.00	0.00	0.75	2.74	0.000	n/a	0.978509	----	196.9	0.0000	----
FWH Shell Side Line 5	9.31	8.06	0.00	0.00	0.75	2.74	0.000	n/a	1.386806	----	162.5	0.0000	----
FWH Shell Side Line 6	9.31	8.92	0.00	0.00	0.75	2.74	0.000	n/a	2.053861	----	100.3	0.0000	----
Feed Pump Steam & Drain Line 1	9.31	8.36	0.00	0.00	0.13	20.50	0.000	n/a	0.116701	1.0	101.7	0.8734	974.8
Drain Tank Drain Line 1	9.20	6.03	0.00	0.00	0.52	16.00	0.000	0.00	3.648394	----	445.4	0.0000	----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4)

Analysis Date/Time: 21-Jul-2011 2:22 pm
 CHECWORKS SFA Version 3.0 SP-2 (build 200)

Water Treatment : Cycle 2
 Power Level : 100.00%
 Plant Type : PWR

Chemistry Condition :

Condensate Dissolved Oxygen (ppb) :
 Concentration of 1st Constituent (ppm) : None
 Concentration of 2nd Constituent (ppm) : None
 Concentration of Ammonia (ppm) :
 Concentration of Hydrazine (ppb) :
 Hydrazine at SG (ppb) :
 Hydrazine at MSR drain (ppb) :
 Concentration of Boron (ppm) :
 Boron Injection Rate (lbm/hr) :

16,430
 0.000
 0.000
 0.480
 20.000
 12.000
 24.000
 0.000
 0.000

, Sampling at Not Used
 , Sampling at Not Used
 , Sampling at Final Feed Water
 , Sampling at Final Feed Water
 , Sampling at Steam outlet
 , Sampling at Not Used

Chemistry Analysis Report

Chemistry Analysis Results :

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent None (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
Blowdown Line	8.78	5.73	0.00	0.00	0.14	53.07	0.000	n/a	0.1	778.6	518.0	0.0000	-----
Main Steam Line 1	9.18	5.73	0.00	0.00	0.13	53.07	0.000	n/a	13.02415	-----	518.0	0.9999	-----
Main Steam Line 2	9.18	5.84	0.00	0.00	0.13	55.42	0.000	n/a	10.59295	340.4	429.1	0.9161	1136.9
Main Steam Line 3	9.21	5.94	0.00	0.00	0.13	22.27	0.000	n/a	9.375758	-----	390.6	0.9900	-----
Main Steam Line 4	9.21	7.55	0.00	0.00	0.14	9.62	0.000	n/a	7.205196	5.0	162.6	0.7270	858.0
HP Extraction Steam Line 1	9.18	6.01	0.00	0.00	0.12	83.03	0.000	n/a	0.92908	185.6	375.6	0.9540	1158.3
HP Extraction Steam Line 2	9.18	5.84	0.00	0.00	0.13	55.42	0.000	n/a	0.706255	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line 1	8.76	5.94	0.00	0.00	0.13	24.00	0.000	n/a	1.217196	221.9	390.6	0.0000	363.3
Reheater Steam & Drain Line 1	9.18	5.89	0.00	0.00	0.46	12.20	0.000	n/a	0.795863	644.7	494.0	0.0201	495.3
LP Extraction Steam Line 1	9.21	6.38	0.00	0.00	0.13	45.88	0.000	n/a	0.502856	65.0	298.0	0.9981	1177.4
LP Extraction Steam Line 2	9.21	6.74	0.00	0.00	0.13	34.34	0.000	n/a	0.475653	27.9	246.1	0.9557	1120.6
LP Extraction Steam Line 3	9.21	7.21	0.00	0.00	0.16	7.80	0.000	n/a	0.408297	10.7	196.5	0.6642	815.4
LP Extraction Steam Line 4	9.21	7.55	0.00	0.00	0.14	9.62	0.000	n/a	0.667055	5.0	162.6	0.7270	858.0
FWH Tube Side Line 1	9.18	6.09	0.00	0.00	0.48	19.96	0.000	0.00	13.12415	-----	423.2	0.0000	-----
FWH Tube Side Line 2	9.20	6.32	0.00	0.00	0.52	25.52	0.000	0.00	9.475758	-----	371.6	0.0000	-----

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent None (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	9.18	6.21	0.00	0.00	0.48	19.96	0.000	0.00	13.12415	-----	392.1	0.0000	-----
FWH Tube Side Line 3	9.20	6.77	0.00	0.00	0.52	31.70	0.000	0.00	9.475758	-----	293.6	0.0000	-----
FWH Tube Side Line 4	9.20	7.14	0.00	0.00	0.52	35.16	0.000	0.00	9.475758	-----	243.8	0.0000	-----
FWH Tube Side Line 5	9.20	7.63	0.00	0.00	0.52	37.77	0.000	0.00	9.475758	-----	191.8	0.0000	-----
FWH Tube Side Line 6	9.20	8.04	0.00	0.00	0.52	38.94	0.000	0.00	9.475758	-----	155.7	0.0000	-----
FWH Shell Side Line 1	9.18	6.23	0.00	0.00	0.49	12.00	0.000	n/a	1.502118	-----	386.7	0.0000	-----
FWH Shell Side Line 2	9.18	6.29	0.00	0.00	0.49	12.00	0.000	n/a	0.92908	-----	374.1	0.0000	-----
FWH Shell Side Line 3	9.21	7.10	0.00	0.00	0.53	2.74	0.000	n/a	0.502856	-----	250.0	0.0000	-----
FWH Shell Side Line 4	9.21	7.58	0.00	0.00	0.53	2.74	0.000	n/a	0.978509	-----	196.9	0.0000	-----
FWH Shell Side Line 5	9.21	7.96	0.00	0.00	0.53	2.74	0.000	n/a	1.386806	-----	162.5	0.0000	-----
FWH Shell Side Line 6	9.21	8.81	0.00	0.00	0.53	2.74	0.000	n/a	2.053861	-----	100.3	0.0000	-----
Feed Pump Steam & Drain Line 1	9.21	8.28	0.00	0.00	0.11	20.50	0.000	n/a	0.116701	1.0	101.7	0.8734	974.8
Drain Tank Drain Line 1	9.09	5.96	0.00	0.00	0.37	16.00	0.000	0.00	3.648394	-----	445.4	0.0000	-----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4)

Report Date/Time: 21-Jul-2011 3:04 pm
 Analysis Date/Time: 21-Jul-2011 2:22 pm
 CHECWORKS SFA Version 3.0 SP-2 (build 200)

Water Treatment : Cycle 3
 Power Level : 100.00%
 Plant Type : PWR

Chemistry Condition :

Condensate Dissolved Oxygen (ppb) :
 Concentration of 1st Constituent (ppm) : None
 Concentration of 2nd Constituent (ppm) : None
 Concentration of Ammonia (ppm):
 Concentration of Hydrazine (ppb) :
 Hydrazine at SG (ppb) :
 Hydrazine at MSR drain (ppb) :
 Concentration of Boron (ppm) :
 Boron Injection Rate (lbm/hr) :

11.720
 0.000
 0.000
 0.760
 25.000
 15.000
 30.000
 7.500
 0.000

, Sampling at Not Used
 , Sampling at Not Used
 , Sampling at Condensate
 , Sampling at Final Feed Water
 , Sampling at Steam outlet
 , Sampling at Steam Generator Blowdown

Chemistry Analysis Report

Chemistry Analysis Results :

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent None (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
Blowdown Line	7.48	5.75	0.00	0.00	0.20	66.34	0.000	n/a	0.1	778.6	518.0	0.0000	----
Main Steam Line 1	9.02	5.75	0.00	0.00	0.19	66.34	0.000	n/a	13.02415	----	518.0	0.9999	----
Main Steam Line 2	9.02	5.89	0.00	0.00	0.18	69.28	0.000	n/a	10.59295	340.4	429.1	0.9161	1136.9
Main Steam Line 3	9.26	6.00	0.00	0.00	0.18	27.84	0.000	n/a	9.375758	----	390.6	0.9900	----
Main Steam Line 4	9.26	7.60	0.00	0.00	0.19	12.02	0.000	n/a	7.205196	5.0	162.6	0.7270	858.0
HP Extraction Steam Line 1	9.02	6.05	0.00	0.00	0.17	103.79	0.000	n/a	0.92908	185.6	375.6	0.9540	1158.3
HP Extraction Steam Line 2	9.02	5.89	0.00	0.00	0.18	69.28	0.000	n/a	0.706255	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line 1	7.78	5.99	0.00	0.00	0.18	30.00	0.000	n/a	1.217196	221.9	390.6	0.0000	363.3
Reheater Steam & Drain Line 1	9.02	5.95	0.00	0.00	0.67	15.24	0.000	n/a	0.795863	644.7	494.0	0.0201	495.3
LP Extraction Steam Line 1	9.26	6.39	0.00	0.00	0.19	57.35	0.000	n/a	0.502856	65.0	298.0	0.9981	1177.4
LP Extraction Steam Line 2	9.26	6.78	0.00	0.00	0.18	42.92	0.000	n/a	0.475653	27.9	246.1	0.9557	1120.6
LP Extraction Steam Line 3	9.26	7.28	0.00	0.00	0.20	9.75	0.000	n/a	0.408297	10.7	196.5	0.6642	815.4
LP Extraction Steam Line 4	9.26	7.60	0.00	0.00	0.19	12.02	0.000	n/a	0.667055	5.0	162.6	0.7270	858.0
FWH Tube Side Line 1	8.99	6.17	0.00	0.00	0.70	24.95	0.000	0.00	13.12415	----	423.2	0.0000	----
FWH Tube Side Line 2	9.21	6.41	0.00	0.00	0.76	30.62	0.000	0.00	9.475758	----	371.6	0.0000	----

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent None (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	8.99	6.29	0.00	0.00	0.70	24.95	0.000	0.00	13.12415	-----	392.1	0.0000	-----
FWH Tube Side Line 3	9.21	6.86	0.00	0.00	0.76	35.69	0.000	0.00	9.475758	-----	293.6	0.0000	-----
FWH Tube Side Line 4	9.21	7.24	0.00	0.00	0.76	38.40	0.000	0.00	9.475758	-----	243.8	0.0000	-----
FWH Tube Side Line 5	9.21	7.73	0.00	0.00	0.76	40.40	0.000	0.00	9.475758	-----	191.8	0.0000	-----
FWH Tube Side Line 6	9.21	8.13	0.00	0.00	0.76	41.29	0.000	0.00	9.475758	-----	155.7	0.0000	-----
FWH Shell Side Line 1	9.02	6.32	0.00	0.00	0.71	15.00	0.000	n/a	1.502118	-----	386.7	0.0000	-----
FWH Shell Side Line 2	9.02	6.37	0.00	0.00	0.71	15.00	0.000	n/a	0.92908	-----	374.1	0.0000	-----
FWH Shell Side Line 3	9.26	7.20	0.00	0.00	0.78	3.42	0.000	n/a	0.502856	-----	250.0	0.0000	-----
FWH Shell Side Line 4	9.26	7.68	0.00	0.00	0.78	3.42	0.000	n/a	0.978509	-----	196.9	0.0000	-----
FWH Shell Side Line 5	9.26	8.06	0.00	0.00	0.78	3.42	0.000	n/a	1.386806	-----	162.5	0.0000	-----
FWH Shell Side Line 6	9.26	8.89	0.00	0.00	0.78	3.42	0.000	n/a	2.053861	-----	100.3	0.0000	-----
Feed Pump Steam & Drain Line 1	9.26	8.18	0.00	0.00	0.19	25.62	0.000	n/a	0.116701	1.0	101.7	0.8734	974.8
Drain Tank Drain Line 1	8.56	6.03	0.00	0.00	0.53	20.00	0.000	0.00	3.648394	-----	445.4	0.0000	-----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4)

Report Date/Time: 21-Jul-2011 3:04 pm
 Analysis Date/Time: 21-Jul-2011 2:22 pm
 CHECWORKS SFA Version 3.0 SP-2 (build 200)

Water Treatment : Cycle 4
 Power Level : 100.00%
 Plant Type : PWR

Chemistry Condition :

Condensate Dissolved Oxygen (ppb) :
 Concentration of 1st Constituent (ppm) : None
 Concentration of 2nd Constituent (ppm) : None
 Concentration of Ammonia (ppm):
 Concentration of Hydrazine (ppb) :
 Hydrazine at SG (ppb) :
 Hydrazine at MSR drain (ppb) :
 Concentration of Boron (ppm) :
 Boron Injection Rate (lbm/hr) :

9.130
 0.000
 0.000
 1.260
 40.000
 24.000
 48.000
 7.500
 0.000

, Sampling at Not Used
 , Sampling at Not Used
 , Sampling at Final Feed Water
 , Sampling at Final Feed Water
 , Sampling at Steam outlet
 , Sampling at Steam Generator Blowdown

Chemistry Analysis Report

Chemistry Analysis Results :

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent None (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
Blowdown Line	7.71	5.82	0.00	0.00	0.35	106.15	0.000	n/a	0.1	778.6	518.0	0.0000	----
Main Steam Line 1	9.24	5.82	0.00	0.00	0.34	106.15	0.000	n/a	13.02415	----	518.0	0.9999	----
Main Steam Line 2	9.24	5.99	0.00	0.00	0.30	110.85	0.000	n/a	10.59295	340.4	429.1	0.9161	1136.9
Main Steam Line 3	9.44	6.10	0.00	0.00	0.30	44.54	0.000	n/a	9.375758	----	390.6	0.9900	----
Main Steam Line 4	9.44	7.73	0.00	0.00	0.28	19.24	0.000	n/a	7.205196	5.0	162.6	0.7270	858.0
HP Extraction Steam Line 1	9.24	6.16	0.00	0.00	0.28	166.07	0.000	n/a	0.92908	185.6	375.6	0.9540	1158.3
HP Extraction Steam Line 2	9.24	5.99	0.00	0.00	0.30	110.85	0.000	n/a	0.706255	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line 1	7.99	6.10	0.00	0.00	0.30	48.00	0.000	n/a	1.217196	221.9	390.6	0.0000	363.3
Reheater Steam & Drain Line 1	9.24	6.07	0.00	0.00	1.20	24.39	0.000	n/a	0.795863	644.7	494.0	0.0201	495.3
LP Extraction Steam Line 1	9.44	6.52	0.00	0.00	0.29	91.76	0.000	n/a	0.502856	65.0	298.0	0.9981	1177.4
LP Extraction Steam Line 2	9.44	6.91	0.00	0.00	0.27	68.67	0.000	n/a	0.475653	27.9	246.1	0.9557	1120.6
LP Extraction Steam Line 3	9.44	7.41	0.00	0.00	0.31	15.60	0.000	n/a	0.408297	10.7	196.5	0.6642	815.4
LP Extraction Steam Line 4	9.44	7.73	0.00	0.00	0.28	19.24	0.000	n/a	0.667055	5.0	162.6	0.7270	858.0
FWH Tube Side Line 1	9.21	6.30	0.00	0.00	1.26	39.98	0.000	0.00	13.12415	----	423.2	0.0000	----
FWH Tube Side Line 2	9.39	6.55	0.00	0.00	1.38	47.55	0.000	0.00	9.475758	----	371.6	0.0000	----

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent None (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	9.21	6.43	0.00	0.00	1.26	39.98	0.000	0.00	13.12415	----	392.1	0.0000	----
FWH Tube Side Line 3	9.39	7.01	0.00	0.00	1.38	52.60	0.000	0.00	9.475758	----	293.6	0.0000	----
FWH Tube Side Line 4	9.39	7.40	0.00	0.00	1.38	55.17	0.000	0.00	9.475758	----	243.8	0.0000	----
FWH Tube Side Line 5	9.39	7.89	0.00	0.00	1.38	57.08	0.000	0.00	9.475758	----	191.8	0.0000	----
FWH Tube Side Line 6	9.39	8.29	0.00	0.00	1.38	57.94	0.000	0.00	9.475758	----	155.7	0.0000	----
FWH Shell Side Line 1	9.24	6.45	0.00	0.00	1.28	24.00	0.000	n/a	1.502118	----	386.7	0.0000	----
FWH Shell Side Line 2	9.24	6.51	0.00	0.00	1.28	24.00	0.000	n/a	0.92908	----	374.1	0.0000	----
FWH Shell Side Line 3	9.44	7.35	0.00	0.00	1.40	5.48	0.000	n/a	0.502856	----	250.0	0.0000	----
FWH Shell Side Line 4	9.44	7.84	0.00	0.00	1.40	5.48	0.000	n/a	0.978509	----	196.9	0.0000	----
FWH Shell Side Line 5	9.44	8.22	0.00	0.00	1.40	5.48	0.000	n/a	1.386806	----	162.5	0.0000	----
FWH Shell Side Line 6	9.44	9.06	0.00	0.00	1.40	5.48	0.000	n/a	2.053861	----	100.3	0.0000	----
Feed Pump Steam & Drain Line 1	9.44	8.31	0.00	0.00	0.27	40.99	0.000	n/a	0.116701	1.0	101.7	0.8734	974.8
Drain Tank Drain Line 1	8.81	6.15	0.00	0.00	0.95	32.01	0.000	0.00	3.648394	----	445.4	0.0000	----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4)

Analysis Date/Time: 21-Jul-2011 2:22 pm
 CHECWORKS SFA Version 3.0 SP-2 (build 200)

Water Treatment : Cycle 5
 Power Level : 100.00%
 Plant Type : PWR

Chemistry Condition :

Condensate Dissolved Oxygen (ppb) :
 Concentration of 1st Constituent (ppm) : None
 Concentration of 2nd Constituent (ppm) : None
 Concentration of Ammonia (ppm) :
 Concentration of Hydrazine (ppb) :
 Hydrazine at SG (ppb) :
 Hydrazine at MSR drain (ppb) :
 Concentration of Boron (ppm) :
 Boron Injection Rate (lbm/hr) :

2.830
 0.000
 0.000
 1.290
 40.000
 24.000
 48.000
 0.000
 0.000

, Sampling at Not Used
 , Sampling at Not Used
 , Sampling at Final Feed Water
 , Sampling at Final Feed Water
 , Sampling at Steam outlet
 , Sampling at Not Used

Chemistry Analysis Report

Chemistry Analysis Results :

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent None (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
Blowdown Line	9.09	5.84	0.00	0.00	0.35	106.15	0.000	n/a	0.1	778.6	518.0	0.0000	-----
Main Steam Line 1	9.46	5.84	0.00	0.00	0.35	106.15	0.000	n/a	13.02415	-----	518.0	0.9999	-----
Main Steam Line 2	9.46	6.00	0.00	0.00	0.31	110.85	0.000	n/a	10.59295	340.4	429.1	0.9161	1136.9
Main Steam Line 3	9.48	6.12	0.00	0.00	0.30	44.54	0.000	n/a	9.375758	-----	390.6	0.9900	-----
Main Steam Line 4	9.48	7.76	0.00	0.00	0.28	19.24	0.000	n/a	7.205196	5.0	162.6	0.7270	858.0
HP Extraction Steam Line 1	9.46	6.19	0.00	0.00	0.28	166.07	0.000	n/a	0.92908	185.6	375.6	0.9540	1158.3
HP Extraction Steam Line 2	9.46	6.00	0.00	0.00	0.31	110.85	0.000	n/a	0.706255	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line 1	9.04	6.12	0.00	0.00	0.30	48.00	0.000	n/a	1.217196	221.9	390.6	0.0000	363.3
Reheater Steam & Drain Line 1	9.46	6.07	0.00	0.00	1.23	24.39	0.000	n/a	0.795863	644.7	494.0	0.0201	495.3
LP Extraction Steam Line 1	9.48	6.58	0.00	0.00	0.27	91.76	0.000	n/a	0.502856	65.0	298.0	0.9981	1177.4
LP Extraction Steam Line 2	9.48	6.95	0.00	0.00	0.27	68.67	0.000	n/a	0.475653	27.9	246.1	0.9557	1120.6
LP Extraction Steam Line 3	9.48	7.43	0.00	0.00	0.31	15.60	0.000	n/a	0.408297	10.7	196.5	0.6642	815.4
LP Extraction Steam Line 4	9.48	7.76	0.00	0.00	0.28	19.24	0.000	n/a	0.667055	5.0	162.6	0.7270	858.0
FWH Tube Side Line 1	9.45	6.30	0.00	0.00	1.29	40.02	0.000	0.00	13.12415	-----	423.2	0.0000	-----
FWH Tube Side Line 2	9.48	6.55	0.00	0.00	1.41	46.95	0.000	0.00	9.475758	-----	371.6	0.0000	-----

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent None (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	9.45	6.43	0.00	0.00	1.29	40.02	0.000	0.00	13.12415	----	392.1	0.0000	----
FWH Tube Side Line 3	9.48	7.02	0.00	0.00	1.41	50.08	0.000	0.00	9.475758	----	293.6	0.0000	----
FWH Tube Side Line 4	9.48	7.41	0.00	0.00	1.41	51.26	0.000	0.00	9.475758	----	243.8	0.0000	----
FWH Tube Side Line 5	9.48	7.90	0.00	0.00	1.41	52.03	0.000	0.00	9.475758	----	191.8	0.0000	----
FWH Tube Side Line 6	9.48	8.32	0.00	0.00	1.41	52.36	0.000	0.00	9.475758	----	155.7	0.0000	----
FWH Shell Side Line 1	9.46	6.46	0.00	0.00	1.31	24.00	0.000	n/a	1.502118	----	386.7	0.0000	----
FWH Shell Side Line 2	9.46	6.52	0.00	0.00	1.31	24.00	0.000	n/a	0.92908	----	374.1	0.0000	----
FWH Shell Side Line 3	9.48	7.36	0.00	0.00	1.44	5.48	0.000	n/a	0.502856	----	250.0	0.0000	----
FWH Shell Side Line 4	9.48	7.85	0.00	0.00	1.44	5.48	0.000	n/a	0.978509	----	196.9	0.0000	----
FWH Shell Side Line 5	9.48	8.24	0.00	0.00	1.44	5.48	0.000	n/a	1.386806	----	162.5	0.0000	----
FWH Shell Side Line 6	9.48	9.09	0.00	0.00	1.44	5.48	0.000	n/a	2.053861	----	100.3	0.0000	----
Feed Pump Steam & Drain Line 1	9.48	8.50	0.00	0.00	0.20	40.99	0.000	n/a	0.116701	1.0	101.7	0.8734	974.8
Drain Tank Drain Line 1	9.38	6.16	0.00	0.00	0.97	32.01	0.000	0.00	3.648394	----	445.4	0.0000	----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4)

Report Date/Time: 21-Jul-2011 3:05 pm
 Analysis Date/Time: 21-Jul-2011 2:22 pm
 CHECWORKS SFA Version 3.0 SP-2 (build 200)

Water Treatment : Cycle 6
 Power Level : 100.00%
 Plant Type : PWR

Chemistry Condition :

Condensate Dissolved Oxygen (ppb) :
 Concentration of 1st Constituent (ppm) : None
 Concentration of 2nd Constituent (ppm) : None
 Concentration of Ammonia (ppm) :
 Concentration of Hydrazine (ppb) :
 Hydrazine at SG (ppb) :
 Hydrazine at MSR drain (ppb) :
 Concentration of Boron (ppm) :
 Boron Injection Rate (lbm/hr) :

2.530
 0.000
 0.000
 1.290
 40.000
 24.000
 48.000
 0.000
 0.000

, Sampling at Not Used
 , Sampling at Not Used
 , Sampling at Final Feed Water
 , Sampling at Final Feed Water
 , Sampling at Steam outlet
 , Sampling at Not Used

Chemistry Analysis Report

Chemistry Analysis Results :

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent None (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
Blowdown Line	9.09	5.84	0.00	0.00	0.35	106.15	0.000	n/a	0.1	778.6	518.0	0.0000	----
Main Steam Line 1	9.46	5.84	0.00	0.00	0.35	106.15	0.000	n/a	13.02415	----	518.0	0.9999	----
Main Steam Line 2	9.46	6.00	0.00	0.00	0.31	110.85	0.000	n/a	10.59295	340.4	429.1	0.9161	1136.9
Main Steam Line 3	9.48	6.12	0.00	0.00	0.30	44.54	0.000	n/a	9.375758	----	390.6	0.9900	----
Main Steam Line 4	9.48	7.76	0.00	0.00	0.28	19.24	0.000	n/a	7.205196	5.0	162.6	0.7270	858.0
HP Extraction Steam Line 1	9.46	6.19	0.00	0.00	0.28	166.07	0.000	n/a	0.92908	185.6	375.6	0.9540	1158.3
HP Extraction Steam Line 2	9.04	6.00	0.00	0.00	0.31	110.85	0.000	n/a	0.706255	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line 1	9.46	6.12	0.00	0.00	0.30	48.00	0.000	n/a	1.217196	221.9	390.6	0.0000	363.3
Reheater Steam & Drain Line 1	9.46	6.07	0.00	0.00	1.23	24.39	0.000	n/a	0.795863	644.7	494.0	0.0201	495.3
LP Extraction Steam Line 1	9.48	6.58	0.00	0.00	0.27	91.76	0.000	n/a	0.502856	65.0	298.0	0.9981	1177.4
LP Extraction Steam Line 2	9.48	6.95	0.00	0.00	0.27	68.67	0.000	n/a	0.475653	27.9	246.1	0.9557	1120.6
LP Extraction Steam Line 3	9.48	7.43	0.00	0.00	0.31	15.60	0.000	n/a	0.408297	10.7	196.5	0.6642	815.4
LP Extraction Steam Line 4	9.48	7.76	0.00	0.00	0.28	19.24	0.000	n/a	0.667055	5.0	162.6	0.7270	858.0
FWH Tube Side Line 1	9.45	6.30	0.00	0.00	1.29	40.02	0.000	0.00	13.12415	----	423.2	0.0000	----
FWH Tube Side Line 2	9.48	6.55	0.00	0.00	1.41	46.91	0.000	0.00	9.475758	----	371.6	0.0000	----

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent None (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	9.45	6.43	0.00	0.00	1.29	40.02	0.000	0.00	13.12415	----	392.1	0.0000	----
FWH Tube Side Line 3	9.48	7.02	0.00	0.00	1.41	49.95	0.000	0.00	9.475758	----	293.6	0.0000	----
FWH Tube Side Line 4	9.48	7.41	0.00	0.00	1.41	51.06	0.000	0.00	9.475758	----	243.8	0.0000	----
FWH Tube Side Line 5	9.48	7.90	0.00	0.00	1.41	51.78	0.000	0.00	9.475758	----	191.8	0.0000	----
FWH Tube Side Line 6	9.48	8.32	0.00	0.00	1.41	52.09	0.000	0.00	9.475758	----	155.7	0.0000	----
FWH Shell Side Line 1	9.46	6.46	0.00	0.00	1.31	24.00	0.000	n/a	1.502118	----	386.7	0.0000	----
FWH Shell Side Line 2	9.46	6.52	0.00	0.00	1.31	24.00	0.000	n/a	0.92908	----	374.1	0.0000	----
FWH Shell Side Line 3	9.48	7.36	0.00	0.00	1.44	5.48	0.000	n/a	0.502856	----	250.0	0.0000	----
FWH Shell Side Line 4	9.48	7.85	0.00	0.00	1.44	5.48	0.000	n/a	0.978509	----	196.9	0.0000	----
FWH Shell Side Line 5	9.48	8.24	0.00	0.00	1.44	5.48	0.000	n/a	1.386806	----	162.5	0.0000	----
FWH Shell Side Line 6	9.48	9.09	0.00	0.00	1.44	5.48	0.000	n/a	2.053861	----	100.3	0.0000	----
Feed Pump Steam & Drain Line 1	9.48	8.50	0.00	0.00	0.20	40.99	0.000	n/a	0.116701	1.0	101.7	0.8734	974.8
Drain Tank Drain Line 1	9.38	6.16	0.00	0.00	0.97	32.01	0.000	0.00	3.648394	----	445.4	0.0000	----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4)

Report Date/Time: 21-Jul-2011 3:05 pm
 Analysis Date/Time: 21-Jul-2011 2:22 pm
 CHECWORKS SFA Version 3.0 SP-2 (build 200)

Chemistry Analysis Report

Water Treatment : Cycle 7
 Power Level : 100.00%
 Plant Type : PWR

Chemistry Condition :

Condensate Dissolved Oxygen (ppb) :
 Concentration of 1st Constituent (ppm) : Morpholine
 Concentration of 2nd Constituent (ppm) : None
 Concentration of Ammonia (ppm):
 Concentration of Hydrazine (ppb) :
 Hydrazine at SG (ppb) :
 Hydrazine at MSR drain (ppb) :
 Concentration of Boron (ppm) :
 Boron Injection Rate (lbm/hr) :

3,000
 4,500
 0,000
 0,060
 58,000
 34,800
 69,600
 7,500
 0,000

, Sampling at Final Feed Water
 , Sampling at Not Used
 , Sampling at Final Feed Water
 , Sampling at Final Feed Water
 , Sampling at Steam outlet
 , Sampling at Steam Generator Blowdown

Chemistry Analysis Results :

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent Morpholine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
Blowdown Line	7.96	5.98	3.86	0.00	0.02	153.91	0.000	n/a	0.1	778.6	518.0	0.0000	----
Main Steam Line 1	8.85	5.98	3.84	0.00	0.02	153.91	0.000	n/a	13.02415	----	518.0	0.9999	----
Main Steam Line 2	8.85	6.22	4.57	0.00	0.02	160.73	0.000	n/a	10.59295	340.4	429.1	0.9161	1136.9
Main Steam Line 3	9.04	6.37	5.08	0.00	0.01	64.59	0.000	n/a	9.375758	----	390.6	0.9900	----
Main Steam Line 4	9.04	8.09	9.86	0.00	0.01	27.89	0.000	n/a	7.205196	5.0	162.6	0.7270	858.0
HP Extraction Steam Line 1	8.85	6.44	5.41	0.00	0.01	240.80	0.000	n/a	0.92908	185.6	375.6	0.9540	1158.3
HP Extraction Steam Line 2	8.85	6.22	4.57	0.00	0.02	160.73	0.000	n/a	0.706255	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line 1	8.34	6.37	5.09	0.00	0.02	69.60	0.000	n/a	1.217196	221.9	390.6	0.0000	363.3
Reheater Steam & Drain Line 1	8.85	6.06	4.49	0.00	0.07	35.37	0.000	n/a	0.795863	644.7	494.0	0.0201	495.3
LP Extraction Steam Line 1	9.04	6.88	7.63	0.00	0.01	133.05	0.000	n/a	0.502856	65.0	298.0	0.9981	1177.4
LP Extraction Steam Line 2	9.04	7.32	9.42	0.00	0.01	99.57	0.000	n/a	0.475653	27.9	246.1	0.9557	1120.6
LP Extraction Steam Line 3	9.04	7.72	8.15	0.00	0.01	22.62	0.000	n/a	0.408297	10.7	196.5	0.6642	815.4
LP Extraction Steam Line 4	9.04	8.09	9.86	0.00	0.01	27.89	0.000	n/a	0.667055	5.0	162.6	0.7270	858.0
FWH Tube Side Line 1	8.82	6.24	4.50	0.00	0.06	58.02	0.000	0.00	13.12415	----	423.2	0.0000	----
FWH Tube Side Line 2	8.98	6.44	4.42	0.00	0.06	67.86	0.000	0.00	9.475758	----	371.6	0.0000	----

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent Morpholine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	8.82	6.36	4.50	0.00	0.06	58.02	0.000	0.00	13.12415	----	392.1	0.0000	----
FWH Tube Side Line 3	8.98	6.85	4.42	0.00	0.06	71.99	0.000	0.00	9.475758	----	293.6	0.0000	----
FWH Tube Side Line 4	8.98	7.20	4.42	0.00	0.06	73.50	0.000	0.00	9.475758	----	243.8	0.0000	----
FWH Tube Side Line 5	8.98	7.65	4.42	0.00	0.06	74.50	0.000	0.00	9.475758	----	191.8	0.0000	----
FWH Tube Side Line 6	8.98	8.01	4.42	0.00	0.06	74.93	0.000	0.00	9.475758	----	155.7	0.0000	----
FWH Shell Side Line 1	8.85	6.38	4.50	0.00	0.07	34.80	0.000	n/a	1.502118	----	386.7	0.0000	----
FWH Shell Side Line 2	8.85	6.43	4.50	0.00	0.07	34.80	0.000	n/a	0.92908	----	374.1	0.0000	----
FWH Shell Side Line 3	9.04	7.16	4.43	0.00	0.08	7.94	0.000	n/a	0.502856	----	250.0	0.0000	----
FWH Shell Side Line 4	9.04	7.61	4.43	0.00	0.08	7.94	0.000	n/a	0.978509	----	196.9	0.0000	----
FWH Shell Side Line 5	9.04	7.95	4.43	0.00	0.08	7.94	0.000	n/a	1.386806	----	162.5	0.0000	----
FWH Shell Side Line 6	9.04	8.71	4.43	0.00	0.08	7.94	0.000	n/a	2.053861	----	100.3	0.0000	----
Feed Pump Steam & Drain Line 1	9.04	8.85	17.99	0.00	0.01	59.44	0.000	n/a	0.116701	1.0	101.7	0.8734	974.8
Drain Tank Drain Line 1	8.58	6.18	4.70	0.00	0.05	46.41	0.000	0.00	3.648394	----	445.4	0.0000	----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4)

Report Date/Time: 21-Jul-2011 3:06 pm
 Analysis Date/Time: 21-Jul-2011 2:22 pm
 CHECWORKS SFA Version 3.0 SP-2 (build 200)

Water Treatment : Cycle 8
 Power Level : 100.00%
 Plant Type : PWR

Chemistry Condition :

Condensate Dissolved Oxygen (ppb) :
 Concentration of 1st Constituent (ppm) : Morpholine
 Concentration of 2nd Constituent (ppm) : None
 Concentration of Ammonia (ppm):
 Concentration of Hydrazine (ppb) :
 Hydrazine at SG (ppb) :
 Hydrazine at MSR drain (ppb) :
 Concentration of Boron (ppm) :
 Boron Injection Rate (lbm/hr) :

4.000
 4.500
 0.000
 0.200
 190.000
 114.000
 228.000
 7.500
 0.000

, Sampling at Final Feed Water
 , Sampling at Not Used
 , Sampling at Final Feed Water
 , Sampling at Final Feed Water
 , Sampling at Steam outlet
 , Sampling at Steam Generator Blowdown

Chemistry Analysis Report

Chemistry Analysis Results :

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent Morpholine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
Blowdown Line	8.03	6.03	3.85	0.00	0.06	504.20	0.000	n/a	0.1	778.6	518.0	0.0000	----
Main Steam Line 1	8.95	6.02	3.81	0.00	0.06	504.20	0.000	n/a	13.02415	----	518.0	0.9999	----
Main Steam Line 2	8.95	6.25	4.51	0.00	0.05	526.52	0.000	n/a	10.59295	340.4	429.1	0.9161	1136.9
Main Steam Line 3	9.15	6.39	5.05	0.00	0.05	211.58	0.000	n/a	9.375758	----	390.6	0.9900	----
Main Steam Line 4	9.15	8.10	9.86	0.00	0.03	91.38	0.000	n/a	7.205196	5.0	162.6	0.7270	858.0
HP Extraction Steam Line 1	8.95	6.47	5.33	0.00	0.04	788.82	0.000	n/a	0.92908	185.6	375.6	0.9540	1158.3
HP Extraction Steam Line 2	8.95	6.25	4.51	0.00	0.05	526.52	0.000	n/a	0.706255	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line 1	8.36	6.39	5.05	0.00	0.05	228.00	0.000	n/a	1.217196	221.9	390.6	0.0000	363.3
Reheater Steam & Drain Line 1	8.95	6.09	4.49	0.00	0.23	115.86	0.000	n/a	0.795863	644.7	494.0	0.0201	495.3
LP Extraction Steam Line 1	9.15	6.89	7.58	0.00	0.04	435.84	0.000	n/a	0.502856	65.0	298.0	0.9981	1177.4
LP Extraction Steam Line 2	9.15	7.33	9.39	0.00	0.03	326.19	0.000	n/a	0.475653	27.9	246.1	0.9557	1120.6
LP Extraction Steam Line 3	9.15	7.73	8.14	0.00	0.04	74.10	0.000	n/a	0.408297	10.7	196.5	0.6642	815.4
LP Extraction Steam Line 4	9.15	8.10	9.86	0.00	0.03	91.38	0.000	n/a	0.667055	5.0	162.6	0.7270	858.0
FWH Tube Side Line 1	8.91	6.28	4.50	0.00	0.20	190.01	0.000	0.00	13.12415	----	423.2	0.0000	----
FWH Tube Side Line 2	9.07	6.48	4.43	0.00	0.20	221.49	0.000	0.00	9.475758	----	371.6	0.0000	----

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent Morpholine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	8.91	6.40	4.50	0.00	0.20	190.01	0.000	0.00	13.12415	-----	392.1	0.0000	-----
FWH Tube Side Line 3	9.07	6.90	4.43	0.00	0.19	232.79	0.000	0.00	9.475758	-----	293.6	0.0000	-----
FWH Tube Side Line 4	9.07	7.26	4.43	0.00	0.19	236.43	0.000	0.00	9.475758	-----	243.8	0.0000	-----
FWH Tube Side Line 5	9.07	7.71	4.43	0.00	0.19	238.86	0.000	0.00	9.475758	-----	191.8	0.0000	-----
FWH Tube Side Line 6	9.07	8.08	4.43	0.00	0.19	239.94	0.000	0.00	9.475758	-----	155.7	0.0000	-----
FWH Shell Side Line 1	8.95	6.42	4.50	0.00	0.24	114.00	0.000	n/a	1.502118	-----	386.7	0.0000	-----
FWH Shell Side Line 2	8.95	6.48	4.50	0.00	0.24	114.00	0.000	n/a	0.92908	-----	374.1	0.0000	-----
FWH Shell Side Line 3	9.15	7.22	4.43	0.00	0.26	26.02	0.000	n/a	0.502856	-----	250.0	0.0000	-----
FWH Shell Side Line 4	9.15	7.68	4.43	0.00	0.26	26.02	0.000	n/a	0.978509	-----	196.9	0.0000	-----
FWH Shell Side Line 5	9.15	8.03	4.43	0.00	0.26	26.02	0.000	n/a	1.386806	-----	162.5	0.0000	-----
FWH Shell Side Line 6	9.15	8.81	4.43	0.00	0.26	26.02	0.000	n/a	2.053861	-----	100.3	0.0000	-----
Feed Pump Steam & Drain Line 1	9.15	8.85	17.99	0.00	0.02	194.72	0.000	n/a	0.116701	1.0	101.7	0.8734	974.8
Drain Tank Drain Line 1	8.65	6.21	4.69	0.00	0.18	152.03	0.000	0.00	3.648394	-----	445.4	0.0000	-----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH, hot pH and amine concentration are not reported since there is no water phase.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4)

Report Date/Time: 21-Jul-2011 3:06 pm
 Analysis Date/Time: 21-Jul-2011 2:22 pm
 CHECWORKS SFA Version 3.0 SP-2 (build 200)

Chemistry Analysis Report

Water Treatment : Cycle 9
 Power Level : 100.00%
 Plant Type : PWR

Chemistry Condition :

Condensate Dissolved Oxygen (ppb) :
 Concentration of 1st Constituent (ppm) : Morpholine
 Concentration of 2nd Constituent (ppm) : None
 Concentration of Ammonia (ppm):
 Concentration of Hydrazine (ppb) :
 Hydrazine at SG (ppb) :
 Hydrazine at MSR drain (ppb) :
 Concentration of Boron (ppm) :
 Boron Injection Rate (lbm/hr) :

9,000
 4,500
 0,000
 0,680
 225,000
 135,000
 270,000
 7,500
 0,000

, Sampling at Final Feed Water
 , Sampling at Not Used
 , Sampling at Final Feed Water
 , Sampling at Final Feed Water
 , Sampling at Steam outlet
 , Sampling at Steam Generator Blowdown

Chemistry Analysis Results :

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent Morpholine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
Blowdown Line	8.09	6.05	3.83	0.00	0.19	597.08	0.000	n/a	0.1	778.6	518.0	0.0000	----
Main Steam Line 1	9.16	6.05	3.79	0.00	0.19	597.08	0.000	n/a	13.02415	----	518.0	0.9999	----
Main Steam Line 2	9.16	6.27	4.48	0.00	0.15	623.51	0.000	n/a	10.59295	340.4	429.1	0.9161	1136.9
Main Steam Line 3	9.35	6.41	5.01	0.00	0.14	250.55	0.000	n/a	9.375758	----	390.6	0.9900	----
Main Steam Line 4	9.35	8.12	9.84	0.00	0.10	108.21	0.000	n/a	7.205196	5.0	162.6	0.7270	858.0
HP Extraction Steam Line 1	9.16	6.49	5.29	0.00	0.13	934.12	0.000	n/a	0.92908	185.6	375.6	0.9540	1158.3
HP Extraction Steam Line 2	9.16	6.27	4.48	0.00	0.15	623.51	0.000	n/a	0.706255	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line 1	8.41	6.41	5.02	0.00	0.15	270.00	0.000	n/a	1.217196	221.9	390.6	0.0000	363.3
Reheater Steam & Drain Line 1	9.16	6.15	4.49	0.00	0.68	137.20	0.000	n/a	0.795863	644.7	494.0	0.0201	495.3
LP Extraction Steam Line 1	9.35	6.91	7.52	0.00	0.12	516.12	0.000	n/a	0.502856	65.0	298.0	0.9981	1177.4
LP Extraction Steam Line 2	9.35	7.34	9.34	0.00	0.10	386.27	0.000	n/a	0.475653	27.9	246.1	0.9557	1120.6
LP Extraction Steam Line 3	9.35	7.75	8.12	0.00	0.13	87.75	0.000	n/a	0.408297	10.7	196.5	0.6642	815.4
LP Extraction Steam Line 4	9.35	8.12	9.84	0.00	0.10	108.21	0.000	n/a	0.667055	5.0	162.6	0.7270	858.0
FWH Tube Side Line 1	9.12	6.36	4.50	0.00	0.68	225.04	0.000	0.00	13.12415	----	423.2	0.0000	----
FWH Tube Side Line 2	9.29	6.58	4.43	0.00	0.72	262.36	0.000	0.00	9.475758	----	371.6	0.0000	----

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent Morpholine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	9.12	6.48	4.50	0.00	0.68	225.04	0.000	0.00	13.12415	-----	392.1	0.0000	-----
FWH Tube Side Line 3	9.29	7.02	4.43	0.00	0.72	276.28	0.000	0.00	9.475758	-----	293.6	0.0000	-----
FWH Tube Side Line 4	9.29	7.38	4.43	0.00	0.72	281.58	0.000	0.00	9.475758	-----	243.8	0.0000	-----
FWH Tube Side Line 5	9.29	7.85	4.43	0.00	0.72	285.69	0.000	0.00	9.475758	-----	191.8	0.0000	-----
FWH Tube Side Line 6	9.29	8.24	4.43	0.00	0.71	287.69	0.000	0.00	9.475758	-----	155.7	0.0000	-----
FWH Shell Side Line 1	9.16	6.51	4.51	0.00	0.73	135.00	0.000	n/a	1.502118	-----	386.7	0.0000	-----
FWH Shell Side Line 2	9.16	6.56	4.51	0.00	0.73	135.00	0.000	n/a	0.92908	-----	374.1	0.0000	-----
FWH Shell Side Line 3	9.35	7.35	4.44	0.00	0.81	30.81	0.000	n/a	0.502856	-----	250.0	0.0000	-----
FWH Shell Side Line 4	9.35	7.82	4.44	0.00	0.81	30.81	0.000	n/a	0.978509	-----	196.9	0.0000	-----
FWH Shell Side Line 5	9.35	8.18	4.44	0.00	0.81	30.81	0.000	n/a	1.386806	-----	162.5	0.0000	-----
FWH Shell Side Line 6	9.35	8.99	4.44	0.00	0.81	30.81	0.000	n/a	2.053861	-----	100.3	0.0000	-----
Feed Pump Steam & Drain Line 1	9.35	8.86	17.98	0.00	0.07	230.59	0.000	n/a	0.116701	1.0	101.7	0.8734	974.8
Drain Tank Drain Line 1	8.81	6.27	4.68	0.00	0.54	180.04	0.000	0.00	3.648394	-----	445.4	0.0000	-----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Company: Entergy Nuclear Operations, Inc.
Plant: Indian Point
Unit: 3
DB Name: IPEC 3 (v4)

Report Date/Time: 21-Jul-2011 3:06 pm
Analysis Date/Time: 21-Jul-2011 2:22 pm
CHECWORKS SFA Version 3.0 SP-2 (build 200)

Water Treatment : Cycle 10A
Power Level : 100.00%
Plant Type : PWR

Chemistry Condition :

Condensate Dissolved Oxygen (ppb) :
Concentration of 1st Constituent (ppm) : Morpholine
Concentration of 2nd Constituent (ppm) : None
Concentration of Ammonia (ppm) :
Concentration of Hydrazine (ppb) :
Hydrazine at SG (ppb) :
Hydrazine at MSR drain (ppb) :
Concentration of Boron (ppm) :
Boron Injection Rate (lbm/hr) :

1,800
4,500
0,000
2,000
180,000
108,000
216,000
6,500
0,000

Final Feed Water
Not Used
Condensate
Final Feed Water
Steam outlet
Steam Generator Blowdown

, Sampling at
, Sampling at
, Sampling at
, Sampling at
, Sampling at
, Sampling at

Chemistry Analysis Report

Chemistry Analysis Results :

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent	2nd Constituent	Morpholine	(ppm)	None	Ammonia	Hydrazine	Dis. Oxy	(ppb)	Vent Rate	Flow Rate	Temp	Quality	Enthalpy
			(ppm)	(ppm)												
Blowdown Line	8.24	6.08	3.79	0.00	0.48	477.66	0.000	0.000	n/a	0.1	778.6	518.0	0.0000	----	----	
Main Steam Line 1	9.43	6.08	3.77	0.00	0.48	477.66	0.000	0.000	n/a	13.02415	----	518.0	0.9999	----	----	
Main Steam Line 2	9.43	6.30	4.44	0.00	0.39	498.81	0.000	0.000	n/a	10.59295	340.4	429.1	0.9161	1136.9	1136.9	
Main Steam Line 3	9.58	6.44	4.94	0.00	0.37	200.44	0.000	0.000	n/a	9.375758	----	390.6	0.9900	----	----	
Main Steam Line 4	9.58	8.16	9.79	0.00	0.26	86.57	0.000	0.000	n/a	7.205196	5.0	162.6	0.7270	858.0	858.0	
HP Extraction Steam Line 1	9.43	6.52	5.24	0.00	0.33	747.30	0.000	0.000	n/a	0.92908	185.6	375.6	0.9540	1158.3	1158.3	
HP Extraction Steam Line 2	9.43	6.30	4.44	0.00	0.39	498.81	0.000	0.000	n/a	0.706255	340.4	429.1	0.9161	1136.9	1136.9	
Moisture Separator Drain Line 1	8.53	6.44	4.95	0.00	0.37	216.00	0.000	0.000	n/a	1.217196	221.9	390.6	0.0000	363.3	363.3	
Reheater Steam & Drain Line 1	9.44	6.25	4.49	0.00	1.77	109.76	0.000	0.000	n/a	0.795863	644.7	494.0	0.0201	495.3	495.3	
LP Extraction Steam Line 1	9.58	6.94	7.42	0.00	0.29	412.90	0.000	0.000	n/a	0.502856	65.0	298.0	0.9981	1177.4	1177.4	
LP Extraction Steam Line 2	9.58	7.37	9.25	0.00	0.26	309.02	0.000	0.000	n/a	0.475653	27.9	246.1	0.9557	1120.6	1120.6	
LP Extraction Steam Line 3	9.58	7.80	8.07	0.00	0.31	70.20	0.000	0.000	n/a	0.408297	10.7	196.5	0.6642	815.4	815.4	
LP Extraction Steam Line 4	9.58	8.16	9.79	0.00	0.26	86.57	0.000	0.000	n/a	0.667055	5.0	162.6	0.7270	858.0	858.0	
FWH Tube Side Line 1	9.41	6.48	4.50	0.00	1.84	180.00	0.000	0.000	0.00	13.12415	----	423.2	0.0000	----	----	
FWH Tube Side Line 2	9.54	6.71	4.44	0.00	2.01	209.79	0.000	0.000	0.00	9.475758	----	371.6	0.0000	----	----	

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent Morpholine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	9.41	6.60	4.50	0.00	1.84	180.00	0.000	0.00	13.12415	-----	392.1	0.0000	-----
FWH Tube Side Line 3	9.54	7.17	4.44	0.00	2.00	220.17	0.000	0.00	9.475758	-----	293.6	0.0000	-----
FWH Tube Side Line 4	9.54	7.55	4.44	0.00	2.00	223.14	0.000	0.00	9.475758	-----	243.8	0.0000	-----
FWH Tube Side Line 5	9.54	8.04	4.44	0.00	2.00	224.89	0.000	0.00	9.475758	-----	191.8	0.0000	-----
FWH Tube Side Line 6	9.54	8.44	4.44	0.00	2.00	225.61	0.000	0.00	9.475758	-----	155.7	0.0000	-----
FWH Shell Side Line 1	9.44	6.63	4.51	0.00	1.89	108.00	0.000	n/a	1.502118	-----	386.7	0.0000	-----
FWH Shell Side Line 2	9.44	6.69	4.51	0.00	1.89	108.00	0.000	n/a	0.92908	-----	374.1	0.0000	-----
FWH Shell Side Line 3	9.58	7.51	4.45	0.00	2.08	24.65	0.000	n/a	0.502856	-----	250.0	0.0000	-----
FWH Shell Side Line 4	9.58	7.99	4.45	0.00	2.08	24.65	0.000	n/a	0.978509	-----	196.9	0.0000	-----
FWH Shell Side Line 5	9.58	8.37	4.45	0.00	2.08	24.65	0.000	n/a	1.386806	-----	162.5	0.0000	-----
FWH Shell Side Line 6	9.58	9.20	4.45	0.00	2.08	24.65	0.000	n/a	2.053861	-----	100.3	0.0000	-----
Feed Pump Steam & Drain Line 1	9.58	8.90	17.89	0.00	0.17	184.47	0.000	n/a	0.116701	1.0	101.7	0.8734	974.8
Drain Tank Drain Line 1	9.10	6.36	4.65	0.00	1.38	144.03	0.000	0.00	3.648394	-----	445.4	0.0000	-----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Company: Entergy Nuclear Operations, Inc.
Plant: Indian Point
Unit: 3
DB Name: IPEC 3 (v4)

Report Date/Time: 21-Jul-2011 3:06 pm
Analysis Date/Time: 21-Jul-2011 2:22 pm
CHECWORKS SFA Version 3.0 SP-2 (build 200)

Chemistry Analysis Report

Water Treatment : Cycle 10B
Power Level : 100.00%
Plant Type : PWR

Chemistry Condition :

Condensate Dissolved Oxygen (ppb) :
Concentration of 1st Constituent (ppm) : ethanalamine
Concentration of 2nd Constituent (ppm) : None
Concentration of Ammonia (ppm) :
Concentration of Hydrazine (ppb) :
Hydrazine at SG (ppb) :
Hydrazine at MSR drain (ppb) :
Concentration of Boron (ppm) :
Boron Injection Rate (lbm/hr) :

2.500
2.000
0.000
2.000
225.000
135.000
270.000
4.900
0.000
, Sampling at Final Feed Water
, Sampling at Not Used
, Sampling at Condensate
, Sampling at Final Feed Water
, Sampling at Steam outlet
, Sampling at Steam Generator Blowdown

Chemistry Analysis Results :

Table with columns: HBD Item Description, (Note 1) Cold pH, Hot pH, 1st Constituent ethanalamine (ppm), 2nd Constituent None (ppm), Ammonia (ppm), Hydrazine (ppb), Dis. Oxy (ppb), Vent Rate (%), Flow Rate (Mlb/hr), Pres (psia), Temp (F), Quality, Enthalpy (Btu/lb)

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent ethanolamine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	9.52	6.62	2.00	0.00	1.84	225.00	0.000	0.00	13.12415	-----	392.1	0.0000	-----
FWH Tube Side Line 3	9.59	7.18	1.36	0.00	2.00	275.18	0.000	0.00	9.475758	-----	293.6	0.0000	-----
FWH Tube Side Line 4	9.59	7.56	1.36	0.00	2.00	278.93	0.000	0.00	9.475758	-----	243.8	0.0000	-----
FWH Tube Side Line 5	9.59	8.05	1.36	0.00	2.00	281.22	0.000	0.00	9.475758	-----	191.8	0.0000	-----
FWH Tube Side Line 6	9.59	8.46	1.36	0.00	2.00	282.18	0.000	0.00	9.475758	-----	155.7	0.0000	-----
FWH Shell Side Line 1	9.54	6.65	1.98	0.00	1.90	135.00	0.000	n/a	1.502118	-----	386.7	0.0000	-----
FWH Shell Side Line 2	9.54	6.71	1.98	0.00	1.90	135.00	0.000	n/a	0.92908	-----	374.1	0.0000	-----
FWH Shell Side Line 3	9.62	7.51	1.32	0.00	2.10	30.81	0.000	n/a	0.502856	-----	250.0	0.0000	-----
FWH Shell Side Line 4	9.62	8.01	1.32	0.00	2.10	30.81	0.000	n/a	0.978509	-----	196.9	0.0000	-----
FWH Shell Side Line 5	9.62	8.39	1.32	0.00	2.10	30.81	0.000	n/a	1.386806	-----	162.5	0.0000	-----
FWH Shell Side Line 6	9.62	9.24	1.32	0.00	2.10	30.81	0.000	n/a	2.053861	-----	100.3	0.0000	-----
Feed Pump Steam & Drain Line 1	9.62	9.27	10.09	0.00	0.13	230.59	0.000	n/a	0.116701	1.0	101.7	0.8734	974.8
Drain Tank Drain Line 1	9.36	6.44	3.67	0.00	1.38	180.04	0.000	0.00	3.648394	-----	445.4	0.0000	-----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4)

Report Date/Time: 21-Jul-2011 3:07 pm
 Analysis Date/Time: 21-Jul-2011 2:22 pm
 CHECWORKS SFA Version 3.0 SP-2 (build 200)

Chemistry Analysis Report

Water Treatment : Cycle 11
 Power Level : 100.00%
 Plant Type : PWR

Chemistry Condition :

Condensate Dissolved Oxygen (ppb) :
 Concentration of 1st Constituent (ppm) : ethanalamine
 Concentration of 2nd Constituent (ppm) : None
 Concentration of Ammonia (ppm):
 Concentration of Hydrazine (ppb) :
 Hydrazine at SG (ppb) :
 Hydrazine at MSR drain (ppb) :
 Concentration of Boron (ppm) :
 Boron Injection Rate (lbm/hr) :

3.300	Final Feed Water
2.400	Not Used
0.000	, Sampling at
5.285	, Sampling at
190.000	Final Feed Water
114.000	Final Feed Water
228.000	Stream outlet
0.000	, Sampling at
0.000	Not Used

Chemistry Analysis Results :

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent ethanalamine		2nd Constituent None		Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
			(ppm)	(ppm)	(ppm)	(ppb)									
Blowdown Line	9.74	6.32	6.09	0.00	0.00	1.33	504.20	0.000	n/a	0.1	778.6	518.0	0.0000	----	
Main Steam Line 1	9.86	6.32	6.08	0.00	0.00	1.33	504.20	0.000	n/a	13.02415	----	518.0	0.9999	----	
Main Steam Line 2	9.86	6.60	7.58	0.00	0.00	1.04	526.52	0.000	n/a	10.59295	340.4	429.1	0.9161	1136.9	
Main Steam Line 3	9.87	6.77	8.01	0.00	0.00	0.95	211.58	0.000	n/a	9.375758	----	390.6	0.9900	----	
Main Steam Line 4	9.87	8.43	5.67	0.00	0.00	0.60	91.38	0.000	n/a	7.205196	5.0	162.6	0.7270	858.0	
HP Extraction Steam Line 1	9.86	6.90	11.14	0.00	0.00	0.83	788.82	0.000	n/a	0.92908	185.6	375.6	0.9540	1158.3	
HP Extraction Steam Line 2	9.86	6.60	7.58	0.00	0.00	1.04	526.52	0.000	n/a	0.706255	340.4	429.1	0.9161	1136.9	
Moisture Separator Drain Line 1	9.77	6.77	8.33	0.00	0.00	0.95	228.00	0.000	n/a	1.217196	221.9	390.6	0.0000	363.3	
Reheater Steam & Drain Line 1	9.86	6.42	2.40	0.00	0.00	5.01	115.86	0.000	n/a	0.795863	644.7	494.0	0.0201	495.3	
LP Extraction Steam Line 1	9.87	7.45	17.49	0.00	0.00	0.68	435.84	0.000	n/a	0.502856	65.0	298.0	0.9981	1177.4	
LP Extraction Steam Line 2	9.87	7.84	17.38	0.00	0.00	0.59	326.19	0.000	n/a	0.475653	27.9	246.1	0.9557	1120.6	
LP Extraction Steam Line 3	9.87	8.03	4.57	0.00	0.00	0.76	74.10	0.000	n/a	0.408297	10.7	196.5	0.6642	815.4	
LP Extraction Steam Line 4	9.87	8.43	5.67	0.00	0.00	0.60	91.38	0.000	n/a	0.667055	5.0	162.6	0.7270	858.0	
FWH Tube Side Line 1	9.86	6.67	2.40	0.00	0.00	5.28	190.01	0.000	0.00	13.12415	----	423.2	0.0000	----	
FWH Tube Side Line 2	9.86	6.91	1.65	0.00	0.00	5.82	221.47	0.000	0.00	9.475758	----	371.6	0.0000	----	

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent ethanolamine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	9.86	6.81	2.40	0.00	5.28	190.01	0.000	0.00	13.12415	-----	392.1	0.0000	-----
FWH Tube Side Line 3	9.86	7.39	1.65	0.00	5.81	232.66	0.000	0.00	9.475758	-----	293.6	0.0000	-----
FWH Tube Side Line 4	9.86	7.78	1.65	0.00	5.81	236.13	0.000	0.00	9.475758	-----	243.8	0.0000	-----
FWH Tube Side Line 5	9.86	8.29	1.65	0.00	5.81	238.36	0.000	0.00	9.475758	-----	191.8	0.0000	-----
FWH Tube Side Line 6	9.86	8.70	1.65	0.00	5.81	239.34	0.000	0.00	9.475758	-----	155.7	0.0000	-----
FWH Shell Side Line 1	9.86	6.83	2.37	0.00	5.35	114.00	0.000	n/a	1.502118	-----	386.7	0.0000	-----
FWH Shell Side Line 2	9.86	6.90	2.37	0.00	5.35	114.00	0.000	n/a	0.92908	-----	374.1	0.0000	-----
FWH Shell Side Line 3	9.87	7.73	1.60	0.00	5.93	26.02	0.000	n/a	0.502856	-----	250.0	0.0000	-----
FWH Shell Side Line 4	9.87	8.23	1.60	0.00	5.93	26.02	0.000	n/a	0.978509	-----	196.9	0.0000	-----
FWH Shell Side Line 5	9.87	8.62	1.60	0.00	5.93	26.02	0.000	n/a	1.386806	-----	162.5	0.0000	-----
FWH Shell Side Line 6	9.87	9.48	1.60	0.00	5.93	26.02	0.000	n/a	2.053861	-----	100.3	0.0000	-----
Feed Pump Steam & Drain Line 1	9.87	9.42	12.22	0.00	0.33	194.72	0.000	n/a	0.116701	1.0	101.7	0.8734	974.8
Drain Tank Drain Line 1	9.83	6.58	4.36	0.00	3.88	152.03	0.000	0.00	3.648394	-----	445.4	0.0000	-----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4)

Report Date/Time: 21-Jul-2011 3:07 pm
 Analysis Date/Time: 21-Jul-2011 2:22 pm
 CHECWORKS SFA Version 3.0 SP-2 (build 200)

Chemistry Analysis Report

Water Treatment : Cycle 12
 Power Level : 100.00%
 Plant Type : PWR

Chemistry Condition :

Condensate Dissolved Oxygen (ppb) :
 Concentration of 1st Constituent (ppm) : ethanalamine
 Concentration of 2nd Constituent (ppm) : None
 Concentration of Ammonia (ppm):
 Concentration of Hydrazine (ppb) :
 Hydrazine at SG (ppb) :
 Hydrazine at MSR drain (ppb) :
 Concentration of Boron (ppm) :
 Boron Injection Rate (lbm/hr) :

0.690
 3.558
 0.000
 5.830
 104.657
 62.794
 125.589
 0.000
 0.000

, Sampling at Final Feed Water
 , Sampling at Not Used
 , Sampling at Final Feed Water
 , Sampling at Final Feed Water
 , Sampling at Stream outlet
 , Sampling at Not Used

Chemistry Analysis Results :

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent ethanalamine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
Blowdown Line	9.81	6.38	8.92	0.00	1.45	277.72	0.000	n/a	0.1	778.6	518.0	0.0000	----
Main Steam Line 1	9.89	6.38	8.91	0.00	1.45	277.72	0.000	n/a	13.02415	-----	518.0	0.9999	----
Main Steam Line 2	9.89	6.67	11.05	0.00	1.13	290.02	0.000	n/a	10.59295	340.4	429.1	0.9161	1136.9
Main Steam Line 3	9.90	6.84	11.69	0.00	1.03	116.54	0.000	n/a	9.375758	-----	390.6	0.9900	----
Main Steam Line 4	9.90	8.52	8.48	0.00	0.63	50.33	0.000	n/a	7.205196	5.0	162.6	0.7270	858.0
HP Extraction Steam Line 1	9.89	6.98	16.17	0.00	0.90	434.50	0.000	n/a	0.92908	185.6	375.6	0.9540	1158.3
HP Extraction Steam Line 2	9.89	6.67	11.05	0.00	1.13	290.02	0.000	n/a	0.706255	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line 1	9.85	6.85	12.14	0.00	1.02	125.59	0.000	n/a	1.217196	221.9	390.6	0.0000	363.3
Reheater Steam & Drain Line 1	9.89	6.46	3.56	0.00	5.50	63.82	0.000	n/a	0.795863	644.7	494.0	0.0201	495.3
LP Extraction Steam Line 1	9.90	7.53	25.35	0.00	0.73	240.07	0.000	n/a	0.502856	65.0	298.0	0.9981	1177.4
LP Extraction Steam Line 2	9.90	7.93	25.48	0.00	0.63	179.67	0.000	n/a	0.475653	27.9	246.1	0.9557	1120.6
LP Extraction Steam Line 3	9.90	8.11	6.84	0.00	0.80	40.82	0.000	n/a	0.408297	10.7	196.5	0.6642	815.4
LP Extraction Steam Line 4	9.90	8.52	8.48	0.00	0.63	50.33	0.000	n/a	0.667055	5.0	162.6	0.7270	858.0
FWH Tube Side Line 1	9.89	6.71	3.56	0.00	5.83	104.66	0.000	0.00	13.12415	-----	423.2	0.0000	----
FWH Tube Side Line 2	9.90	6.94	2.47	0.00	6.43	121.99	0.000	0.00	9.475758	-----	371.6	0.0000	----

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent ethanolamine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	9.89	6.84	3.56	0.00	5.83	104.66	0.000	0.00	13.12415	-----	392.1	0.0000	-----
FWH Tube Side Line 3	9.90	7.42	2.47	0.00	6.43	128.00	0.000	0.00	9.475758	-----	293.6	0.0000	-----
FWH Tube Side Line 4	9.90	7.82	2.47	0.00	6.42	129.64	0.000	0.00	9.475758	-----	243.8	0.0000	-----
FWH Tube Side Line 5	9.90	8.32	2.47	0.00	6.42	130.54	0.000	0.00	9.475758	-----	191.8	0.0000	-----
FWH Tube Side Line 6	9.90	8.73	2.47	0.00	6.42	130.89	0.000	0.00	9.475758	-----	155.7	0.0000	-----
FWH Shell Side Line 1	9.89	6.87	3.52	0.00	5.89	62.79	0.000	n/a	1.502118	-----	386.7	0.0000	-----
FWH Shell Side Line 2	9.89	6.93	3.52	0.00	5.89	62.79	0.000	n/a	0.92908	-----	374.1	0.0000	-----
FWH Shell Side Line 3	9.90	7.77	2.40	0.00	6.52	14.33	0.000	n/a	0.502856	-----	250.0	0.0000	-----
FWH Shell Side Line 4	9.90	8.27	2.40	0.00	6.52	14.33	0.000	n/a	0.978509	-----	196.9	0.0000	-----
FWH Shell Side Line 5	9.90	8.65	2.40	0.00	6.52	14.33	0.000	n/a	1.386806	-----	162.5	0.0000	-----
FWH Shell Side Line 6	9.90	9.51	2.40	0.00	6.52	14.33	0.000	n/a	2.053861	-----	100.3	0.0000	-----
Feed Pump Steam & Drain Line 1	9.90	9.51	18.28	0.00	0.35	107.26	0.000	n/a	0.116701	1.0	101.7	0.8734	974.8
Drain Tank Drain Line 1	9.88	6.62	6.39	0.00	4.26	83.74	0.000	0.00	3.648394	-----	445.4	0.0000	-----

Notes:

1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.

2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4)

Report Date/Time: 21-Jul-2011 3:07 pm
 Analysis Date/Time: 21-Jul-2011 2:22 pm
 CHECWORKS SFA Version 3.0 SP-2 (build 200)

Chemistry Analysis Report

Water Treatment : Cycle 12
 Power Level : 101.12%
 Plant Type : PWR

Chemistry Condition :
 Condensate Dissolved Oxygen (ppb) :
 Concentration of 1st Constituent (ppm) : ethanalamine
 Concentration of 2nd Constituent (ppm) : None
 Concentration of Ammonia (ppm) :
 Concentration of Hydrazine (ppb) :
 Hydrazine at SG (ppb) :
 Hydrazine at MSR drain (ppb) :
 Concentration of Boron (ppm) :
 Boron Injection Rate (lbm/hr) :

0.690	Final Feed Water
3.558	Not Used
0.000	Sampling at
5.830	Sampling at
104.657	Final Feed Water
62.794	Final Feed Water
125.589	Stream outlet
0.000	Sampling at
0.000	Not Used

Chemistry Analysis Results :

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent ethanalamine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
Blowdown Line	9.81	6.39	9.07	0.00	1.43	281.15	0.000	n/a	0.057785	774.4	514.5	0.0000	----
Main Steam Line 1	9.89	6.39	9.06	0.00	1.43	281.15	0.000	n/a	13.18687	----	514.5	0.9992	----
Main Steam Line 2	9.89	6.65	10.86	0.00	1.14	285.48	0.000	n/a	10.545	361.4	434.8	0.9172	1138.6
Main Steam Line 3	9.90	6.91	13.19	0.00	0.97	115.97	0.000	n/a	9.622492	----	381.7	0.9900	----
Main Steam Line 4	9.90	8.52	10.75	0.00	0.57	56.48	0.000	n/a	7.266111	5.6	166.7	0.7738	907.0
HP Extraction Steam Line 1	9.89	6.93	14.94	0.00	0.94	389.73	0.000	n/a	0.935949	200.9	382.2	0.9404	1148.2
HP Extraction Steam Line 2	9.89	6.65	10.86	0.00	1.14	285.48	0.000	n/a	0.751563	361.4	434.8	0.9172	1138.6
Moisture Separator Drain Line 1	9.88	6.92	13.73	0.00	0.96	125.67	0.000	n/a	0.922509	199.8	381.7	0.0007	355.9
Reheater Steam & Drain Line 1	9.89	6.46	3.63	0.00	5.13	64.95	0.000	n/a	0.954357	623.3	490.3	0.0414	506.5
LP Extraction Steam Line 1	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	0.000	n/a	0.53128	74.5	307.2	1.0000	1197.4
LP Extraction Steam Line 2	9.90	7.79	17.80	0.00	0.67	103.84	0.000	n/a	0.447417	31.3	252.8	0.9055	1075.7
LP Extraction Steam Line 3	9.90	8.09	9.54	0.00	0.70	50.65	0.000	n/a	0.458881	12.8	205.1	0.7520	906.1
LP Extraction Steam Line 4	9.90	8.52	10.75	0.00	0.57	56.48	0.000	n/a	0.771656	5.6	166.7	0.7738	907.0
FWH Tube Side Line 1	9.89	6.70	3.56	0.00	5.83	104.66	0.000	0.00	13.24466	----	425.0	0.0000	----
FWH Tube Side Line 2	9.89	6.93	2.60	0.00	6.28	123.14	0.000	0.00	9.680277	----	374.7	0.0000	----

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent ethanolamine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	9.89	6.92	3.56	0.00	5.83	104.66	0.000	0.00	13.24466	-----	376.3	0.0000	-----
FWH Tube Side Line 3	9.89	7.40	2.60	0.00	6.27	129.34	0.000	0.00	9.680277	-----	296.6	0.0000	-----
FWH Tube Side Line 4	9.89	7.82	2.60	0.00	6.27	131.12	0.000	0.00	9.680277	-----	243.0	0.0000	-----
FWH Tube Side Line 5	9.89	8.27	2.60	0.00	6.27	131.92	0.000	0.00	9.680277	-----	196.4	0.0000	-----
FWH Tube Side Line 6	9.89	8.74	2.60	0.00	6.27	132.33	0.000	0.00	9.680277	-----	155.3	0.0000	-----
FWH Shell Side Line 1	9.89	6.85	3.53	0.00	5.87	62.79	0.000	n/a	1.70592	-----	390.3	0.0000	-----
FWH Shell Side Line 2	9.89	6.92	3.53	0.00	5.87	62.79	0.000	n/a	0.935949	-----	376.9	0.0000	-----
FWH Shell Side Line 3	9.90	7.76	2.56	0.00	6.34	13.52	0.000	n/a	0.53128	-----	250.6	0.0000	-----
FWH Shell Side Line 4	9.90	8.21	2.56	0.00	6.34	13.52	0.000	n/a	0.978697	-----	202.2	0.0000	-----
FWH Shell Side Line 5	9.90	8.64	2.56	0.00	6.34	13.52	0.000	n/a	1.437578	-----	163.7	0.0000	-----
FWH Shell Side Line 6	9.90	9.69	2.56	0.00	6.34	13.52	0.000	n/a	2.209234	-----	88.7	0.0000	-----
Feed Pump Steam & Drain Line 1	9.90	9.53	19.71	0.00	0.34	102.26	0.000	n/a	0.147147	1.0	101.7	0.8749	976.3
Drain Tank Drain Line 1	9.89	6.90	6.17	0.00	4.60	79.05	0.000	0.00	3.564378	-----	380.8	0.0000	-----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4)

Report Date/Time: 21-Jul-2011 3:07 pm
 Analysis Date/Time: 21-Jul-2011 2:22 pm

CHECWORKS SFA Version 3.0 SP-2 (build 200)

Water Treatment : Cycle 13
 Power Level : 101.12%
 Plant Type : PWR

Chemistry Condition :

Condensate Dissolved Oxygen (ppb) :
 Concentration of 1st Constituent (ppm) : ethanalamine
 Concentration of 2nd Constituent (ppm) : None
 Concentration of Ammonia (ppm):
 Concentration of Hydrazine (ppb) :
 Hydrazine at SG (ppb) :
 Hydrazine at MSR drain (ppb) :
 Concentration of Boron (ppm) :
 Boron Injection Rate (lbm/hr) :

3,340
 3,423
 0,000
 4,886
 98,400
 58,100
 116,100
 0,000
 0,000

, Sampling at Final Feed Water
 , Sampling at Not Used
 , Sampling at Final Feed Water
 , Sampling at Final Feed Water
 , Sampling at Steam outlet
 , Sampling at Not Used

Chemistry Analysis Report

Chemistry Analysis Results :

HBD Item Description	(Note 1)		Hot pH		1st Constituent ethanalamine		2nd Constituent None		Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
	Cold pH				(ppm)	(ppm)	(ppb)	(ppb)									
Blowdown Line	9.79		6.38		8.74	0.00	0.00	0.00	1.20	260.13	0.000	n/a	0.057785	774.4	514.5	0.0000	----
Main Steam Line 1	9.86		6.38		8.74	0.00	0.00	0.00	1.20	260.13	0.000	n/a	13.18687	----	514.5	0.9992	----
Main Steam Line 2	9.86		6.64		10.47	0.00	0.00	0.00	0.96	264.14	0.000	n/a	10.545	361.4	434.8	0.9172	1138.6
Main Steam Line 3	9.86		6.90		12.72	0.00	0.00	0.00	0.82	107.21	0.000	n/a	9.622492	----	381.7	0.9900	----
Main Steam Line 4	9.86		8.51		10.33	0.00	0.00	0.00	0.48	52.21	0.000	n/a	7.266111	5.6	166.7	0.7738	907.0
HP Extraction Steam Line 1	9.86		6.92		14.42	0.00	0.00	0.00	0.79	360.60	0.000	n/a	0.935949	200.9	382.2	0.9404	1148.2
HP Extraction Steam Line 2	9.86		6.64		10.47	0.00	0.00	0.00	0.96	264.14	0.000	n/a	0.751563	361.4	434.8	0.9172	1138.6
Moisture Separator Drain Line 1	9.86		6.90		13.25	0.00	0.00	0.00	0.81	116.18	0.000	n/a	0.922509	199.8	381.7	0.0007	355.9
Reheater Steam & Drain Line 1	9.86		6.43		3.49	0.00	0.00	0.00	4.30	60.09	0.000	n/a	0.954357	623.3	490.3	0.0414	506.5
LP Extraction Steam Line 1	Note 2		Note 2		Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	0.000	n/a	0.53128	74.5	307.2	1.0000	1197.4
LP Extraction Steam Line 2	9.86		7.78		17.14	0.00	0.00	0.00	0.57	96.00	0.000	n/a	0.447417	31.3	252.8	0.9055	1075.7
LP Extraction Steam Line 3	9.86		8.07		9.17	0.00	0.00	0.00	0.59	46.82	0.000	n/a	0.458881	12.8	205.1	0.7520	906.1
LP Extraction Steam Line 4	9.86		8.51		10.33	0.00	0.00	0.00	0.48	52.21	0.000	n/a	0.771656	5.6	166.7	0.7738	907.0
FWH Tube Side Line 1	9.86		6.67		3.42	0.00	0.00	0.00	4.89	98.41	0.000	0.00	13.24466	----	425.0	0.0000	----
FWH Tube Side Line 2	9.86		6.89		2.49	0.00	0.00	0.00	5.26	116.36	0.000	0.00	9.680277	----	374.7	0.0000	----

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent ethanolamine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	9.86	6.89	3.42	0.00	4.89	98.41	0.000	0.00	13.24466	-----	376.3	0.0000	-----
FWH Tube Side Line 3	9.86	7.36	2.49	0.00	5.26	122.84	0.000	0.00	9.680277	-----	296.6	0.0000	-----
FWH Tube Side Line 4	9.86	7.79	2.49	0.00	5.26	125.23	0.000	0.00	9.680277	-----	243.0	0.0000	-----
FWH Tube Side Line 5	9.86	8.23	2.49	0.00	5.26	126.54	0.000	0.00	9.680277	-----	196.4	0.0000	-----
FWH Tube Side Line 6	9.86	8.70	2.49	0.00	5.26	127.28	0.000	0.00	9.680277	-----	155.3	0.0000	-----
FWH Shell Side Line 1	9.86	6.82	3.40	0.00	4.92	58.10	0.000	n/a	1.70592	-----	390.3	0.0000	-----
FWH Shell Side Line 2	9.86	6.89	3.40	0.00	4.92	58.10	0.000	n/a	0.935949	-----	376.9	0.0000	-----
FWH Shell Side Line 3	9.86	7.72	2.46	0.00	5.32	12.50	0.000	n/a	0.53128	-----	250.6	0.0000	-----
FWH Shell Side Line 4	9.86	8.17	2.46	0.00	5.32	12.50	0.000	n/a	0.978697	-----	202.2	0.0000	-----
FWH Shell Side Line 5	9.86	8.60	2.46	0.00	5.32	12.50	0.000	n/a	1.437578	-----	163.7	0.0000	-----
FWH Shell Side Line 6	9.86	9.66	2.46	0.00	5.32	12.50	0.000	n/a	2.209234	-----	88.7	0.0000	-----
Feed Pump Steam & Drain Line 1	9.86	9.52	18.94	0.00	0.29	94.54	0.000	n/a	0.147147	1.0	101.7	0.8749	976.3
Drain Tank Drain Line 1	9.86	6.88	5.95	0.00	3.86	73.11	0.000	0.00	3.564378	-----	380.8	0.0000	-----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4)

Report Date/Time: 21-Jul-2011 3:08 pm
 Analysis Date/Time: 21-Jul-2011 2:22 pm
 CHECWORKS SFA Version: 3.0 SP-2 (build 200)

Water Treatment : Cycle 14
 Power Level : 104.95%
 Plant Type : PWR

Chemistry Condition :

Condensate Dissolved Oxygen (ppb) :
 Concentration of 1st Constituent (ppm) : ethanolamine
 Concentration of 2nd Constituent (ppm) : None
 Concentration of Ammonia (ppm):
 Concentration of Hydrazine (ppb) :
 Hydrazine at SG (ppb) :
 Hydrazine at MSR drain (ppb) :
 Concentration of Boron (ppm) :
 Boron Injection Rate (lbm/hr) :

2.987
 4.808
 0.000
 3.600
 55.730
 33.440
 66.880
 0.000
 0.000

, Sampling at
 , Sampling at
 , Sampling at
 , Sampling at
 , Sampling at
 , Sampling at

Final Feed Water
 Not Used
 Final Feed Water
 Final Feed Water
 Stream outlet
 Not Used

Chemistry Analysis Report

Chemistry Analysis Results :

HBD Item Description	(Note 1) Cold pH		Hot pH	1st Constituent ethanolamine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
Blowdown Line	9.85		6.43	12.27	0.00	0.87	151.06	0.000	n/a	0.057785	760.4	512.4	0.0000	----
Main Steam Line 1	9.83		6.43	12.26	0.00	0.87	151.06	0.000	n/a	13.7838	----	512.4	0.9992	----
Main Steam Line 2	9.83		6.67	14.71	0.00	0.71	160.22	0.000	n/a	11.07654	388.6	441.8	0.9371	1155.1
Main Steam Line 3	9.82		6.93	16.82	0.00	0.61	61.87	0.000	n/a	9.978813	----	384.8	0.9900	----
Main Steam Line 4	9.82		8.56	14.00	0.00	0.35	30.33	0.000	n/a	7.530174	5.8	168.3	0.7711	905.2
HP Extraction Steam Line 1	9.83		6.97	19.51	0.00	0.58	202.87	0.000	n/a	0.984482	208.3	385.2	0.9386	1147.3
HP Extraction Steam Line 2	9.83		6.67	14.71	0.00	0.71	160.22	0.000	n/a	0.852604	388.6	441.8	0.9371	1155.1
Moisture Separator Drain Line 1	9.92		6.94	17.48	0.00	0.60	66.89	0.000	n/a	1.097732	207.2	384.8	0.0002	358.7
Reheater Steam & Drain Line 1	9.83		6.42	4.90	0.00	3.18	34.53	0.000	n/a	0.870169	620.3	489.8	0.0395	504.5
LP Extraction Steam Line 1	Note 2		Note 2	Note 2	Note 2	Note 2	Note 2	0.000	n/a	0.548842	77.3	309.6	1.0000	1197.6
LP Extraction Steam Line 2	9.82		7.83	23.11	0.00	0.42	56.14	0.000	n/a	0.472533	32.4	254.8	0.9054	1076.5
LP Extraction Steam Line 3	9.82		8.12	12.50	0.00	0.43	27.37	0.000	n/a	0.475753	13.3	206.9	0.7508	905.9
LP Extraction Steam Line 4	9.82		8.56	14.00	0.00	0.35	30.33	0.000	n/a	0.790585	5.8	168.3	0.7711	905.2
FWH Tube Side Line 1	9.83		6.63	4.81	0.00	3.60	55.75	0.000	0.00	13.84159	----	430.4	0.0000	----
FWH Tube Side Line 2	9.82		6.85	3.43	0.00	3.92	66.30	0.000	0.00	10.0366	----	377.3	0.0000	----

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent ethanolamine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	9.83	6.86	4.81	0.00	3.60	55.75	0.000	0.00	13.84159	-----	378.9	0.0000	-----
FWH Tube Side Line 3	9.82	7.32	3.43	0.00	3.92	70.60	0.000	0.00	10.0366	-----	298.3	0.0000	-----
FWH Tube Side Line 4	9.82	7.73	3.43	0.00	3.92	72.22	0.000	0.00	10.0366	-----	245.2	0.0000	-----
FWH Tube Side Line 5	9.82	8.18	3.43	0.00	3.92	73.16	0.000	0.00	10.0366	-----	198.0	0.0000	-----
FWH Tube Side Line 6	9.82	8.64	3.43	0.00	3.92	73.65	0.000	0.00	10.0366	-----	156.9	0.0000	-----
FWH Shell Side Line 1	9.83	6.78	4.78	0.00	3.62	33.44	0.000	n/a	1.722773	-----	394.2	0.0000	-----
FWH Shell Side Line 2	9.83	6.85	4.78	0.00	3.62	33.44	0.000	n/a	0.984482	-----	379.8	0.0000	-----
FWH Shell Side Line 3	9.82	7.66	3.38	0.00	3.96	7.35	0.000	n/a	0.548842	-----	253.0	0.0000	-----
FWH Shell Side Line 4	9.82	8.12	3.38	0.00	3.96	7.35	0.000	n/a	1.021375	-----	204.1	0.0000	-----
FWH Shell Side Line 5	9.82	8.54	3.38	0.00	3.96	7.35	0.000	n/a	1.497128	-----	165.7	0.0000	-----
FWH Shell Side Line 6	9.82	9.57	3.38	0.00	3.96	7.35	0.000	n/a	2.287713	-----	91.8	0.0000	-----
Feed Pump Steam & Drain Line 1	9.82	9.59	25.73	0.00	0.21	54.98	0.000	n/a	0.160926	1.0	101.7	0.8734	974.8
Drain Tank Drain Line 1	9.86	6.87	8.44	0.00	2.75	43.09	0.000	0.00	3.804987	-----	383.2	0.0000	-----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4)

Report Date/Time: 21-Jul-2011 3:09 pm
 Analysis Date/Time: 21-Jul-2011 2:22 pm
 CHECWORKS SFA Version 3.0 SP-2 (build 200)

Chemistry Analysis Report

Water Treatment : Cycle 15
 Power Level : 104.95%
 Plant Type : PWR

Chemistry Condition :

- Condensate Dissolved Oxygen (ppb) : ethanalamine
- Concentration of 1st Constituent (ppm) : None
- Concentration of 2nd Constituent (ppm) : None
- Concentration of Ammonia (ppm):
- Concentration of Hydrazine (ppb) :
- Hydrazine at SG (ppb) :
- Hydrazine at MSR drain (ppb) :
- Concentration of Boron (ppm) :
- Boron Injection Rate (lbm/hr) :

- 2.820 , Sampling at Final Feed Water
- 4.360 , Sampling at Not Used
- 0.000 , Sampling at Final Feed Water
- 3.620 , Sampling at Final Feed Water
- 61.000 , Sampling at Final Feed Water
- 36.600 , Sampling at Steam outlet
- 73.200
- 0.000 , Sampling at Not Used
- 0.000

Chemistry Analysis Results :

HBD Item Description	Cold pH (Note 1)	Hot pH	1st Constituent ethanalamine		2nd Constituent None		Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
			(ppm)	(ppm)	(ppm)	(ppb)									
Blowdown Line	9.83	6.42	11.16	0.00	0.00	0.88	165.33	0.000	n/a	0.057785	760.4	512.4	0.0000	----	----
Main Steam Line 1	9.82	6.42	11.15	0.00	0.00	0.88	165.33	0.000	n/a	13.7838	----	512.4	0.9992	----	----
Main Steam Line 2	9.82	6.65	13.39	0.00	0.00	0.71	175.36	0.000	n/a	11.07654	388.6	441.8	0.9371	1155.1	----
Main Steam Line 3	9.81	6.91	15.31	0.00	0.00	0.61	67.71	0.000	n/a	9.978813	----	384.8	0.9900	----	----
Main Steam Line 4	9.81	8.53	12.68	0.00	0.00	0.36	33.20	0.000	n/a	7.530174	5.8	168.3	0.7711	905.2	----
HP Extraction Steam Line 1	9.82	6.94	17.77	0.00	0.00	0.58	222.05	0.000	n/a	0.984482	208.3	385.2	0.9386	1147.3	----
HP Extraction Steam Line 2	9.82	6.65	13.39	0.00	0.00	0.71	175.36	0.000	n/a	0.852604	388.6	441.8	0.9371	1155.1	----
Moisture Separator Drain Line 1	9.90	6.92	15.92	0.00	0.00	0.61	73.21	0.000	n/a	1.097732	207.2	384.8	0.0002	358.7	----
Reheater Steam & Drain Line 1	9.82	6.41	4.45	0.00	0.00	3.20	37.79	0.000	n/a	0.870169	620.3	489.8	0.0395	504.5	----
LP Extraction Steam Line 1	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	n/a	0.548842	77.3	309.6	1.0000	1197.6	----
LP Extraction Steam Line 2	9.81	7.81	20.99	0.00	0.00	0.42	61.44	0.000	n/a	0.472533	32.4	254.8	0.9054	1076.5	----
LP Extraction Steam Line 3	9.81	8.10	11.32	0.00	0.00	0.44	29.96	0.000	n/a	0.475753	13.3	206.9	0.7508	905.9	----
LP Extraction Steam Line 4	9.81	8.53	12.68	0.00	0.00	0.36	33.20	0.000	n/a	0.790585	5.8	168.3	0.7711	905.2	----
FWH Tube Side Line 1	9.82	6.62	4.36	0.00	0.00	3.62	61.01	0.000	0.00	13.84159	----	430.4	0.0000	----	----
FWH Tube Side Line 2	9.81	6.84	3.10	0.00	0.00	3.94	72.51	0.000	0.00	10.0366	----	377.3	0.0000	----	----

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent ethanolamine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	9.82	6.85	4.36	0.00	3.62	61.01	0.000	0.00	13.84159	----	378.9	0.0000	----
FWH Tube Side Line 3	9.81	7.31	3.10	0.00	3.94	77.06	0.000	0.00	10.0366	----	298.3	0.0000	----
FWH Tube Side Line 4	9.81	7.72	3.10	0.00	3.94	78.73	0.000	0.00	10.0366	----	245.2	0.0000	----
FWH Tube Side Line 5	9.81	8.17	3.10	0.00	3.94	79.70	0.000	0.00	10.0366	----	198.0	0.0000	----
FWH Tube Side Line 6	9.81	8.64	3.10	0.00	3.94	80.20	0.000	0.00	10.0366	----	156.9	0.0000	----
FWH Shell Side Line 1	9.82	6.77	4.33	0.00	3.64	36.60	0.000	n/a	1.722773	----	394.2	0.0000	----
FWH Shell Side Line 2	9.82	6.84	4.33	0.00	3.64	36.60	0.000	n/a	0.984482	----	379.8	0.0000	----
FWH Shell Side Line 3	9.81	7.66	3.06	0.00	3.98	8.04	0.000	n/a	0.548842	----	253.0	0.0000	----
FWH Shell Side Line 4	9.81	8.11	3.06	0.00	3.98	8.04	0.000	n/a	1.021375	----	204.1	0.0000	----
FWH Shell Side Line 5	9.81	8.53	3.06	0.00	3.98	8.04	0.000	n/a	1.497128	----	165.7	0.0000	----
FWH Shell Side Line 6	9.81	9.56	3.06	0.00	3.98	8.04	0.000	n/a	2.287713	----	91.8	0.0000	----
Feed Pump Steam & Drain Line 1	9.81	9.57	23.29	0.00	0.21	60.17	0.000	n/a	0.160926	1.0	101.7	0.8734	974.8
Drain Tank Drain Line 1	9.85	6.86	7.67	0.00	2.77	47.16	0.000	0.00	3.804987	----	383.2	0.0000	----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4)

Report Date/Time: 21-Jul-2011 3:08 pm
 Analysis Date/Time: 21-Jul-2011 2:22 pm
 CHECWORKS SFA Version 3.0 SP-2 (build 200)

Water Treatment : Cycle 16
 Power Level : 104.95%
 Plant Type : PWR

Chemistry Condition :

Condensate Dissolved Oxygen (ppb) : ethanalamine
 Concentration of 1st Constituent (ppm) : None
 Concentration of 2nd Constituent (ppm) : None
 Concentration of Ammonia (ppm) :
 Concentration of Hydrazine (ppb) :
 Hydrazine at SG (ppb) :
 Hydrazine at MSR drain (ppb) :
 Concentration of Boron (ppm) :
 Boron Injection Rate (lbm/hr) :

2.860 Final Feed Water
 4.890 Not Used
 0.000 Final Feed Water
 4.386 Final Feed Water
 69.000 Final Feed Water
 41.000 Steam outlet
 83.000
 0.000 Not Used
 0.000

Chemistry Analysis Report

Chemistry Analysis Results :

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent ethanalamine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
Blowdown Line	9.86	6.44	12.46	0.00	1.06	185.21	0.000	n/a	0.057785	760.4	512.4	0.0000	----
Main Steam Line 1	9.86	6.44	12.45	0.00	1.06	185.21	0.000	n/a	13.7838	-----	512.4	0.9992	----
Main Steam Line 2	9.86	6.68	14.94	0.00	0.86	196.44	0.000	n/a	11.07654	388.6	441.8	0.9371	1155.1
Main Steam Line 3	9.85	6.94	17.09	0.00	0.74	76.78	0.000	n/a	9.978813	-----	384.8	0.9900	----
Main Steam Line 4	9.85	8.56	14.25	0.00	0.43	37.64	0.000	n/a	7.530174	5.8	168.3	0.7711	905.2
HP Extraction Steam Line 1	9.86	6.97	19.81	0.00	0.71	248.74	0.000	n/a	0.984482	208.3	385.2	0.9386	1147.3
HP Extraction Steam Line 2	9.86	6.68	14.94	0.00	0.86	196.44	0.000	n/a	0.852604	388.6	441.8	0.9371	1155.1
Moisture Separator Drain Line 1	9.93	6.95	17.76	0.00	0.73	83.01	0.000	n/a	1.097732	207.2	384.8	0.0002	358.7
Reheater Steam & Drain Line 1	9.86	6.45	4.99	0.00	3.88	42.34	0.000	n/a	0.870169	620.3	489.8	0.0395	504.5
LP Extraction Steam Line 1	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	0.000	n/a	0.548842	77.3	309.6	1.0000	1197.6
LP Extraction Steam Line 2	9.85	7.84	23.50	0.00	0.51	69.67	0.000	n/a	0.472533	32.4	254.8	0.9054	1076.5
LP Extraction Steam Line 3	9.85	8.13	12.72	0.00	0.52	33.97	0.000	n/a	0.475753	13.3	206.9	0.7508	905.9
LP Extraction Steam Line 4	9.85	8.56	14.25	0.00	0.43	37.64	0.000	n/a	0.790585	5.8	168.3	0.7711	905.2
FWH Tube Side Line 1	9.86	6.66	4.89	0.00	4.39	69.01	0.000	0.00	13.84159	-----	430.4	0.0000	----
FWH Tube Side Line 2	9.85	6.88	3.49	0.00	4.77	82.05	0.000	0.00	10.0366	-----	377.3	0.0000	----

HBD Item Description	(Note 1) Cold pH	Hot pH	1st Constituent ethanolamine (ppm)	2nd Constituent None (ppm)	Ammonia (ppm)	Hydrazine (ppb)	Dis. Oxy (ppb)	Vent Rate (%)	Flow Rate (Mlb/hr)	Pres (psia)	Temp (F)	Quality	Enthalpy (Btu/lb)
FWH Tube Side Line 2 (MIXED)	9.86	6.88	4.89	0.00	4.39	69.01	0.000	0.00	13.84159	-----	378.9	0.0000	-----
FWH Tube Side Line 3	9.85	7.35	3.49	0.00	4.77	87.08	0.000	0.00	10.0366	-----	298.3	0.0000	-----
FWH Tube Side Line 4	9.85	7.77	3.49	0.00	4.77	88.90	0.000	0.00	10.0366	-----	245.2	0.0000	-----
FWH Tube Side Line 5	9.85	8.21	3.49	0.00	4.77	89.94	0.000	0.00	10.0366	-----	198.0	0.0000	-----
FWH Tube Side Line 6	9.85	8.68	3.49	0.00	4.77	90.50	0.000	0.00	10.0366	-----	156.9	0.0000	-----
FWH Shell Side Line 1	9.86	6.81	4.86	0.00	4.41	41.00	0.000	n/a	1.722773	-----	394.2	0.0000	-----
FWH Shell Side Line 2	9.86	6.88	4.86	0.00	4.41	41.00	0.000	n/a	0.984482	-----	379.8	0.0000	-----
FWH Shell Side Line 3	9.85	7.70	3.44	0.00	4.82	9.12	0.000	n/a	0.548842	-----	253.0	0.0000	-----
FWH Shell Side Line 4	9.85	8.15	3.44	0.00	4.82	9.12	0.000	n/a	1.021375	-----	204.1	0.0000	-----
FWH Shell Side Line 5	9.85	8.57	3.44	0.00	4.82	9.12	0.000	n/a	1.497128	-----	165.7	0.0000	-----
FWH Shell Side Line 6	9.85	9.60	3.44	0.00	4.82	9.12	0.000	n/a	2.287713	-----	91.8	0.0000	-----
Feed Pump Steam & Drain Line 1	9.85	9.60	26.18	0.00	0.25	68.23	0.000	n/a	0.160926	1.0	101.7	0.8734	974.8
Drain Tank Drain Line 1	9.88	6.89	8.58	0.00	3.35	53.12	0.000	0.00	3.804987	-----	383.2	0.0000	-----

Notes:

- 1: For two-phase lines, the cold pH reported is for the mixture of steam and water, and the amine concentrations and hot pH are for the water phase only.
- 2: For Superheated steam, cold pH and amine concentration are not reported since there is no water phase.

Appendix H

Pass 1 Wear Rate Analysis Reports

Wear Rate Analysis Run	Wear Rate by Average Wear Rate	Wear Rate by Flow Order	Service Life by Remaining Life	Service Life by Flow Order
CD: HDR TO BFP	H-3	H-130	H-257	H-386
CD: HDR TO HTR 33	H-6	H-133	H-260	H-389
CD: HTR 31 TO HTR 32	H-8	H-135	H-262	H-391
CD: HTR 32 TO 33 HDR	H-10	H-137	H-264	H-393
CD: HTR 32 TO HDR	H-12	H-139	H-266	H-395
CD: HTR 33 TO HTR 34	H-14	H-141	H-268	H-397
CD: HTR 34 TO HTR 35	H-16	H-143	H-270	H-399
CD: HTR 35 TO BFP HDR	H-18	H-145	H-272	H-401
CD: HTR 35 TO HDR	H-19	H-146	H-273	H-402
CD: S/G BLWDN HX IN	H-21	H-148	H-275	H-404
CD: S/G BLWDN HX OUT	H-23	H-150	H-277	H-406
ES: BFPT DRN TO COND	H-24	H-151	H-279	H-408
ES: HDR TO 35 HTRS	H-26	H-153	H-281	H-410
ES: HDR TO 36 HTRS	H-27	H-154	H-283	H-412
ES: HTR 36 HEADER	H-29	H-156	H-285	H-414
ES: LP TO 31 HEATERS	H-31	H-158	H-287	H-416
ES: LP TO 32 HEATERS	H-34	H-161	H-290	H-419
ES: LP TO 33 HEATERS	H-36	H-163	H-292	H-421
ES: PRESEP TO 35 HDR	H-43	H-170	H-299	H-428
FW: 36 HTR TO SG HDR	H-47	H-174	H-303	H-432
FW: BFP TO 36 HTR	H-49	H-176	H-305	H-434
FW: FW RECIRC	H-54	H-181	H-310	H-439
FW: SG HEADERS	H-57	H-184	H-313	H-442
HD: HD PMP TO BFP HDR	H-65	H-192	H-320	H-449
HD: HTR 31 TO COND	H-67	H-194	H-322	H-451
HD: HTR 32 TO HTR 31	H-70	H-197	H-325	H-454
HD: HTR 33 TO HTR 32	H-73	H-200	H-329	H-458

Wear Rate Analysis Run	Wear Rate by Average Wear Rate	Wear Rate by Flow Order	Service Life by Remaining Life	Service Life by Flow Order
HD: HTR 34 TO HTR 33	H-79	H-206	H-334	H-463
HD: HTR 35 TO HDT	H-83	H-210	H-338	H-467
HD: HTR 36 TO HDT	H-85	H-212	H-340	H-469
HD: HTR DN TO PUMPS	H-87	H-214	H-342	H-471
MSD: MS 31 TO MSDT	H-88	H-215	H-343	H-472
MSD: MS 32 TO MSDT	H-90	H-217	H-346	H-475
MSD: MS 33 TO MSDT	H-92	H-219	H-349	H-478
MSD: MSDT 31 TO HDT	H-95	H-222	H-352	H-481
MSD: MSDT 32 TO HDT	H-98	H-225	H-355	H-484
MSD: MSDT 33 TO HDT	H-101	H-228	H-358	H-487
PD: PRESEPRTR DRAINS	H-104	H-231	H-361	H-490
RHD: RH 31 TO HDR	H-108	H-235	H-365	H-494
RHD: RH 32A TO HDR	H-113	H-240	H-370	H-499
RHD: RH 32B TO HDR	H-116	H-243	H-373	H-502
RHD: RH 33 TO HDR	H-119	H-246	H-376	H-505
RHD: RHD HDR TO HTRS	H-124	H-251	H-380	H-509

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:15:02AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HDR TO BFP
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
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====>Grouped by Line: CD-06.1 FWH 35 OUT HDR

CD-06.1-03T	14	7.457	4.682	375.7	15.783	0.0	30.000	6.903	0.000	69.01	ARD
CD-06.1-01T (D/S)	12	5.538	3.477	375.7	15.688	0.0	30.000	6.903	0.000	69.01	ARD
CD-06.1-01T (BR/SE)	12	5.462	3.292	370.3	16.286	0.0	16.000	6.928	0.000	69.01	ARD
CD-06.1-03T (D/S)	14	5.062	3.178	375.7	7.891	0.0	30.000	6.903	0.000	69.01	ARD
CD-06.1-01T	12	4.921	2.900	377.3	11.388	0.0	30.000	6.893	0.000	69.01	ARD
CD-06.1-03T (BR/SE)	14	4.341	2.725	375.7	12.681	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.1-02P	62	2.960	1.858	375.7	18.139	0.0	28.000	6.903	0.000	69.01	ARD

Sorted By: Average Wear Rate

====>Grouped by Line: CD-06.2A HDR to BFP 31

CD-06.2A-24O	6	9.810	6.159	375.7	26.293	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3A-02N	30	7.147	4.487	375.7	22.658	0.0	18.000	6.903	0.000	69.01	ARD
CD-06.2A-07V	22	6.179	3.879	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-02E	2	4.593	2.884	375.7	12.699	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-04E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-06E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-09E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-11E	4	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-13E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-15E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-17E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-19E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-20E	4	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-26E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-28E	4	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-33E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-31E	3	4.325	2.715	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD

Sorted By: Average Wear Rate

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
=====>Grouped by Line: CD-06.2A HDR to BFP 31											
CD-06.2A-30E	1	4.078	2.560	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-12P	54	3.954	2.483	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-21P	54	3.954	2.483	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-29P	54	3.954	2.483	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3A-01R (D/S)	17	3.216	2.019	375.7	22.658	0.0	18.000	6.903	0.000	69.01	ARD
CD-06.2A-03P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-05P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-10P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-14P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-16P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-18P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-27P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-32P	53	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-34P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3A-01R	17	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-08P	58	2.719	1.707	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-01P	64	2.481	1.557	375.7	12.681	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-25P	56	1.962	1.232	375.7	26.293	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-22P	9	1.583	1.008	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-23P	9	1.583	1.008	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
=====>Grouped by Line: CD-06.2B HDR to BFP 32											
CD-06.2B-08O	6	9.810	6.159	375.7	26.293	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3B-02N	30	7.147	4.487	375.7	22.658	0.0	18.000	6.903	0.000	69.01	ARD
CD-06.2B-04T (BR/SE)	13	6.179	3.879	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-04T	13	6.179	3.879	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-05V	22	6.179	3.879	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-06E	4	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-10E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-12E	4	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-14E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-01R (D/S)	7	3.954	2.483	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-07P	54	3.954	2.483	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-13P	54	3.954	2.483	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-03T (D/S)	15	3.707	2.327	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-06.2B HDR to BFP 32											
CD-06.2B-03T	15	3.707	2.327	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3B-01R (D/S)	17	3.216	2.019	375.7	22.658	0.0	18.000	6.903	0.000	69.01	ARD
CD-06.2B-01R	7	3.199	2.009	375.7	7.807	0.0	30.000	6.903	0.000	69.01	ARD
CD-06.2B-02P	57	3.094	1.942	375.7	12.639	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-11P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-15P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3B-01R	17	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-09P	56	1.962	1.232	375.7	26.293	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-35P	9	1.583	1.008	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-36P	9	1.583	1.008	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC3 (v4).DB
 Run Name: CD: HDR TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 Analysis Date/Time: 7/22/2011 10:15:08AM
 CHECWORCS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source	
====>Grouped by Line: CD-02.8A HDR to FWH 33A												
CD-02.8A-04V	22	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.8A-08N	30	4.508	2.918	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.8A-02E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.8A-05E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.8A-07E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.7-02T (BR/SE)	14	3.944	2.553	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.8A-03P	54	3.606	2.334	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.8A-06P	54	3.606	2.334	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.7-02T	14	2.840	1.864	198.0	5.527	0.0	24.000	7.096	0.000	89.94	HBD	
CD-02.8A-01P	64	2.254	1.459	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.7-01P	64	1.030	0.676	198.0	5.515	0.0	24.000	7.096	0.000	89.94	HBD	
====>Grouped by Line: CD-02.8B HDR to FWH 33B												
CD-02.8B-04V	22	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.8B-08N	30	4.508	2.918	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.8B-02E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.8B-05E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.8B-07E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.8B-03P	54	3.606	2.334	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.8B-06P	54	3.606	2.334	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.8B-01P	64	2.257	1.461	198.0	16.461	0.0	14.000	7.096	0.000	89.94	HBD	
====>Grouped by Line: CD-02.8C HDR to FWH 33C												
CD-02.8C-04V	22	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.8C-08N	30	4.508	2.918	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.8C-02E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	
CD-02.8C-05E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD	

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.8C HDR to FWH 33C											
CD-02.8C-07E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-03P	54	3.717	2.406	198.0	17.235	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-06P	54	3.606	2.334	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-01P	64	2.339	1.514	198.0	17.425	0.0	14.000	7.096	0.000	89.94	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:15:15AM

DB Name: IPEC3 (v4).DB

CHECWOKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 31 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-01.1A FWH 31A to FWH 32A											
CD-01.1A-01N	31	4.042	2.544	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-13N	30	3.234	2.035	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-03E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-05E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-06E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-07E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-09E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-11E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-08P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-12P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-02P	61	2.183	1.374	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-04P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-10P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
====>Grouped by Line: CD-01.1B FWH 31B to FWH 32B											
CD-01.1B-01N	31	4.042	2.544	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-13N	30	3.234	2.035	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-03E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-05E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-06E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-07E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-09E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-11E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-08P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-12P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-02P	61	2.183	1.374	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-01.1B FWH 31B to FWH 32B											
CD-01.1B-04P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-10P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
====>Grouped by Line: CD-01.1C FWH 31C to FWH 32C											
CD-01.1C-01N	31	4.042	2.544	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-13N	30	3.234	2.035	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-03E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-05E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-06E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-07E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-09E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-11E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-08P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-12P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-02P	61	2.183	1.374	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-04P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-10P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC3 (v4).DB

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:15:25AM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 32 TO 33 HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.2 FWH 32 OUT HDR											
CD-02.1B-11T (D/S)	12	4.349	2.815	198.0	16.115	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.1B-11T (BR/SE)	12	3.831	2.480	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.2-02R	18	2.958	1.915	198.0	16.013	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.1B-11T	12	2.949	1.909	198.0	8.046	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.2-02R (D/S)	18	2.513	1.626	198.0	11.071	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.2-01P	62	2.113	1.368	198.0	16.013	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.2-03P	9	1.455	0.955	198.0	16.013	0.0	20.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.3 FWH 32 OUT HDR											
CD-02.3-15T	14	5.777	3.739	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-15T (D/S)	14	5.653	3.659	198.0	15.968	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.1C-12T (D/S)	12	4.308	2.789	198.0	16.610	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-04E	2	3.886	2.516	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-07E	2	3.886	2.516	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-11E	2	3.886	2.516	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-13E	4	3.886	2.516	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.1C-12T (BR/SE)	12	3.831	2.480	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.3-05E	3	3.676	2.380	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-09E	1	3.466	2.244	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.1C-12T	12	3.435	2.224	198.0	11.079	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-14P	54	3.361	2.176	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-02T (D/S)	15	3.151	2.040	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-02T	15	3.151	2.040	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-06P	53	2.626	1.700	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-08P	52	2.626	1.700	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-12P	52	2.626	1.700	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.3 FWH 32 OUT HDR											
CD-02.3-10P	51	2.311	1.496	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-01P	62	2.112	1.367	198.0	16.740	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-03P	65	2.101	1.360	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-16P	9	1.462	0.960	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-15T (BR/SE)	14	0.476	0.312	198.0	1.117	0.0	18.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.4 FWH 32 OUT HDR											
CD-02.4-02V	23	6.482	4.196	198.0	23.095	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.4-04E	19	5.379	3.482	198.0	24.480	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.4-04E (D/S)	19	4.193	2.714	198.0	16.477	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.4-01R (D/S)	7	4.148	2.685	198.0	23.095	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.5-02E	2	3.936	2.548	198.0	16.868	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.4-01R	7	3.597	2.329	198.0	15.968	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.4-03P	58	2.852	1.846	198.0	23.095	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.5-01P	69	2.589	1.676	198.0	16.156	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-17P	62	2.056	1.331	198.0	15.968	0.0	24.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.5 FWH 32 OUT HDR											
CD-02.5-04T	14	5.804	3.757	198.0	16.723	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-04T (D/S)	14	4.628	2.996	198.0	11.154	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-03T (D/S)	12	4.306	2.788	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-03T	12	4.214	2.728	198.0	15.968	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-04T (BR/SE)	14	3.944	2.553	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.5-03T (BR/SE)	12	0.468	0.307	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.6 FWH 32 OUT HDR											
CD-02.6-03T	14	4.610	2.984	198.0	11.083	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.6-03T (BR/SE)	14	3.944	2.553	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.6-03T (D/S)	14	2.843	1.866	198.0	5.533	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.6-01T (D/S)	15	2.514	1.627	198.0	11.081	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.6-01T	15	2.514	1.627	198.0	11.081	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.6-02P	65	1.676	1.085	198.0	11.081	0.0	24.000	7.096	0.000	89.94	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:15:31AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 32 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.1A FWH 32A to HDR											
CD-02.1A-06E	5	6.761	4.377	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-01N	31	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-05V	22	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-03E	2	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-09E	2	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-11E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-08P	55	3.944	2.553	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-12P	54	3.606	2.334	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-13R	18	3.155	2.042	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-02P	61	3.043	1.970	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-04P	52	2.817	1.824	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-10P	52	2.817	1.824	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-13R (D/S)	18	2.149	1.391	198.0	7.994	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.1A-14P	9	1.564	1.027	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.1B FWH 32B to HDR											
CD-02.1B-01N	31	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-07V	22	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-03E	2	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-05E	2	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-06E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-09E	2	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-02P	61	3.043	1.970	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-10P	52	2.943	1.905	198.0	17.602	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-04P	52	2.817	1.824	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-08P	58	2.479	1.605	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.1C FWH 32C to HDR											
CD-02.1C-01N	31	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-08V	22	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-10E	2	4.282	2.772	198.0	17.134	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-03E	2	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-05E	2	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-06E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-07P	54	3.606	2.334	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-02P	61	3.043	1.970	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-04P	52	2.817	1.824	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-11P	52	2.817	1.824	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-09P	58	2.479	1.605	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:15:39AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 33 TO HTR 34
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-03.1A FWH 33A to FWH 34A											
CD-03.1A-01N	31	8.487	5.354	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-13N	30	6.790	4.283	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-02E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-03E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-06E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-10E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-05E	1	5.602	3.534	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-08E	1	5.602	3.534	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-12E	1	5.602	3.534	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-04P	54	5.432	3.427	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-07P	54	5.432	3.427	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-11P	54	5.432	3.427	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-15P	51	3.734	2.356	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-09P	51	3.734	2.356	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-14P	9	2.371	1.516	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
====>Grouped by Line: CD-03.1B FWH 33B to FWH 34B											
CD-03.1B-01N	31	8.487	5.354	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-11N	30	6.790	4.283	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-06E	4	6.424	4.053	245.2	17.379	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-05E	2	6.414	4.046	245.2	17.336	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-02E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-03E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-08E	2	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-10E	1	5.602	3.534	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-07P	54	5.473	3.452	245.2	16.966	0.0	14.000	7.096	0.000	88.90	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-03.1B FWH 33B to FWH 34B											
CD-03.1B-04P	54	5.432	3.427	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-09P	52	4.244	2.677	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-12P	9	2.371	1.516	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
====>Grouped by Line: CD-03.1C FWH 33C to FWH 34C											
CD-03.1C-01N	31	8.487	5.354	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-11N	30	6.790	4.283	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-02E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-03E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-05E	2	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-06E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-08E	2	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-10E	1	5.602	3.534	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-04P	54	5.432	3.427	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-07P	54	5.432	3.427	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-09P	52	4.244	2.677	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-12P	9	2.371	1.516	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:15:48AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 34 TO HTR 35
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-04.1A FWH 34A to FWH 35A											
CD-04.1A-01N	31	11.069	6.973	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-14N	30	8.856	5.578	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-02E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-03E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-05E	2	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-07E	2	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-09E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-11E	2	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-13E	1	7.306	4.602	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-04P	54	7.084	4.463	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-10P	54	7.084	4.463	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-06P	52	5.535	3.486	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-08P	52	5.535	3.486	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-12P	52	5.535	3.486	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-15P	9	3.116	1.991	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
====>Grouped by Line: CD-04.1B FWH 34B to FWH 35B											
CD-04.1B-01N	31	11.069	6.973	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-16N	30	8.856	5.578	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-02E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-03E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-05E	2	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-08E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-10E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-13E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-06E	3	7.749	4.881	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-04.1B FWH 34B to FWH 35B											
CD-04.1B-12E	1	7.306	4.602	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-15E	1	7.306	4.602	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-04P	54	7.084	4.463	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-09P	54	7.084	4.463	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-11P	54	7.084	4.463	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-14P	54	7.084	4.463	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-07P	53	5.535	3.486	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-17P	9	3.116	1.991	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
====>Grouped by Line: CD-04.1C FWH 34C to FWH 35C											
CD-04.1C-01N	31	11.069	6.973	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-13N	30	8.856	5.578	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-02E	4	8.443	5.318	298.3	18.078	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-03E	4	8.403	5.293	298.3	17.943	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-05E	2	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-07E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-08E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-10E	2	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-12E	1	7.306	4.602	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-04P	54	7.084	4.463	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-09P	54	7.084	4.463	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-06P	52	5.535	3.486	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-11P	52	5.535	3.486	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-14P	9	3.116	1.991	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 Analysis Date/Time: 7/22/2011 10:15:51AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 35 TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-05.3 FWH 35 OUT HDR											
CD-05.1B-09T (BR/SE)	12	5.810	3.567	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-09T (D/S)	12	5.228	3.210	377.3	12.287	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.1B-09T	12	3.324	2.070	377.3	6.134	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.3-01P	62	2.550	1.566	377.3	12.287	0.0	24.000	6.880	0.000	82.05	HBD
====>Grouped by Line: CD-05.4 FWH 35 OUT HDR											
CD-05.1C-10T (D/S)	12	6.530	4.009	377.3	18.304	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-03T (BR/SE)	10	6.376	3.915	377.3	18.329	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-03T (D/S)	10	5.928	3.639	377.3	11.447	0.0	30.000	6.880	0.000	82.05	HBD
CD-05.4-01E	4	5.893	3.618	377.3	18.304	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.1C-10T (BR/SE)	12	5.810	3.567	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-10T	12	5.207	3.197	377.3	12.208	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-02P	54	5.116	3.141	377.3	18.414	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-05P	60	3.535	2.170	377.3	11.334	0.0	30.000	6.880	0.000	82.05	HBD
CD-05.4-04P	62	3.185	1.956	377.3	18.304	0.0	24.000	6.880	0.000	82.05	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:15:56AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 35 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-05.1A FWH 35A to HDR											
CD-05.1A-01N	31	8.544	5.246	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-05V	22	8.544	5.246	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-02E	4	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-03E	4	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-07E	2	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-09E	4	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-04P	54	5.468	3.357	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-10P	54	5.468	3.357	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-11R	18	4.785	2.938	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-08P	52	4.272	2.623	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-06P	58	3.759	2.308	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-11R (D/S)	18	2.417	1.506	377.3	6.095	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.2-01P	68	2.015	1.255	377.3	6.095	0.0	24.000	6.880	0.000	82.05	HBD
====>Grouped by Line: CD-05.1B FWH 35B to HDR											
CD-05.1B-01N	31	8.544	5.246	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-05V	22	8.544	5.246	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-07E	2	6.493	3.986	377.3	18.894	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-02E	4	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-03E	4	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-04P	54	5.468	3.357	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-06P	58	3.759	2.308	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
====>Grouped by Line: CD-05.1C FWH 35C to HDR											
CD-05.1C-01N	31	8.544	5.246	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-05V	22	8.544	5.246	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-02E	4	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-05.1C FWH 35C to HDR											
CD-05.1C-03E	4	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-07E	2	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-08E	4	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-09P	54	5.532	3.396	377.3	18.449	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-04P	54	5.468	3.357	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-06P	58	3.759	2.308	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:16:02AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)

Duty Factor (Global) : 1.000

Run Name: CD: S/G BLWDN HX IN
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.9 FWH HDR to SGBD HX3											
CD-02.10-11N	30	2.830	1.858	198.0	6.587	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.9-17T (BR/SE)	14	2.259	1.483	198.0	5.966	0.0	8.000	7.096	0.000	89.94	HBD
CD-02.10-04E	2	2.052	1.347	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-06E	2	2.052	1.347	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-08E	2	2.052	1.347	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-10E	4	2.052	1.347	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-05P	52	1.386	0.910	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-07P	52	1.386	0.910	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-09P	52	1.386	0.910	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-03P	56	1.187	0.768	198.0	14.012	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-01P	64	1.109	0.728	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.9-17T	14	0.757	0.497	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-04V	22	0.689	0.452	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-02E	4	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-06E	2	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-08E	4	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-11E	2	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-13E	2	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-16E	2	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-03P	54	0.441	0.289	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-09P	54	0.441	0.289	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-07P	52	0.344	0.226	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-12P	52	0.344	0.226	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-14P	52	0.344	0.226	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-05P	58	0.303	0.199	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-01P	63	0.275	0.181	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.9 FWH HDR to SGBD HX3											
CD-02.9-10P	9	0.151	0.099	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-15P	9	0.151	0.099	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:16:16AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: S/G BLWDN HX OUT
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.11 SGBD HX3 to FWH HDR											
CD-02.11-01N	31	3.537	2.322	198.0	6.587	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-13T (BR/SE)	10	2.581	1.694	198.0	5.966	0.0	8.000	7.096	0.000	89.94	HBD
CD-02.11-03E	2	2.052	1.347	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-07E	2	2.052	1.347	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-10E	2	2.052	1.347	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-12E	2	2.052	1.347	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-05E	1	1.830	1.201	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-02P	61	1.497	0.983	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-04P	52	1.386	0.910	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-08P	52	1.386	0.910	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-11P	52	1.386	0.910	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-06P	51	1.220	0.801	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-13T (D/S)	10	0.689	0.452	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-04V	22	0.689	0.452	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.11-09P	9	0.610	0.400	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.12-02E	2	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-06E	2	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-08E	2	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-10E	2	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-01P	60	0.413	0.271	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-03P	52	0.344	0.226	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-07P	52	0.344	0.226	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-09P	52	0.344	0.226	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-11P	52	0.344	0.226	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-05P	58	0.303	0.199	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:16:21AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: BFPT DRN TO COND
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-07.1 BFPT 31 Drain to Cond											
EX-07.1-01N	31	0.285	0.291	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-03EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-08EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-10EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-06P	53	0.183	0.186	101.7	0.046	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-02E	4	0.177	0.181	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-05E	3	0.162	0.164	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-07E	1	0.152	0.155	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-11R	18	0.120	0.122	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-12N	30	0.102	0.101	101.7	0.020	87.3	54.000	7.276	0.000	68.22	HBD
EX-07.1-04P	56	0.069	0.072	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-09P	56	0.069	0.072	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-11R (D/S)	18	0.068	0.068	101.7	0.020	87.3	54.000	7.276	0.000	68.22	HBD
====>Grouped by Line: EX-07.2 BFPT 32 Drain to Cond											
EX-07.2-01N	31	0.285	0.291	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-03EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-08EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-10EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-06P	53	0.183	0.186	101.7	0.046	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-02E	4	0.177	0.181	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-05E	3	0.162	0.164	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-07E	1	0.152	0.155	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-11R	18	0.120	0.122	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-12N	30	0.102	0.101	101.7	0.020	87.3	54.000	7.276	0.000	68.22	HBD
EX-07.2-04P	56	0.069	0.072	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source	
====>Grouped by Line: EX-07.2 BFPT 32 Drain to Cond												
EX-07.2-09P	56	0.069	0.072	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD	
EX-07.2-11R (D/S)	18	0.068	0.068	101.7	0.020	87.3	54.000	7.276	0.000	68.22	HBD	

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:16:29AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: HDR TO 35 HTRS
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.16 HDR 35 to FWH 35A											
EX-02.16-05V	22	23.371	27.586	385.2	29.945	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-08E	2	23.255	26.776	385.2	35.427	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-09N	30	21.311	25.176	385.2	29.549	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-07P	54	0.094	0.096	385.2	30.292	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-03E	2	0.091	0.093	385.2	30.943	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-06E	4	0.090	0.092	385.2	30.250	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-01R (D/S)	7	0.075	0.083	385.2	29.715	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-02P	57	0.073	0.074	385.2	29.474	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-04P	52	0.061	0.062	385.2	30.232	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-01R	7	0.059	0.066	385.2	7.029	93.8	28.000	0.000	0.000	0.00	ARD
EX-02.19-01P	64	0.028	0.031	385.2	7.029	93.8	28.000	0.000	0.000	0.00	ARD
====>Grouped by Line: EX-02.17 HDR 35 to FWH 35B											
EX-02.17-05E	2	23.378	26.921	385.2	35.888	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-02V	22	23.371	27.586	385.2	29.945	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-06N	30	21.311	25.176	385.2	29.549	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-04P	54	0.094	0.096	385.2	30.276	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-03E	4	0.090	0.092	385.2	30.250	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-01P	64	0.032	0.036	385.2	30.483	93.8	18.000	0.000	0.000	0.00	ARD
====>Grouped by Line: EX-02.18 HDR 35 to FWH 35C											
EX-02.18-02V	22	23.371	27.586	385.2	29.945	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-05E	2	21.737	24.981	385.2	29.715	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-06N	30	21.311	25.176	385.2	29.549	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-03E	4	0.084	0.092	385.2	30.250	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-04P	54	0.078	0.086	385.2	30.250	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-01P	64	0.032	0.036	385.2	30.483	93.8	18.000	0.000	0.000	0.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC3 (v4).DB

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:16:49AM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: HDR TO 36 HTRS
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-01.5A HP EX HDR to FWH 36A											
EX-01.5A-11V	22	13.313	6.209	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-07L (D/S)	12	0.013	0.009	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-16L (D/S)	12	0.013	0.009	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-07L	12	0.013	0.009	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-16L	12	0.013	0.009	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-09E	102	0.011	0.008	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-03E	102	0.011	0.008	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-14E	4	0.008	0.006	441.8	38.106	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-15N	30	0.008	0.006	441.8	35.935	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-06P	54	0.008	0.005	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-13E	2	0.007	0.005	441.8	37.496	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-05E	4	0.007	0.005	441.8	37.401	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-01R (D/S)	7	0.006	0.005	441.8	35.727	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-02P	57	0.006	0.004	441.8	36.793	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-17P	52	0.005	0.003	441.8	36.275	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-10P	52	0.005	0.003	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-01R	7	0.004	0.003	441.8	15.740	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.5A-04P	52	0.004	0.003	441.8	53.650	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-12P	58	0.003	0.002	441.8	37.331	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-08P	62	0.002	0.002	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.7-01P	63	0.002	0.001	441.8	15.740	93.7	18.000	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.5B HP EX HDR to FWH 36B											
EX-01.5B-09V	22	13.313	6.209	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-04L (D/S)	12	0.013	0.009	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-14L (D/S)	12	0.013	0.009	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-01.5B HP EX HDR to FWH 36B											
EX-01.5B-04L	12	0.013	0.009	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-14L	12	0.013	0.009	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-12E	4	0.008	0.006	441.8	39.151	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-13N	30	0.008	0.006	441.8	35.935	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-08P	54	0.007	0.005	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-02E	2	0.007	0.005	441.8	38.209	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-11E	2	0.007	0.005	441.8	37.854	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-07E	4	0.007	0.005	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-06E	1	0.006	0.004	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-15P	52	0.005	0.004	441.8	36.954	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-03P	52	0.005	0.003	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-10P	58	0.003	0.002	441.8	37.153	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-05P	62	0.002	0.002	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-01P	64	0.002	0.002	441.8	53.069	93.7	12.750	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.5C HP EX HDR to FWH 36C											
EX-01.5C-09V	22	13.313	6.209	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-14L (D/S)	12	0.013	0.009	441.8	36.778	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-14L	12	0.013	0.009	441.8	36.778	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-04L	12	0.013	0.009	441.8	36.659	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-04L (D/S)	12	0.013	0.009	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-12E	4	0.008	0.006	441.8	38.321	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-13N	30	0.008	0.006	441.8	35.935	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-08P	54	0.008	0.005	441.8	36.913	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-11E	2	0.007	0.005	441.8	37.800	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-02E	2	0.007	0.005	441.8	37.455	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-07E	4	0.007	0.005	441.8	37.360	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-06E	1	0.006	0.004	441.8	37.564	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-03P	52	0.005	0.003	441.8	36.831	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-15P	52	0.005	0.003	441.8	36.301	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-10P	58	0.003	0.002	441.8	36.939	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-01P	64	0.002	0.002	441.8	54.131	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-05P	62	0.002	0.002	441.8	36.778	93.7	12.750	6.679	0.000	196.44	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:17:07AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: HTR 36 HEADER
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-01.1 HP EXT to FWH 36 HDR											
EX-01.1-01N	31	22.695	10.559	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-06E	2	0.010	0.007	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-03P	54	0.009	0.007	441.8	55.741	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-04E	4	0.009	0.006	441.8	57.672	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-02E	4	0.009	0.006	441.8	57.590	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-05P	54	0.007	0.005	441.8	75.097	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-07P	52	0.006	0.004	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-08R	18	0.006	0.004	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-08R (D/S)	18	0.004	0.003	441.8	26.318	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.6-01P	68	0.003	0.002	441.8	25.914	93.7	18.000	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.2 HP EXT to FWH 36 HDR											
EX-01.2-01N	31	22.695	10.559	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-02E	4	0.010	0.007	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-03P	54	0.009	0.007	441.8	56.380	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-06E	4	0.009	0.006	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-04E	3	0.008	0.006	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-08E	1	0.008	0.005	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-07P	54	0.007	0.005	441.8	74.401	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-05P	53	0.007	0.005	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-09P	51	0.004	0.003	441.8	74.893	93.7	12.750	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER											
EX-01.3-07V	25	17.393	8.087	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-08V	25	17.393	8.087	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-06V	22	15.946	7.414	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-23T	14	0.018	0.013	441.8	56.075	93.7	18.000	6.679	0.000	196.44	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER											
EX-01.2-10L (D/S)	12	0.015	0.011	441.8	55.283	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-23T (D/S)	14	0.015	0.010	441.8	36.716	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.2-10L	12	0.011	0.008	441.8	26.618	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.2-10L (BR/SE)	12	0.011	0.008	441.8	56.495	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.3-19E	4	0.009	0.007	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-21E	2	0.009	0.007	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-20P	54	0.009	0.006	441.8	55.224	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-13E	2	0.009	0.006	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-02E	2	0.009	0.006	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-15E	2	0.009	0.006	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-09E	4	0.009	0.006	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-17T	15	0.007	0.005	441.8	55.547	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-04T	15	0.007	0.005	441.8	55.094	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-05P	65	0.007	0.005	441.8	55.038	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-10P	54	0.006	0.005	441.8	83.334	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-17T (D/S)	15	0.006	0.004	441.8	55.547	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-04T (D/S)	15	0.006	0.004	441.8	55.094	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-22P	52	0.006	0.004	441.8	55.924	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-16P	52	0.006	0.004	441.8	54.987	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-03P	52	0.006	0.004	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-14P	52	0.006	0.004	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-23T (BR/SE)	14	0.006	0.004	441.8	39.487	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.3-11T	15	0.005	0.004	441.8	83.334	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-12P	65	0.005	0.004	441.8	83.334	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-11T (D/S)	15	0.004	0.003	441.8	83.334	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-01P	62	0.003	0.002	441.8	54.933	93.7	18.000	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.4 HP EXT FWH 36 HEADER											
EX-01.4-02T	14	0.015	0.010	441.8	35.801	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.4-02T (D/S)	14	0.011	0.008	441.8	15.745	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.4-02T (BR/SE)	14	0.006	0.004	441.8	36.644	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.4-01P	63	0.002	0.002	441.8	36.616	93.7	18.000	6.679	0.000	196.44	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:17:19AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)

Run Name: ES: LP TO 31 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Duty Factor (Global) : 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-06.1A LP EXT 19 to FWH 31A											
EX-06.1A-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1A-04N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1A-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1A-03E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.1B LP EXT 19 to FWH 31B											
EX-06.1B-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1B-04N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1B-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1B-03E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.1C LP EXT 19 to FWH 31C											
EX-06.1C-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1C-04N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1C-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1C-03E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.2A LP EXT 17 to FWH 31A											
EX-06.2A-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2A-04N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2A-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2A-03E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.2B LP EXT 17 to FWH 31B											
EX-06.2B-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2B-04N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2B-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2B-03E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.2C LP EXT 17 to FWH 31C											

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-06.2C LP EXT 17 to FWH 31C											
EX-06.2C-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2C-04N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2C-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2C-03E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.3A LP EXT 20 to FWH 31A											
EX-06.3A-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3A-05N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3A-03P	54	4.774	4.118	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3A-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3A-04E	1	3.929	3.387	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.3B LP EXT 20 to FWH 31B											
EX-06.3B-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3B-05N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3B-03P	54	4.774	4.118	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3B-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3B-04E	2	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.3C LP EXT 20 to FWH 31C											
EX-06.3C-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3C-05N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3C-03P	54	4.774	4.118	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3C-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3C-04E	2	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.4A LP EXT 18 to FWH 31A											
EX-06.4A-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4A-05N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4A-04E	2	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4A-02E	3	4.167	3.593	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4A-03P	53	1.438	1.046	168.3	19.532	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.4B LP EXT 18 to FWH 31B											
EX-06.4B-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4B-05N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4B-04E	2	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4B-02E	3	4.167	3.593	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4B-03P	53	1.438	1.046	168.3	19.532	77.1	26.000	7.141	0.000	37.64	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-06.4C LP EXT 18 to FWH 31C											
EX-06.4C-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4C-05N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4C-04E	2	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4C-02E	3	4.167	3.593	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4C-03P	53	1.438	1.046	168.3	19.532	77.1	26.000	7.141	0.000	37.64	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:17:25AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: LP TO 32 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-05.1A LP EXT 16 to FWH 32A											
EX-05.1A-01N	31	24.280	12.829	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1A-04N	30	16.260	8.610	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1A-03E	3	13.893	7.435	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1A-02P	61	4.317	3.069	206.9	36.385	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.1B LP EXT 16 to FWH 32B											
EX-05.1B-01N	31	24.280	12.829	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1B-04N	30	16.260	8.610	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1B-03E	3	13.893	7.435	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1B-02P	61	4.317	3.069	206.9	36.385	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.1C LP EXT 16 to FWH 32C											
EX-05.1C-01N	31	24.280	12.829	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1C-04N	30	16.260	8.610	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1C-03E	3	13.893	7.435	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1C-02P	61	4.317	3.069	206.9	36.385	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.2A LP EXT 15 to FWH 32A											
EX-05.2A-01N	31	24.280	12.829	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-06N	30	16.260	8.610	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-02E	4	15.295	8.185	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-03E	3	13.893	7.435	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-05E	1	13.099	7.010	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-04P	53	12.454	6.666	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B											
EX-05.2B-01N	31	24.280	12.829	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2B-06N	30	16.260	8.610	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2B-02E	4	15.295	8.185	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B											
EX-05.2B-03E	3	13.893	7.435	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2B-05E	1	13.099	7.010	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2B-04P	53	12.454	6.666	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.2C LP EXT 15 to FWH 32C											
EX-05.2C-01N	31	24.280	12.829	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-06N	30	16.260	8.610	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-02E	4	15.295	8.185	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-03E	3	13.893	7.435	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-05E	1	13.099	7.010	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-04P	53	12.454	6.666	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:18:08AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: LP TO 33 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.1 LPEX14 to FWH33A HDR											
EX-04.1-01N	31	5.543	6.679	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-06T (BR/SE)	10	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-05E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-06T (D/S)	10	3.445	3.624	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.1-02E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-03E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-04P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-08X	6	2.181	2.031	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-07P	52	1.591	1.482	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.3-01P	60	1.250	1.315	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR											
EX-04.11-19T	14	8.237	9.513	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.9-09T (D/S)	12	7.017	8.103	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-19T (D/S)	14	5.287	5.562	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-06V	25	5.137	5.932	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.9-09T	12	4.500	4.734	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-08E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-13E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-15E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.9-09T (BR/SE)	12	4.076	4.943	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.11-04V	22	3.842	4.508	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-09E	3	3.579	4.134	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-11E	3	3.579	4.134	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-02T	15	3.210	3.708	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-17T	15	3.210	3.708	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR											
EX-04.11-12P	53	3.210	3.707	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-03P	65	3.166	3.657	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-18P	65	3.166	3.657	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-17T (D/S)	15	2.826	3.263	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-02T (D/S)	15	2.826	3.263	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-16P	52	2.675	3.090	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-19T (BR/SE)	14	2.622	3.181	254.8	7.012	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.11-07P	58	1.884	2.176	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-10P	53	1.833	1.707	254.8	17.234	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-05P	58	1.537	1.803	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-14P	52	1.527	1.423	254.8	17.234	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-01P	62	1.285	1.484	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-20P	9	0.941	1.087	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.13 LP EXT 32 to FWH 33B											
EX-04.13-06N	30	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-03E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-05E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-01R (D/S)	7	3.117	3.780	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-07T	15	2.810	3.408	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-02P	57	2.809	3.407	254.8	6.994	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-07T (D/S)	15	2.473	2.999	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-04P	52	2.316	2.804	254.8	7.164	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-01R	7	2.125	2.236	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.12-01P	64	1.106	1.163	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.14 LP EXT 32 to FWH 33B											
EX-04.14-03N	30	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.14-02E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.14-01P	64	1.480	1.792	254.8	7.285	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.15 LPEX14 to FWH33C HDR											
EX-04.15-01N	31	5.543	6.679	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-06T (BR/SE)	10	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-05E	2	3.449	4.183	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-06T (D/S)	10	3.445	3.624	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.15-02E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.15 LPEX14 to FWH33C HDR											
EX-04.15-03E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-04P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-07P	52	2.342	2.840	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-08X	6	2.181	2.031	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.17-01P	60	1.250	1.315	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.16 LPEX13 to FWH33C HDR											
EX-04.16-01N	31	5.543	6.679	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-07E	2	3.449	4.183	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-02E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-03E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-05E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-04P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-06P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-10X	6	2.181	2.031	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-08P	52	1.591	1.482	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.18 LPEX FWH 33C IN HDR											
EX-04.20-16T	14	8.181	9.470	254.8	5.676	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.16-09T (D/S)	12	7.017	8.103	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-16T (D/S)	14	5.433	5.714	254.8	0.304	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-06V	25	5.137	5.932	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.16-09T	12	4.500	4.734	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-02E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-04E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-06E	4	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-08E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-10E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-12E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-07P	54	4.109	4.745	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.16-09T (BR/SE)	12	4.076	4.943	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.18-04V	22	3.842	4.508	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.19-01R	7	3.296	3.807	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-02T	15	3.210	3.708	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-14T	15	3.210	3.708	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-15P	65	3.166	3.657	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.18 LPEX FWH 33C IN HDR											
EX-04.18-03P	65	3.166	3.657	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.19-01R (D/S)	7	2.884	3.332	254.8	14.052	90.5	24.000	7.255	0.000	69.67	HBD
EX-04.20-14T (D/S)	15	2.826	3.263	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-02T (D/S)	15	2.826	3.263	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.19-03R (D/S)	18	2.826	3.263	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-05P	52	2.675	3.090	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-09P	52	2.675	3.090	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-13P	52	2.675	3.090	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-16T (BR/SE)	14	2.623	3.182	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.19-02V	23	2.604	2.991	254.8	14.424	90.5	24.000	7.255	0.000	69.67	HBD
EX-04.20-01P	68	2.141	2.473	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.19-03R	18	2.135	2.467	254.8	14.052	90.5	24.000	7.255	0.000	69.67	HBD
EX-04.18-05P	58	1.537	1.803	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-03P	52	1.527	1.423	254.8	17.234	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-11P	52	1.527	1.423	254.8	17.234	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-01P	62	1.285	1.484	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.2 LPEX13 to FWH33A HDR											
EX-04.2-01N	31	5.543	6.679	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-07E	2	3.449	4.183	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-02E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-03E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-05E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-04P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-06P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-10X	6	2.181	2.031	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-08P	52	1.591	1.482	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.21 LP EXT 31 to FWH 33C											
EX-04.21-06N	30	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-03E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-05E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-01R (D/S)	7	3.117	3.780	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-07T	15	2.810	3.408	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-02P	57	2.806	3.406	254.8	7.050	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-07T (D/S)	15	2.473	2.999	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.21 LP EXT 31 to FWH 33C											
EX-04.21-04P	52	2.316	2.804	254.8	7.164	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-01R	7	2.125	2.236	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-17P	64	1.106	1.163	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.22 LP EXT 31 to FWH 33C											
EX-04.22-03N	30	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.22-02E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.22-01P	64	1.481	1.794	254.8	7.260	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.4 LPEX FWH 33A IN HDR											
EX-04.4-22T	14	8.205	9.489	254.8	5.575	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.2-09T (D/S)	12	7.017	8.103	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-22T (D/S)	14	5.367	5.645	254.8	0.297	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-06V	25	5.137	5.932	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.2-09T	12	4.500	4.734	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-08E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-10E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-12E	4	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-14E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-16E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-18E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-13P	54	4.108	4.745	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.2-09T (BR/SE)	12	4.076	4.943	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.4-04V	22	3.842	4.508	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-02T	15	3.210	3.708	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-20T	15	3.210	3.708	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-21P	65	3.166	3.657	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-03P	65	3.166	3.657	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-02T (D/S)	15	2.826	3.263	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-20T (D/S)	15	2.826	3.263	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-11P	52	2.675	3.090	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-15P	52	2.675	3.090	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-19P	52	2.675	3.090	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-22T (BR/SE)	14	2.622	3.181	254.8	7.012	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.4-07P	58	1.884	2.176	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-05P	58	1.537	1.803	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.4 LPEX FWH 33A IN HDR											
EX-04.4-09P	52	1.527	1.423	254.8	17.235	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-17P	52	1.527	1.423	254.8	17.235	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-01P	62	1.285	1.484	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-23P	9	0.941	1.087	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.6 LP EXT to FWH 33A											
EX-04.6-06N	30	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-05E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-03E	2	3.638	4.359	254.8	7.997	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-01R (D/S)	7	3.117	3.780	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-07T	15	2.808	3.408	254.8	7.025	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-02P	57	2.807	3.407	254.8	7.033	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-07T (D/S)	15	2.471	2.999	254.8	7.025	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-04P	52	2.311	2.797	254.8	7.299	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-01R	7	2.125	2.236	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.5-01P	64	1.106	1.163	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.7 LP EXT to FWH 33A											
EX-04.7-03N	30	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.7-02E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.7-01P	64	1.482	1.795	254.8	7.229	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.8 LPEX14 to FWH33B HDR											
EX-04.8-01N	31	5.543	6.679	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-06T (BR/SE)	10	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-05E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-06T (D/S)	10	3.445	3.624	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.8-02E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-03E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-04P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-08X	6	2.181	2.031	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-07P	52	1.591	1.482	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.10-01P	60	1.250	1.315	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.9 LPEX13 to FWH33B HDR											
EX-04.9-01N	31	5.543	6.679	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-07E	2	3.449	4.183	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-02E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.9 LPEX13 to FWH33B HDR											
EX-04.9-03E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-05E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-04P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-06P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-10X	6	2.181	2.031	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-08P	52	1.591	1.482	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC3 (v4).DB

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:18:42AM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: PRESEP TO 35 HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.1 PSEP 2A 10" to 35 HDR											
EX-02.1-01N	31	0.009	0.010	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-02P	61	0.007	0.007	385.2	23.337	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-06T (D/S)	10	0.007	0.007	385.2	3.409	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.1-06T (BR/SE)	10	0.007	0.007	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-05O	6	0.007	0.007	385.2	45.863	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-04P	54	0.006	0.006	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-03E	4	0.006	0.006	385.2	23.905	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.5-01P	60	0.001	0.001	385.2	17.778	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.11 PSEP1B 14" to 35 HDR											
EX-02.11-06O	6	0.009	0.009	385.2	95.761	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-04P	54	0.008	0.008	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-03E	4	0.008	0.008	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-02P	64	0.003	0.003	385.2	73.301	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-07P	56	0.002	0.002	385.2	95.761	93.8	14.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.12 PSEP 1B&2B to 35 HDR											
EX-02.9-10T (D/S)	12	0.013	0.013	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.9-10T	12	0.009	0.009	385.2	3.409	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.9-10T (BR/SE)	12	0.007	0.007	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.12-01P	62	0.002	0.002	385.2	75.930	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR											
EX-02.13-06R	18	0.018	0.019	385.2	47.982	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-06R (D/S)	18	0.014	0.014	385.2	15.155	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.11-05T (D/S)	12	0.013	0.013	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.11-05T	12	0.013	0.013	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.11-05T (BR/SE)	12	0.009	0.009	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR											
EX-02.13-03E	4	0.008	0.008	385.2	48.757	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-04E	3	0.007	0.007	385.2	48.757	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-02B	1	0.006	0.006	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-05P	53	0.006	0.006	385.2	48.757	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-03P	54	0.006	0.006	385.2	75.933	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-01P	62	0.002	0.002	385.2	75.930	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.14 FWH 35 HEADER											
EX-02.14-10V	22	8.691	9.134	385.2	54.705	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-11V	25	7.912	8.243	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-13V	25	7.912	8.243	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-25E	4	6.804	6.804	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-16E	2	6.530	6.804	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-24E	2	6.530	6.804	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-18E	2	6.530	6.804	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-27E	2	6.530	6.804	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-20E	4	6.530	6.804	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-21P	54	6.329	6.594	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-06E	2	6.324	6.324	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-08E	2	6.324	6.324	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-26P	54	6.301	6.557	385.2	38.039	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-02E	2	5.968	6.324	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-14E	3	5.513	5.744	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-04T	15	4.945	5.152	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-32T	15	4.945	5.152	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-05P	65	4.878	5.082	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-32T (D/S)	15	4.352	4.534	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-04T (D/S)	15	4.352	4.534	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-03P	52	4.121	4.293	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-19P	52	4.121	4.293	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-09P	52	4.121	4.293	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-07P	52	4.102	4.270	385.2	38.039	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-17P	52	2.917	2.550	385.2	76.600	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-12P	58	2.901	3.023	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-31P	58	2.901	3.023	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.14 FWH 35 HEADER											
EX-02.14-01P	62	1.979	2.062	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-29T	14	0.044	0.047	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-29T (D/S)	14	0.037	0.040	385.2	23.240	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.7-02T (D/S)	12	0.037	0.040	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.7-02T	12	0.030	0.032	385.2	15.155	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.7-02T (BR/SE)	12	0.029	0.031	385.2	48.757	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.14-22T	15	0.017	0.018	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-23P	65	0.017	0.018	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-29T (BR/SE)	14	0.016	0.017	385.2	29.715	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.14-22T (D/S)	15	0.015	0.016	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-28P	52	0.014	0.015	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-33P	9	0.008	0.009	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.15 FWH 35 HEADER											
EX-02.15-02T	14	0.038	0.040	385.2	24.551	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.15-02T (D/S)	14	0.037	0.039	385.2	7.714	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.15-02T (BR/SE)	14	0.016	0.017	385.2	29.715	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.15-01P	64	0.008	0.008	385.2	24.405	93.8	28.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.2 PSEP 1A 10" to 35 HDR											
EX-02.2-02P	61	0.007	0.007	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-03E	2	0.006	0.006	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-05E	2	0.006	0.006	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-08O	6	0.005	0.005	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-06P	52	0.004	0.004	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-04P	52	0.003	0.003	385.2	38.302	93.8	10.750	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.4 PSEP2A 14" to 35 HDR											
EX-02.4-06O	6	0.009	0.009	385.2	95.761	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-04P	54	0.008	0.008	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-03E	4	0.008	0.008	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-02P	64	0.003	0.003	385.2	73.301	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-07P	56	0.002	0.002	385.2	95.761	93.8	14.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.6 PSEP 1A&2A to 35 HDR											
EX-02.2-07T (D/S)	12	0.013	0.013	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.2-07T	12	0.009	0.009	385.2	3.409	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.2-07T (BR/SE)	12	0.007	0.007	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line:											
EX-02.6-01P	62	0.002	0.002	385.2	75.930	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line:											
EX-02.4-05T (D/S)	12	0.013	0.013	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.4-05T	12	0.013	0.013	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.4-05T (BR/SE)	12	0.009	0.009	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.7-01P	62	0.002	0.002	385.2	75.930	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line:											
EX-02.8-01N	31	0.009	0.010	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-08T (D/S)	10	0.007	0.007	385.2	3.409	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.8-08T (BR/SE)	10	0.007	0.007	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-07O	6	0.007	0.007	385.2	45.863	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-02E	3	0.006	0.005	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-06E	3	0.006	0.005	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-04E	1	0.005	0.005	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-09P	53	0.005	0.005	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-05P	51	0.004	0.004	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-03P	53	0.003	0.003	385.2	38.302	93.8	10.750	6.854	0.000	41.00	ARD
====>Grouped by Line:											
EX-02.9-01N	31	0.009	0.010	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-02P	61	0.007	0.007	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-08P	54	0.006	0.006	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-10P	54	0.006	0.006	385.2	23.379	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-03E	2	0.006	0.006	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-05E	2	0.006	0.006	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-07E	4	0.006	0.006	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-09E	4	0.006	0.006	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-11O	6	0.005	0.005	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-06P	52	0.004	0.004	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-04P	52	0.003	0.003	385.2	38.302	93.8	10.750	6.854	0.000	41.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:18:51AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: FW: 36 HTR TO SG HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.1A FWH 36A to SG HDR											
FW-02.1A-05V	22	4.354	2.603	430.4	29.883	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-01N	31	3.082	1.843	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-02E	4	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-04E	4	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-07E	2	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-09E	2	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-11E	2	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-03P	54	1.972	1.179	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-13R	18	1.726	1.032	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-08P	52	1.541	0.921	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-10P	52	1.541	0.921	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-12P	52	1.541	0.921	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-06P	58	1.356	0.811	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-13R (D/S)	18	0.878	0.532	430.4	5.938	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.1B FWH 36B to SG HDR											
FW-02.1B-05V	22	4.354	2.603	430.4	29.883	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-01N	31	3.082	1.843	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-02E	4	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-04E	4	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-07E	2	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-09E	2	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-03P	54	1.972	1.179	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-10P	52	1.547	0.925	430.4	17.364	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-08P	52	1.541	0.921	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-06P	58	1.356	0.811	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.1C FWH 36C to SG HDR											
FW-02.1C-05V	22	4.354	2.603	430.4	29.883	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-01N	31	3.082	1.843	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-02E	4	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-04E	4	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-07E	2	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-09E	2	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-03P	54	1.972	1.179	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-10P	52	1.555	0.930	430.4	17.508	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-08P	52	1.541	0.921	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-06P	58	1.356	0.811	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:19:13AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: FW: BFP TO 36 HTR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.1A BFP 31 to RCIRC T											
FW-01.2A-03T (BR/SE)	15	40.126	22.984	378.8	539.374	0.0	6.625	6.892	0.000	69.01	ARD
FW-01.1A-03R	18	6.899	3.951	378.8	33.910	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.1A-02P	61	6.628	3.796	378.8	33.715	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.2A-01E	4	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-02P	54	5.683	3.255	378.8	20.153	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.1A-03R (D/S)	18	5.367	3.074	378.8	20.389	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-03T (D/S)	15	5.325	3.050	378.8	20.135	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-03T	15	5.325	3.050	378.8	20.135	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.1A-01N	31	0.022	0.013	378.8	33.290	0.0	16.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.1B BFP 32 to RCIRC T											
FW-01.2B-05T (BR/SE)	15	40.126	22.984	378.8	539.374	0.0	6.625	6.892	0.000	69.01	ARD
FW-01.1B-03R	18	6.899	3.951	378.8	33.910	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.1B-02P	61	6.752	3.867	378.8	34.720	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.2B-01E	4	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-03E	1	6.037	3.458	378.8	21.122	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-02P	54	5.674	3.250	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.1B-03R (D/S)	18	5.367	3.074	378.8	20.389	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-05T (D/S)	15	5.323	3.049	378.8	20.121	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-05T	15	5.323	3.049	378.8	20.121	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-04P	51	3.901	2.235	378.8	20.103	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.1B-01N	31	0.022	0.013	378.8	33.290	0.0	16.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR											
FW-01.2A-06V	22	12.386	7.095	378.8	34.207	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-05V	25	9.942	5.695	378.8	24.119	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-10E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR											
FW-01.2A-12E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-07E	4	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-14E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-16E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-18E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-20E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-22E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-08T (D/S)	15	5.319	3.047	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-08T	15	5.319	3.047	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-23P	52	4.446	2.547	378.8	20.198	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-11P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-13P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-15P_1	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-17P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-19P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-21P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-04P	65	3.550	2.033	378.8	20.135	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-09P	65	3.546	2.031	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-15P_2	9	2.608	1.519	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR											
FW-01.2B-08V	22	12.386	7.095	378.8	34.207	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-07V	25	9.942	5.695	378.8	24.119	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-13E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-09E	4	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-15E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-17E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-19E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-21E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-23E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-25E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-10P	54	5.674	3.250	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-11T (D/S)	15	5.319	3.047	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-11T	15	5.319	3.047	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-27R	18	4.964	2.844	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR											
FW-01.2B-14P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-16P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-18P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-20P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-22P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-24P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-26P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-06P	65	3.559	2.039	378.8	20.216	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-12P	65	3.546	2.031	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-27R (D/S)	18	3.110	1.782	378.8	8.564	0.0	30.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.3 BFP DISCHARGE HDR											
FW-01.4-01T	14	8.471	4.852	378.8	17.358	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.4-01T (D/S)	14	6.755	3.869	378.8	11.577	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-01T (D/S)	12	6.329	3.625	378.8	17.419	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-01T (BR/SE)	12	6.038	3.458	378.8	20.148	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.3-04E	4	5.853	3.353	378.8	18.111	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-03E	4	5.786	3.314	378.8	17.780	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.4-01T (BR/SE)	14	5.726	3.280	378.8	16.905	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.3-06E	2	5.651	3.237	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-08E	4	5.651	3.237	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-10E	2	5.651	3.237	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-12E	2	5.651	3.237	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-14E	2	5.651	3.237	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-15E	4	5.651	3.237	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-05P	54	4.888	2.800	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-09P	54	4.888	2.800	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-16P	54	4.888	2.800	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-17T (D/S)	15	4.582	2.625	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-17T	15	4.582	2.625	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-01T	12	4.296	2.461	378.8	8.709	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-07P	52	3.819	2.187	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-11P	52	3.819	2.187	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-13P	52	3.819	2.187	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-02P	62	3.086	1.768	378.8	17.409	0.0	30.000	6.892	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.3 BFP DISCHARGE HDR											
FW-01.3-18P	65	3.080	1.764	378.8	17.350	0.0	30.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.4 BFP DISCHARGE HDR											
FW-01.5-01T	14	6.776	3.881	378.8	11.635	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.5-01T (BR/SE)	14	5.723	3.278	378.8	16.888	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.5-01T (D/S)	14	4.229	2.463	378.8	5.809	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.4-02P	63	2.454	1.406	378.8	11.561	0.0	30.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.6A BFP HDR to FWH 36A											
FW-01.6A-07V	22	11.412	6.537	378.8	28.703	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-12N	30	6.462	3.701	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-03E	2	5.977	3.424	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-05E	2	5.977	3.424	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-08E	4	5.977	3.424	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-10E	3	5.654	3.238	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-01R (D/S)	7	5.169	2.961	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-09P	54	5.169	2.961	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-02P	57	4.084	2.339	378.8	16.863	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-04P	52	4.039	2.313	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-06P	52	4.039	2.313	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-11P	53	4.039	2.313	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-01R	7	2.646	1.541	378.8	5.704	0.0	30.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.6B BFP HDR to FWH 36B											
FW-01.6B-05V	22	11.412	6.537	378.8	28.703	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-10N	30	6.462	3.701	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-03E	2	5.977	3.424	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-06E	4	5.977	3.424	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-08E	3	5.654	3.238	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-07P	54	5.169	2.961	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-04P	52	4.039	2.313	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-02P	64	3.227	1.848	378.8	16.534	0.0	18.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.6C BFP HDR to FWH 36C											
FW-01.6C-05V	22	11.412	6.537	378.8	28.703	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-10N	30	6.462	3.701	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-03E	2	5.977	3.424	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-06E	4	5.977	3.424	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.6C BFP HDR to FWH 36C											
FW-01.6C-08E	3	5.654	3.238	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-04P	52	4.039	2.313	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-02P	64	3.231	1.851	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:19:30AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 0.020

Run Name: FW: FW RECIRC
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-04.1A BFP 31 RECIRC											
FW-05.1A-01V	24	0.574	0.288	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-03V	22	0.574	0.288	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2A-07P_2	9	0.505	0.257	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-09P_2	9	0.505	0.257	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-22B	2	0.396	0.198	378.8	1,500.508	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-03B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-08B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-10B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-12B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-14B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-16B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-18B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-20B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-04E	3	0.343	0.172	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-06E	1	0.323	0.162	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-24R	18	0.274	0.137	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-23P	52	0.255	0.128	378.8	1,388.613	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-21P	52	0.250	0.125	378.8	1,345.944	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-05P	53	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-09P_1	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-11P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-13P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-15P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-17P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-19P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.1A-04P_2	9	0.223	0.113	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-04.1A BFP 31 RECIRC											
FW-04.1A-06P_2	9	0.223	0.113	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-01E	4	0.218	0.109	378.8	581.324	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2A-07P_1	51	0.215	0.108	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.1A-03E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-05E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-07E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-08E	4	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2A-02P	67	0.201	0.101	378.8	1,361.711	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.1A-09P	54	0.183	0.092	378.8	553.754	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-02P	54	0.180	0.090	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2A-01R (D/S)	17	0.176	0.088	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-24R (D/S)	18	0.169	0.084	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-04R	18	0.157	0.079	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.2A-01N	30	0.147	0.074	378.8	273.656	0.0	8.625	6.927	2.860	98.41	ARD
FW-04.1A-04P_1	52	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-06P_1	52	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2A-01R	17	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-02P	58	0.125	0.063	378.8	549.199	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-10P	64	0.112	0.056	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-04R (D/S)	18	0.110	0.055	378.8	273.656	0.0	8.625	6.927	2.860	98.41	ARD
====>Grouped by Line: FW-04.1B BFP 32 RECIRC											
FW-05.1B-01V	24	0.574	0.288	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1B-03V	22	0.574	0.288	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2B-08P_2	9	0.505	0.257	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-10P_2	9	0.505	0.257	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-03B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-09B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-11B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-13B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-15B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-17B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-19B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-21B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-05E	1	0.323	0.162	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-04.1B BFP 32 RECIRC											
FW-04.2B-07E	1	0.323	0.162	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-23R	18	0.274	0.137	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-22P	52	0.253	0.127	378.8	1,374.167	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-04P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-10P_1	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-12P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-14P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-16P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-18P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-20P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.1B-03E	4	0.234	0.117	378.8	650.542	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-04P_2	9	0.223	0.113	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-06P_2	9	0.223	0.113	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-01E	4	0.221	0.111	378.8	593.847	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2B-06P	51	0.215	0.108	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-08P_1	51	0.215	0.108	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.1B-05E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-07E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-08E	4	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2B-02P	67	0.196	0.098	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.1B-02P	54	0.185	0.092	378.8	561.160	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-04P_1	54	0.180	0.090	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-09P	54	0.180	0.090	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2B-23R (D/S)	18	0.178	0.089	378.8	585.288	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2B-01R (D/S)	17	0.176	0.088	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-05.1B-04R	18	0.157	0.079	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.2B-01N	30	0.147	0.074	378.8	273.656	0.0	8.625	6.927	2.860	98.41	ARD
FW-04.1B-06P_1	52	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2B-01R	17	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1B-02P	58	0.124	0.062	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-10P	64	0.112	0.056	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1B-04R (D/S)	18	0.110	0.055	378.8	273.656	0.0	8.625	6.927	2.860	98.41	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:20:10AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: FW: SG HEADERS
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.3 SG INLET HEADER											
FW-02.1B-11T (BR/SE)	12	2.107	1.260	430.4	17.403	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-11T (D/S)	12	1.930	1.154	430.4	12.137	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.1B-11T	12	1.222	0.741	430.4	6.059	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.3-01P	62	0.940	0.562	430.4	12.105	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.4 SG INLET HEADER											
FW-02.4-19T	14	3.237	1.935	430.4	18.116	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-19T (D/S)	14	2.756	1.648	430.4	13.587	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.1C-11T (D/S)	12	2.415	1.444	430.4	18.135	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-04E	2	2.156	1.289	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-05E	4	2.156	1.289	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-07E	2	2.156	1.289	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-09E	2	2.156	1.289	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-11E	2	2.156	1.289	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-13E	2	2.156	1.289	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-15E	2	2.156	1.289	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-17E	2	2.156	1.289	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.1C-11T (BR/SE)	12	2.108	1.260	430.4	17.408	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-11T	12	1.926	1.151	430.4	12.096	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-06P	54	1.865	1.115	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-19T (BR/SE)	14	1.848	1.105	430.4	13.066	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.4-02T (D/S)	15	1.748	1.045	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-02T	15	1.748	1.045	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-18P	52	1.471	0.880	430.4	18.108	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-08P	52	1.457	0.871	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-10P	52	1.457	0.871	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.4 SG INLET HEADER											
FW-02.4-12P_1	52	1.457	0.871	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-14P	52	1.457	0.871	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-16P	52	1.457	0.871	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-03P	65	1.165	0.697	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-12P_2	9	0.829	0.503	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.5 SG INLET HEADER											
FW-02.5-04T	14	2.756	1.648	430.4	13.587	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-04T (D/S)	14	2.197	1.314	430.4	9.058	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-04T (BR/SE)	14	1.856	1.110	430.4	13.157	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.5-01T (D/S)	15	1.504	0.899	430.4	13.595	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-01T	15	1.504	0.899	430.4	13.595	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-03T (D/S)	15	1.489	0.890	430.4	13.374	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-03T	15	1.489	0.890	430.4	13.374	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-06P	65	1.002	0.599	430.4	13.581	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-02P	65	0.992	0.593	430.4	13.374	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.6 SG INLET HEADER											
FW-02.6-03T	14	2.196	1.313	430.4	9.049	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.6-03T (BR/SE)	14	1.857	1.111	430.4	13.170	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.6-03T (D/S)	14	1.275	0.773	430.4	4.524	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.6-01P	63	0.798	0.477	430.4	9.049	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.8A SG HDR to SG 31											
FW-02.8A-05V	24	4.713	2.818	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8A-19V	22	3.909	2.337	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-04V	22	3.709	2.218	430.4	22.434	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-18V	25	3.442	2.058	430.4	19.921	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-12F	6	3.000	1.794	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-26R	18	2.362	1.412	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8A-02E	2	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-10E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-06E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-16E	2	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-22E	4	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-23E	4	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-02E	2	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8A SG HDR to SG 31											
FW-03.1A-08B	4	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-05B	3	1.785	1.067	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-14E	1	1.733	1.036	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-20P	58	1.720	1.028	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-04B	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-07B	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-11P_1	54	1.680	1.005	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-07P	54	1.680	1.005	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-24P	54	1.632	0.976	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-25R (D/S)	7	1.614	1.614	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8A-08T (D/S)	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-03T (D/S)	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-03T	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-26R (D/S)	18	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-08T	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-21T (D/S)	15	1.530	0.915	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-21T	15	1.530	0.915	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-17P	52	1.313	0.785	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-01P	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-03P	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-06P_1	53	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-15P	51	1.155	0.691	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-25R	7	1.099	1.099	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-01P	64	1.055	0.631	430.4	13.046	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-09P	65	1.050	0.628	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-11P_2	9	0.678	0.411	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-06P_2	9	0.650	0.394	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-13P	56	0.600	0.359	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-09N	30	0.030	0.018	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.8B SG HDR to SG 32											
FW-02.8B-06V	24	4.713	2.818	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8B-20V	22	3.909	2.337	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-05V	22	3.709	2.218	430.4	22.434	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-19V	25	3.442	2.058	430.4	19.921	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8B SG HDR to SG 32											
FW-02.8B-25R (D/S)	7	3.017	1.804	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8B-13F	6	3.000	1.794	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-11E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-02E	2	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-07E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-17E	2	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-23E	4	1.939	1.159	430.4	12.904	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-02E	2	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-08E	2	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-25R	7	1.838	1.099	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-05B	3	1.785	1.067	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-11E	3	1.785	1.067	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-15E	1	1.733	1.036	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-21P	58	1.720	1.028	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-12P_1	54	1.696	1.014	430.4	13.144	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-04B	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-07B	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-10E	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-08P	54	1.680	1.005	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-24P	54	1.632	0.976	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-04T (D/S)	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-09T (D/S)	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-04T	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-09T	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-22T (D/S)	15	1.530	0.915	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-22T	15	1.530	0.915	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-26R	18	1.412	1.412	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8B-03P	52	1.313	0.785	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-18P	52	1.313	0.785	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-01P	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-03P	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-06P	53	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-09P	53	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-16P	51	1.155	0.691	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8B SG HDR to SG 32											
FW-02.8B-10P	65	1.050	0.628	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-01P	64	1.050	0.628	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-26R (D/S)	18	0.942	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-12P_2	9	0.678	0.411	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-14P	56	0.600	0.359	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-12N	30	0.030	0.018	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.8C SG HDR to SG 34											
FW-02.8C-06V	24	4.713	2.818	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8C-19V	22	3.909	2.337	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-05V	22	3.709	2.218	430.4	22.434	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-18V	25	3.442	2.058	430.4	19.921	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-13F	6	3.000	1.794	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-24R (D/S)	7	2.699	1.614	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8C-25R	18	2.362	1.412	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8C-11E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-02E	2	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-07E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-16E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-22E	4	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-02E	2	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-05B	2	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-10E	4	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-24R	7	1.838	1.099	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-15E	1	1.733	1.036	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-20P	58	1.720	1.028	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-04B	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-07B	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-12E	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-14E	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-12P_1	54	1.680	1.005	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-08P	54	1.680	1.005	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-23P	54	1.632	0.976	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-11P	54	1.632	0.976	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-09T (D/S)	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8C SG HDR to SG 34											
FW-02.8C-04T (D/S)	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-04T	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-25R (D/S)	18	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-09T	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-21T (D/S)	15	1.530	0.915	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-21T	15	1.530	0.915	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-03P	52	1.313	0.785	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-17P	52	1.313	0.785	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-01P	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-03P	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-06P_1	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-16P_1	51	1.122	0.671	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-09P	51	1.122	0.671	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-13P	51	1.122	0.671	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-01P	64	1.051	0.629	430.4	12.975	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-10P	65	1.050	0.628	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-12P_2	9	0.678	0.411	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-16P_2	9	0.650	0.394	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-06P_2	9	0.650	0.394	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-14P	56	0.600	0.359	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-15N	30	0.030	0.018	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.8D SG HDR to SG 33											
FW-02.8D-06V	24	4.713	2.818	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8D-18V	22	3.909	2.337	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-05V	22	3.709	2.218	430.4	22.434	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-17V	25	3.442	2.058	430.4	19.921	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-24R (D/S)	7	3.017	1.804	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8D-13F	6	3.000	1.794	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-25R	18	2.640	1.578	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8D-11E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-02E	2	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-07E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-15E	2	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-21E	4	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8D SG HDR to SG 33											
FW-02.8D-22E	4	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-02E	2	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.7-04T (BR/SE)	14	1.859	1.112	430.4	13.194	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-24R	7	1.838	1.099	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-05B	3	1.785	1.067	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-08B	3	1.785	1.067	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-19P	58	1.720	1.028	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-04B	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-07B	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-12P_1	54	1.680	1.005	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-08P	54	1.680	1.005	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-23P	54	1.632	0.976	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-04T (D/S)	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-09T (D/S)	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-04T	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-25R (D/S)	18	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-09T	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-20T (D/S)	15	1.530	0.915	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-20T	15	1.530	0.915	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-03P	52	1.313	0.785	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-16P	52	1.313	0.785	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.7-04T	14	1.281	0.777	430.4	4.547	0.0	30.000	6.657	0.000	69.01	HBD
FW-03.1D-01P	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-03P	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-06P_1	53	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-09P	53	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-01P	64	1.054	0.630	430.4	13.033	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-10P	65	1.050	0.628	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.7-02T (D/S)	15	0.686	0.416	430.4	4.458	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.6-02T (D/S)	15	0.686	0.416	430.4	4.458	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.6-02T	15	0.686	0.416	430.4	4.458	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.7-02T	15	0.686	0.416	430.4	4.458	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.8D-12P_2	9	0.678	0.411	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-06P_2	9	0.650	0.394	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8D SG HDR to SG 33											
FW-02.8D-14P	56	0.600	0.359	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.7-01P	63	0.464	0.282	430.4	4.532	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.7-03P	65	0.464	0.282	430.4	4.532	0.0	30.000	6.657	0.000	69.01	HBD
FW-03.1D-10N	30	0.030	0.018	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:20:22AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HD PMP TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-11.1A HD PMP 31 to HDR											
HD-12.2A-06O	6	11.614	7.518	370.3	33.430	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.1A-01V	24	11.191	7.244	370.3	31.512	0.0	8.625	6.959	0.000	53.12	ARD
HD-11.2A-01R (D/S)	7	6.762	4.377	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-11.1A-01N	31	6.495	4.204	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.1A-02V	25	6.495	4.204	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-01V	22	6.495	4.204	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.1A-02R	18	5.917	3.830	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-12.2A-03E	4	4.807	3.111	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.2A-01R	7	4.547	2.943	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-04T (D/S)	15	3.897	2.523	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.1A-02R (D/S)	18	3.897	2.523	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-04T	15	3.897	2.523	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-02P	58	2.858	1.850	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-05P	65	2.692	1.743	370.3	14.043	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-07P	56	2.323	1.504	370.3	33.430	0.0	12.750	6.959	0.000	53.12	ARD
====>Grouped by Line: HD-11.1B HD PMP 32 to HDR											
HD-12.2B-06O	6	11.614	7.518	370.3	33.430	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.1B-01V	24	10.566	6.840	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-11.2B-01R (D/S)	7	6.762	4.377	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-11.1B-01N	31	6.495	4.204	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.1B-02V	25	6.495	4.204	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-01V	22	6.495	4.204	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.1B-02R	18	5.917	3.830	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-12.2B-08T (BR/SE)	10	5.196	3.364	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-03E	4	4.843	3.135	370.3	13.430	0.0	12.750	6.959	0.000	53.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-11.1B HD PMP 32 to HDR											
HD-11.2B-01R	7	4.547	2.943	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-08T (D/S)	10	4.521	3.175	370.3	8.492	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.2B-04T (D/S)	15	3.897	2.523	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.1B-02R (D/S)	18	3.897	2.523	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-04T	15	3.897	2.523	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-02P	58	2.882	1.866	370.3	13.448	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.3-01P	60	2.711	1.905	370.3	8.488	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.2B-05P	65	2.607	1.688	370.3	13.343	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-07P	56	2.323	1.504	370.3	33.430	0.0	12.750	6.959	0.000	53.12	ARD
====>Grouped by Line: HD-12.2A HD PMP HDR to CD SYS											
HD-12.2A-08T (D/S)	12	7.182	3.836	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-01E	4	6.632	3.542	370.3	17.617	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-17E	2	6.481	3.462	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-03E	2	6.481	3.462	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-07E	2	6.481	3.462	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-09E	2	6.481	3.462	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-11E	2	6.481	3.462	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-13E	2	6.481	3.462	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-05E	1	5.781	3.087	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-02P	54	5.605	2.994	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-15T (D/S)	15	5.255	2.807	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-15T	15	5.255	2.807	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.2A-08T (BR/SE)	12	4.417	2.859	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.4-18P	52	4.379	2.339	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-04P	52	4.379	2.339	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-08P	52	4.379	2.339	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-10P_1	52	4.379	2.339	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-12P	52	4.379	2.339	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-14P	52	4.379	2.339	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-06P	51	3.854	2.058	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.2A-08T	12	3.745	2.623	370.3	8.595	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-16P	65	3.503	1.871	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-10P_2	9	2.441	1.330	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC3 (v4).DB

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:20:36AM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 31 TO COND
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-13.1 FWH 31A to Cond 33											
HD-13.1-18E (D/S)	16	4.248	2.609	102.3	46.214	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.1-20R	18	3.837	2.357	102.3	46.214	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.1-19V	8	2.482	1.525	102.3	9.199	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.1-01N	31	1.241	0.765	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-09V	22	1.241	0.765	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-21V	22	1.241	0.765	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-23N	30	0.993	0.612	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-08E	4	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-03E	4	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-10E	4	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-05E	2	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-11E	4	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-14E	2	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-16E	2	0.918	0.566	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-12E	3	0.869	0.535	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-04P	54	0.794	0.490	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-07T (D/S)	15	0.745	0.459	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-07T	15	0.745	0.459	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-20R (D/S)	18	0.745	0.459	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-02P	61	0.670	0.413	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-06P	52	0.620	0.382	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-13P	53	0.620	0.382	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-15P	52	0.620	0.382	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-17P	52	0.620	0.382	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-18E	16	0.620	0.382	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-22P	58	0.546	0.337	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-13.2 FWH 31B to Cond 32											
HD-13.2-17V	8	2.472	1.517	102.2	9.114	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.2-16E (D/S)	16	1.532	0.940	102.2	9.114	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.2-18R	18	1.384	0.849	102.2	9.114	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.2-01N	31	1.233	0.759	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-08V	22	1.233	0.759	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-19V	22	1.233	0.759	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-07T	12	1.011	0.622	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-21N	30	0.986	0.607	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-03E	4	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-09E	4	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-10E	4	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-12E	2	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-14E	2	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-07T (BR/SE)	12	0.838	0.516	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-05E	1	0.814	0.501	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-04P	54	0.789	0.486	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-11P	54	0.789	0.486	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-18R (D/S)	18	0.740	0.455	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-02P	61	0.666	0.410	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-13P	52	0.616	0.379	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-15P	52	0.616	0.379	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-16E	16	0.616	0.379	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-06P	51	0.542	0.334	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-20P	58	0.542	0.334	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
====>Grouped by Line: HD-13.3 FWH 31C to Cond 31											
HD-13.3-17V	8	2.475	1.522	102.1	9.169	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.3-16E (D/S)	16	1.535	0.944	102.1	9.169	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.3-18R	18	1.386	0.852	102.1	9.169	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.3-01N	31	1.235	0.763	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-08V	22	1.235	0.763	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-19V	22	1.235	0.763	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-07T	12	1.013	0.626	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-21N	30	0.988	0.610	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-03E	4	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-13.3 FWH 31C to Cond 31											
HD-13.3-09E	4	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-10E	4	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-12E	2	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-14E	2	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-07T (BR/SE)	12	0.840	0.519	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-05E	1	0.815	0.503	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-04P	54	0.791	0.488	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-11P	54	0.791	0.488	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-18R (D/S)	18	0.741	0.458	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-02P	61	0.667	0.412	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-13P	52	0.618	0.381	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-15P	52	0.618	0.381	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-16E	16	0.618	0.381	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-06P	51	0.544	0.336	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-20P	58	0.544	0.336	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC3 (v4).DB

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:20:52AM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 32 TO HTR 31
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-08.1A FWH 32A to FWH 31A											
HD-09.1A-01V	24	4.551	1.088	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1A-01N	31	3.378	0.811	165.8	2.896	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-07T (D/S)	10	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-10V	22	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-01V	22	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2A-01R (D/S)	7	2.913	0.696	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1A-07T (BR/SE)	10	2.598	0.625	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.1A-02R	18	2.549	0.609	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1A-09E	2	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-03E	4	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-05E	2	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2A-01R	7	2.274	0.547	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-04P	54	2.079	0.500	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-08P	60	2.008	0.469	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.1A-02R (D/S)	18	1.949	0.469	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-02P	61	1.933	0.422	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-06P	52	1.624	0.390	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-04T	13	0.002	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-03E	3	0.001	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-04T (D/S)	13	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-04T (BR/SE)	13	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-02P	58	0.001	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-08.1B FWH 32B to FWH 31B											
HD-09.1B-01V	24	4.551	1.088	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1B-01N	31	3.378	0.811	165.8	2.896	0.0	12.750	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-08.1B FWH 32B to FWH 31B											
HD-8.1B-07T (D/S)	10	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-10V	22	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-01V	22	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2B-01R (D/S)	7	2.913	0.696	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1B-07T (BR/SE)	10	2.598	0.625	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.1B-02R	18	2.549	0.609	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1B-09E	2	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-03E	4	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-05E	2	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2B-01R	7	2.274	0.547	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-04P	54	2.079	0.500	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-08P	60	2.008	0.469	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.1B-02R (D/S)	18	1.949	0.469	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-02P	61	1.933	0.422	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-06P	52	1.624	0.390	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-04T	13	0.002	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-03E	3	0.001	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-04T (BR/SE)	13	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-04T (D/S)	13	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-02P	58	0.001	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-08.1C FWH 32C to FWH 31C											
HD-09.1C-01V	24	4.551	1.088	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1C-01N	31	3.378	0.811	165.8	2.896	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-07T (D/S)	10	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-10V	22	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-01V	22	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2C-01R (D/S)	7	2.913	0.696	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1C-07T (BR/SE)	10	2.598	0.625	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.1C-02R	18	2.549	0.609	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1C-09E	2	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-03E	4	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-05E	2	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2C-01R	7	2.274	0.547	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-04P	54	2.079	0.500	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-08.1C FWH 32C to FWH 31C											
HD-8.1C-08P	60	2.008	0.469	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.1C-02R (D/S)	18	1.949	0.469	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-02P	61	1.933	0.422	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-06P	52	1.624	0.390	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-04T	13	0.002	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-03E	3	0.001	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-04T (BR/SE)	13	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-04T (D/S)	13	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-02P	58	0.001	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.3A FWH 32A to FWH 31A											
HD-09.3A-02N	30	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.3A-01P	64	0.001	0.000	165.8	1.469	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.3B FWH 32B to FWH 31B											
HD-09.3B-02N	30	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.3B-01P	64	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.3C FWH 32C to FWH 31C											
HD-09.3C-02N	30	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.3C-01P	64	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.4A FWH 32A to FWH 31A											
HD-09.4A-04N	30	0.001	0.000	165.8	1.452	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4A-02E	4	0.001	0.000	165.8	1.495	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4A-01P	63	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4A-03P	54	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.4B FWH 32B to FWH 31B											
HD-09.4B-04N	30	0.001	0.000	165.8	1.452	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4B-02E	4	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4B-01P	63	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4B-03P	54	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.4C FWH 32C to FWH 31C											
HD-09.4C-04N	30	0.001	0.000	165.8	1.452	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4C-02E	4	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4C-01P	63	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4C-03P	54	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC3 (v4).DB

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:21:24AM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 33 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A											
HD-07.1A-01V	24	9.831	2.817	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-6.2A-01E (D/S)	16	5.828	1.746	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.2A-03T (BR/SE)	13	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-01N	31	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-01V	22	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-03T	13	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.1A 02R	18	5.264	1.577	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-6.1A-30E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-03E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-32E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-05E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-34E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-07E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-09E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-41E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-11E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-13E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-14E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-16E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-18E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-20E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-22E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-24E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-26E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-15P	54	3.963	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-37E	3	3.844	1.172	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A											
HD-6.1A-42P	54	3.651	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-39E	1	3.624	1.105	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-10P	54	3.514	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-02P	61	3.344	0.904	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-44T (D/S)	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-28T (D/S)	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-44T	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.1A 02R (D/S)	18	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-28T	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-05R	18	3.176	0.938	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-08P	52	3.096	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-19P	52	3.096	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.3A-01N	30	2.952	0.907	204.2	2.875	0.0	10.750	7.096	0.000	9.12	ARD
HD-6.1A-31P	52	2.878	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-38P	53	2.809	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-04P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-33P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-06P_1	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-12P_1	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2A-01E	16	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-43P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-17P_1	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-21P_1	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-23P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-25P_1	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-27P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-40P	51	2.416	0.737	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-02P	58	2.416	0.737	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-04P	63	2.268	0.670	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-05R (D/S)	18	2.204	0.652	204.2	2.747	0.0	10.750	7.096	0.000	9.12	ARD
HD-6.1A-29P	65	2.196	0.670	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-06P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-12P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-17P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A											
HD-6.1A-21P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-25P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-06.1B FWH 33B to FWH 32B											
HD-07.1B-01V	24	9.401	2.817	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-6.2B-01E (D/S)	16	5.828	1.746	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-6.1B-01N	31	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-03T (BR/SE)	13	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-01V	22	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-03T	13	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.1B-02R	18	5.264	1.577	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-6.1B-25E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-03E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-04E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-27E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-29E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-06E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-08E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-36E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-12E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-13E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-15E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-17E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-19E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-21E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-14P	54	3.963	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-32E	3	3.844	1.172	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-10E	3	3.844	1.172	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-34E	1	3.624	1.105	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-05P_1	54	3.514	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-09P	54	3.514	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-37P	54	3.514	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-16P_1	54	3.514	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-02P	61	3.344	0.904	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-38T (D/S)	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1B FWH 33B to FWH 32B											
HD-6.1B-23T (D/S)	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-38T	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.1B-02R (D/S)	18	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-23T	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-05R	18	3.176	0.938	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-07P	52	3.096	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-20P	52	3.096	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.3B-01N	30	2.952	0.907	204.2	2.875	0.0	10.750	7.096	0.000	9.12	ARD
HD-6.1B-26P	52	2.878	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-33P	53	2.809	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-28P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-11P_1	53	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2B-01E	16	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-18P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-22P_1	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-35P	51	2.416	0.737	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-02P	58	2.416	0.737	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-04P	63	2.268	0.670	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-05R (D/S)	18	2.204	0.652	204.2	2.747	0.0	10.750	7.096	0.000	9.12	ARD
HD-6.1B-24P	65	2.196	0.670	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-05P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-11P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-16P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-22P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-06.1C FWH 33C to FWH 32C											
HD-07.1C-01V	24	9.401	2.817	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-6.2C-01E (D/S)	16	5.828	1.746	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.2C-03T (BR/SE)	13	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-01N	31	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-01V	22	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-03T	13	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.1C-02R	18	5.264	1.577	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-6.1C-03E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-21E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1C FWH 33C to FWH 32C											
HD-6.1C-05E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-23E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-07E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-25E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-09E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-32E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-11E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-13E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-15E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-17E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-28E	3	3.844	1.172	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-33P	54	3.684	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-30E	1	3.624	1.105	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-08P_1	54	3.514	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-02P	61	3.344	0.904	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-34T (D/S)	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-19T (D/S)	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-34T	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.1C-02R (D/S)	18	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-19T	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-05R	18	3.176	0.938	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-06P	52	3.096	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-12P	52	3.096	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.3C-01N	30	2.952	0.907	204.2	2.875	0.0	10.750	7.096	0.000	9.12	ARD
HD-6.1C-22P	52	2.878	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-29P	53	2.809	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-04P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-24P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-10P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2C-01E	16	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-14P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-16P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-18P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-31P	51	2.416	0.737	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1C FWH 33C to FWH 32C											
HD-07.2C-02P	58	2.416	0.737	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-04P	63	2.268	0.670	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-05R (D/S)	18	2.204	0.652	204.2	2.747	0.0	10.750	7.096	0.000	9.12	ARD
HD-6.1C-20P	65	2.196	0.670	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-35P	65	2.196	0.670	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-08P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.

Plant: Indian Point

Unit: 3

DB Name: IPEC3 (v4).DB

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM

AnalysisDate/Time: 7/22/2011 10:21:45AM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)

Duty Factor (Global) : 1.000

Run Name: HD: HTR 34 TO HTR 33

Ending Period: RO17

Total Plant Operating Hours:220,317

WRA Data Option: NFA->ARD->HBD->COMP

Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-04.1A FWH 34A to FWH 33A											
HD-05.1A-01V	24	14.782	7.124	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-4.2A-02V	22	10.486	5.061	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3A-01R (D/S)	7	9.461	4.559	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1A-02R	18	8.278	3.989	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-4.3A-01R	7	7.340	3.543	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.2A-01E (D/S)	16	6.501	3.138	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-05.2A-01T (BR/SE)	13	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-01N	31	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-01T	13	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-06N	30	4.170	2.068	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-05E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-04E	4	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-08E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-10E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-12E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-14E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-03T (D/S)	15	3.675	1.551	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-03T	15	3.675	1.551	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-06E	3	3.648	1.809	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-03E	1	3.440	1.706	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-05P	54	3.336	1.654	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-02P	61	3.307	1.396	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.1A-02R (D/S)	18	3.127	1.551	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-11P	52	2.802	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-15P	52	2.802	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-07P	53	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD

Sorted By: Average Wear Rate

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-04.1A FWH 34A to FWH 33A											
HD-4.1A-09P_1	52	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-13P	52	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.2A-01E	16	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-04P	65	2.450	1.034	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-02P	63	2.241	1.034	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-09P_2	9	1.147	0.569	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-04.1B FWH 34B to FWH 33B											
HD-05.1B-01V	24	14.782	7.124	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-4.2B-02V	22	10.486	5.061	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3B-01R (D/S)	7	9.461	4.559	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1B-02R	18	8.278	3.989	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-4.3B-01R	7	7.340	3.543	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.2B-01E (D/S)	16	6.501	3.138	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-05.2B-01T (BR/SE)	13	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-01N	31	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-05T (D/S)	10	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-01T	13	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-05T (BR/SE)	10	4.170	2.068	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-06N	30	4.170	2.068	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-07E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-04E	4	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-09E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-12E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-14E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-16E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-10E	3	3.648	1.809	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-03E	1	3.440	1.706	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-03E	1	3.440	1.706	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-05P	54	3.336	1.654	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-02P	61	3.307	1.396	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-06P	60	3.127	1.551	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.1B-02R (D/S)	18	3.127	1.551	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-08P	52	3.062	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-13P	52	2.802	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-04.1B FWH 34B to FWH 33B											
HD-4.1B-17P	52	2.802	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-04P	51	2.695	1.137	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-11P_1	53	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-15P	52	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.2B-01E	16	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-02P	63	2.241	1.034	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-11P_2	9	1.147	0.569	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-04.1C FWH 34C to FWH 33C											
HD-05.1C-01V	24	14.782	7.124	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-4.2C-02V	22	10.486	5.061	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3C-01R (D/S)	7	9.461	4.559	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1C-02R	18	8.278	3.989	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-4.3C-01R	7	7.340	3.543	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.2C-01E (D/S)	16	6.501	3.138	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-05.2C-01T (BR/SE)	13	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-01N	31	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-01T	13	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-06N	30	4.170	2.068	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-03E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-08E	4	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-04E	4	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-05E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-10E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-12E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-14E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-16E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-18E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-20E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-22E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-06T (D/S)	15	3.675	1.551	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-06T	15	3.675	1.551	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-03E	1	3.440	1.706	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-09P	54	3.336	1.654	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-05P	54	3.336	1.654	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-04.1C FWH 34C to FWH 33C											
HD-4.1C-02P	61	3.307	1.396	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.1C-02R (D/S)	18	3.127	1.551	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-11P	52	3.062	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-19P	52	2.802	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-23P	52	2.802	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-04P	52	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-13P_1	52	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-15P	52	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-17P_1	52	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-21P	52	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.2C-01E	16	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-07P	65	2.450	1.034	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-02P	63	2.241	1.034	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-13P_2	9	1.147	0.569	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-17P_2	9	1.147	0.569	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:21:55AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 35 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source	
====>Grouped by Line: HD-03.1A FWH 35A to HD TK												
HD-03.1A-15V	22	2.413	1.483	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1A-01N	31	2.404	1.477	379.8	3.077	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1A-16N	30	1.930	1.186	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1A-03E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1A-05E	4	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1A-07E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1A-09E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1A-11E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1A-12E	4	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1A-14E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1A-06P	54	1.544	0.949	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1A-13P	54	1.544	0.949	379.8	3.116	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1A-02P	61	1.303	0.801	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1A-04P	52	1.207	0.741	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1A-08P	52	1.207	0.741	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1A-10P	52	1.207	0.741	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD	
====>Grouped by Line: HD-03.1B FWH 35B to HD TK												
HD-03.1B-13V	22	2.413	1.483	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1B-01N	31	2.404	1.477	379.8	3.077	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1B-14N	30	1.930	1.186	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1B-03E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1B-05E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1B-07E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1B-09E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1B-10E	4	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source	
====>Grouped by Line: HD-03.1B FWH 35B to HD TK												
HD-03.1B-12E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1B-11P	54	1.544	0.949	379.8	3.116	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1B-02P	61	1.303	0.801	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1B-04P	52	1.207	0.741	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1B-06P	52	1.207	0.741	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1B-08P	52	1.207	0.741	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD	
====>Grouped by Line: HD-03.1C FWH 35C to HD TK												
HD-03.1C-17V	22	2.413	1.483	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-01N	31	2.404	1.477	379.8	3.077	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-18N	30	1.930	1.186	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-03E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-05E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-07E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-09E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-11E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-13E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-14E	4	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-16E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-15P	54	1.544	0.949	379.8	3.116	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-02P	61	1.303	0.801	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-04P	52	1.207	0.741	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-06P	52	1.207	0.741	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-08P	52	1.207	0.741	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-10P	52	1.207	0.741	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD	
HD-03.1C-12P	52	1.207	0.741	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD	

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:22:05AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 36 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-01.1A FWH 36A to HD TK											
HD-01.2A-01R (D/S)	7	4.846	2.681	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1A-02R	18	4.240	2.345	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-01.1A-01N	31	3.465	1.982	394.5	5.239	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2A-02N	30	2.852	1.631	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-03E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-05E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-07E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-09E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.2A-01R	7	2.442	1.397	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.1A-02R (D/S)	18	2.139	1.223	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-02P	61	1.884	1.078	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-04P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-06P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-08P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-10P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.1A 01V	24	0.061	0.034	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.2A-01V	22	0.029	0.016	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
====>Grouped by Line: HD-01.1B FWH 36B to HD TK											
HD-01.2B-01R (D/S)	7	4.846	2.681	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1B-02R	18	4.240	2.345	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-01.1B-01N	31	3.465	1.982	394.5	5.239	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2B-02N	30	2.852	1.631	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-03E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-05E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-07E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-01.1B FWH 36B to HD TK											
HD-01.2B-01R	7	2.442	1.397	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.1B-02R (D/S)	18	2.139	1.223	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-02P	61	1.884	1.078	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-04P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-06P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.1B-01V	24	0.061	0.034	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.2B-01V	22	0.029	0.016	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
====>Grouped by Line: HD-01.1C FWH 36C to HD TK											
HD-01.2C-01R (D/S)	7	4.846	2.681	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1C-02R	18	4.240	2.345	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-01.1C-01N	31	3.465	1.982	394.5	5.239	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2C-02N	30	2.852	1.631	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-11E	2	2.694	1.540	394.5	5.524	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-03E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-05E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-07E	4	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-09E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.2C-01R	7	2.442	1.397	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-08P	54	2.233	1.277	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.1C-02R (D/S)	18	2.139	1.223	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-02P	61	1.884	1.078	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-04P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-06P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-10P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.1C-01V	24	0.061	0.034	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.2C-01V	22	0.029	0.016	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD

Company: Entergy Nuclear Operations, Inc.

Plant: Indian Point

Unit: 3

DB Name: IPEC3 (v4).DB

Run Name: HD: HTR DN TO PUMPS

Ending Period: RO17

Total Plant Operating Hours:220,317

WRA Data Option: NFA->ARD->HBD->COMP

Line Correction Factor: 1.000

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM

AnalysisDate/Time: 7/22/2011 10:22:16AM

CHECWOKS SFA Version: 3.0 SP-2 (build 200)

Duty Factor (Global) : 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-10.1A HD TK to HD PMP 31											
HD-10.2A-07X	6	3.317	2.729	383.2	7.293	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-04V	22	2.736	2.248	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-06N	30	2.189	1.798	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-02E	3	1.915	1.574	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-01E (D/S)	16	1.696	1.394	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.1A-01N	31	1.640	1.348	383.2	3.408	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.2A-03P	53	1.368	1.124	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-05P	58	1.204	0.989	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.1A-02P	61	0.859	0.706	383.2	3.299	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.2A-01E	16	0.796	0.654	383.2	3.299	0.0	24.000	6.894	0.000	53.12	HBD
====>Grouped by Line: HD-10.1B HD TK to HD PMP 32											
HD-10.2B-06X	6	3.317	2.729	383.2	7.293	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-03V	22	2.736	2.248	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-05N	30	2.189	1.798	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-02P	54	1.751	1.439	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-01E (D/S)	16	1.696	1.394	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.1B-01N	31	1.640	1.348	383.2	3.408	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.2B-04P	58	1.204	0.989	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.1B-02P	61	0.859	0.706	383.2	3.299	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.2B-01E	16	0.796	0.654	383.2	3.299	0.0	24.000	6.894	0.000	53.12	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC3 (v4).DB

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:22:25AM
 CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MS 31 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
=====>Grouped by Line: MSD-01.1A_1 MSEP 31A to HDR											
MSD-01.1A-01N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-02T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-02T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-03P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
=====>Grouped by Line: MSD-01.1A_2 MSEP 31A to HDR											
MSD-01.1A-04N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-08P	61	0.117	0.055	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
=====>Grouped by Line: MSD-01.1A_3 MSEP 31A to HDR											
MSD-01.1A-06T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-05N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-06T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-07P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
=====>Grouped by Line: MSD-01.1B_1 MSEP 31B to HDR											
MSD-01.1B-01N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-02T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-02T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-03P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
=====>Grouped by Line: MSD-01.1B_2 MSEP 31B to HDR											
MSD-01.1B-04N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-08P	61	0.117	0.055	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
=====>Grouped by Line: MSD-01.1B_3 MSEP 31B to HDR											
MSD-01.1B-06T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-05N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-06T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-07P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.2A MSEP 31A DR HDR											
MSD-01.2A-01T (D/S)	12	0.320	0.151	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.2A-01T	12	0.178	0.084	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.2A-01T (BR/SE)	12	0.147	0.070	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.2B MSEP 31B DR HDR											
MSD-01.2B-01T (D/S)	12	0.320	0.151	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.2B-01T	12	0.178	0.084	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.2B-01T (BR/SE)	12	0.147	0.070	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.3A HDR to MSEP TK 31A											
MSD-01.3A-01T (BR/SE)	11	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-04V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-06V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-08N	30	0.444	0.209	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-03E	2	0.410	0.194	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-01T	11	0.390	0.184	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-02P	61	0.299	0.141	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-05P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-07P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-01T (D/S)	11	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.3B HDR to MSEP TK 31B											
MSD-01.3B-01T (BR/SE)	11	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-04V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-06V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-08N	30	0.444	0.209	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-03E	2	0.410	0.194	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-01T	11	0.390	0.184	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-02P	61	0.299	0.141	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-05P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-07P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-01T (D/S)	11	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC3 (v4).DB

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:22:34AM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MS 32 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source	
=====>Grouped by Line: MSD-01.6A_1 MSEP 32A to HDR												
MSD-01.6A-01N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.6A-02T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.6A-02T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.6A-03P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
=====>Grouped by Line: MSD-01.6A_2 MSEP 32A to HDR												
MSD-01.6A-04N	31	0.289	0.136	382.2	0.241	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.6A-08P	61	0.117	0.055	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
=====>Grouped by Line: MSD-01.6A_3 MSEP 32A to HDR												
MSD-01.6A-05N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.6A-06T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.6A-06T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.6A-07P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
=====>Grouped by Line: MSD-01.6B_1 MSEP 32B to HDR												
MSD-01.6B-02T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.6B-01N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.6B-02T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.6B-03P	60	0.132	0.063	382.2	0.181	0.0	12.750	6.962	0.000	83.00	ARD	
=====>Grouped by Line: MSD-01.6B_2 MSEP 32B to HDR												
MSD-01.6B-04N	31	0.289	0.136	382.2	0.241	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.6B-08P	61	0.119	0.056	382.2	0.181	0.0	12.750	6.962	0.000	83.00	ARD	
=====>Grouped by Line: MSD-01.6B_3 MSEP 32B to HDR												
MSD-01.6B-05N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.6B-06T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.6B-06T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.6B-07P	60	0.131	0.062	382.2	0.178	0.0	12.750	6.962	0.000	83.00	ARD	

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.7A MSEP 32A DR HDR											
MSD-01.7A-01T (D/S)	12	0.320	0.151	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7A-01T	12	0.178	0.084	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7A-02P	62	0.156	0.074	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7A-01T (BR/SE)	12	0.147	0.070	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.7B MSEP 32B DR HDR											
MSD-01.7B-01T (D/S)	12	0.320	0.151	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7B-01T	12	0.178	0.084	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7B-02P	62	0.159	0.075	382.2	0.358	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7B-01T (BR/SE)	12	0.147	0.070	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.8A HDR to MSEP TK 32A											
MSD-01.8A-01T (BR/SE)	11	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-04V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-06V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-08N	30	0.444	0.209	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-03E	2	0.410	0.194	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-01T	11	0.390	0.184	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-02P	61	0.299	0.141	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-05P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-07P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-01T (D/S)	11	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.8B HDR to MSEP TK 32B											
MSD-01.8B-01T (BR/SE)	11	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-04V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-06V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-08N	30	0.444	0.209	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-03E	2	0.410	0.194	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-01T	11	0.390	0.184	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-02P	61	0.303	0.143	382.2	0.535	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-05P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-07P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-01T (D/S)	11	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD

CSI Technologies, Inc.

IP3 CHECWOKS SFA Model

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 Analysis Date/Time: 7/22/2011 10:22:45AM

DB Name: IPEC3 (v4).DB

CHECWOKS SFA Version: 3.0 SP-2 (build 200)

Duty Factor (Global) : 1.000

Run Name: MSD: MS 33 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
=====>Grouped by Line: MSD-01.11A_1 MSEP 33A to HDR											
MSD-01.11A-01N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-02T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-02T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-03P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
=====>Grouped by Line: MSD-01.11A_2 MSEP 33A to HDR											
MSD-01.11A-04N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-08P	61	0.117	0.055	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
=====>Grouped by Line: MSD-01.11A_3 MSEP 33A to HDR											
MSD-01.11A-05N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-06T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-06T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-07P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
=====>Grouped by Line: MSD-01.11B_1 MSEP 33B to HDR											
MSD-01.11B-02T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-01N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-02T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-03P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
=====>Grouped by Line: MSD-01.11B_2 MSEP 33B to HDR											
MSD-01.11B-04N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-08P	61	0.117	0.055	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
=====>Grouped by Line: MSD-01.11B_3 MSEP 33B to HDR											
MSD-01.11B-06T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-05N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-06T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-07P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.12A MSEP 33A DR HDR											
MSD-01.12A-01T (D/S)	12	0.320	0.151	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12A-01T	12	0.178	0.084	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12A-02P	62	0.156	0.074	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12A-01T (BR/SE)	12	0.147	0.070	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.12B MSEP 33B DR HDR											
MSD-01.12B-01T (D/S)	12	0.320	0.151	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12B-01T	12	0.178	0.084	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12B-02P	62	0.156	0.074	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12B-01T (BR/SE)	12	0.147	0.070	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.13A HDR to MSEP TK 33A											
MSD-01.13A-01T (BR/SE)	11	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-04V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-06V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-10N	30	0.444	0.209	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-08E	2	0.435	0.205	382.2	0.563	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-03E	2	0.410	0.194	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-01T	11	0.390	0.184	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-02P	61	0.299	0.141	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-09P	52	0.289	0.136	382.2	0.553	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-07P	58	0.245	0.116	382.2	0.533	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-05P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-01T (D/S)	11	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.13B HDR to MSEP TK 33B											
MSD-01.13B-01T (BR/SE)	11	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-04V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-06V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-10N	30	0.444	0.209	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-03E	2	0.410	0.194	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-08E	2	0.410	0.194	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-01T	11	0.390	0.184	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-02P	61	0.299	0.141	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-09P	52	0.277	0.131	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-05P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-07P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line:											
MSD-01.13B-01T (D/S)	11	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD

Sorted By: Average Wear Rate

MSETP TK 33B

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC3 (v4).DB

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:23:11AM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MSDT 31 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.4A TK 31A to HD TK											
MSD-01.5A-27N	30	1.640	0.775	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.4A-01N	31	1.230	0.581	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5A-15P_2	52	1.025	0.484	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-28P_1	9	0.451	0.213	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-06V	25	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-05E	2	0.005	0.006	382.2	2.224	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-08E	4	0.005	0.006	382.2	2.224	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-24E	2	0.005	0.006	382.2	2.199	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-03E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-10E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-12E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-14E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-16E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-18E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-20E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-22E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-26E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-09P	54	0.005	0.005	382.2	2.246	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-01E (D/S)	16	0.004	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-04P	52	0.004	0.004	382.2	2.296	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-25P	52	0.004	0.004	382.2	2.248	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-23P	52	0.004	0.004	382.2	2.217	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-11P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-13P	52	0.004	0.004	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-15P_1	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-17P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.4A TK 31A to HD TK											
MSD-01.5A-19P	52	0.004	0.004	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-21P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-07P	58	0.003	0.003	382.2	2.180	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-02P	66	0.003	0.003	382.2	2.217	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.4A-03T (D/S)	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4A-03T	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4A-02P	61	0.002	0.003	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5A-01E	16	0.002	0.002	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4A-04P	65	0.002	0.002	382.2	1.273	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5A-28P_2	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-29P	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.4B TK 31B to HD TK											
MSD-01.5B-28N	30	1.640	0.775	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-12E	2	1.517	0.716	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-14E	2	1.517	0.716	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-11P_2	54	1.312	0.620	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-13P	52	1.025	0.484	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-15P	52	1.025	0.484	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.4B-01N	31	0.538	0.581	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5B-29P	9	0.451	0.213	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-30P_1	9	0.451	0.213	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-04V	25	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-06E	2	0.005	0.006	382.2	2.201	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-03E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-08E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-10E	4	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-24E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-26E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-16E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-18E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-20E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-22E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-01R (D/S)	7	0.005	0.005	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-11P_1	54	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.4B TK 31B to HD TK											
MSD-01.5B-07P	52	0.004	0.004	382.2	2.240	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-27P	52	0.004	0.004	382.2	2.213	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-25P	52	0.004	0.004	382.2	2.224	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-32P	52	0.004	0.004	382.2	2.199	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-02P	57	0.004	0.004	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-09P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-05P	58	0.003	0.003	382.2	2.207	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.4B-03E	2	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-05E	2	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5B-17P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-19P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-21P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-23P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-01R	7	0.003	0.003	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-06T (D/S)	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-06T	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-02P	61	0.002	0.003	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-04P	52	0.002	0.002	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-07P	52	0.002	0.002	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-08P	65	0.002	0.002	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5B-30P_2	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-31P	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC3 (v4).DB

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:23:36AM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MSDT 32 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.9A TK 32A to HD TK											
MSD-01.10A-25N	30	1.640	0.775	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.9A-01N	31	1.230	0.581	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10A-26P_2	9	0.451	0.213	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-06V	25	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-22E	2	0.005	0.006	382.2	2.221	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-03E	2	0.005	0.006	382.2	2.210	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-08E	2	0.005	0.006	382.2	2.207	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-05E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-12E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-14E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-16E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-18E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-20E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-24E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-10E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-01E (D/S)	16	0.004	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-21P	52	0.004	0.004	382.2	2.188	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-09P	52	0.004	0.004	382.2	2.210	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-23P	52	0.004	0.004	382.2	2.204	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-04P	52	0.004	0.004	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-13P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-15P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-17P	52	0.004	0.004	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-19P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-07P	58	0.003	0.003	382.2	2.186	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-11P	51	0.003	0.003	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.9A TK 32A to HD TK											
MSD-01.10A-02P	66	0.003	0.003	382.2	2.202	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.9A-03T (D/S)	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9A-03T	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9A-02P	61	0.002	0.003	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10A-01E	16	0.002	0.002	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9A-04P	65	0.002	0.002	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10A-26P_1	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-26P_3	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-27P	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.9B TK 32B to HD TK											
MSD-01.10B-27N	30	1.640	0.775	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-11E	2	1.517	0.716	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-13E	2	1.517	0.716	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.9B-01N	31	1.230	0.581	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10B-12P	52	1.025	0.484	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-14P	52	1.025	0.484	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-28P	9	0.451	0.213	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-29P_1	9	0.451	0.213	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-05V	25	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-07E	2	0.006	0.006	382.2	2.238	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-25E	2	0.005	0.006	382.2	2.220	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-02E	4	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-04E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-09E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-23E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-15E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-17E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-19E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-21E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-03P	54	0.005	0.005	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-01E (D/S)	16	0.004	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-26P	52	0.004	0.004	382.2	2.182	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-08P	52	0.004	0.004	382.2	2.204	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-24P	52	0.004	0.004	382.2	2.198	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.9B TK 32B to HD TK											
MSD-01.10B-10P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-06P	58	0.003	0.003	382.2	2.195	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-16P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-18P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-20P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-22P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.9B-03T (D/S)	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9B-03T	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9B-02P	61	0.002	0.003	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10B-01E	16	0.002	0.002	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9B-04P	65	0.002	0.002	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10B-29P_2	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-30P	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC3 (v4).DB

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:23:59AM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MSDT 33 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.14A TK 33A to HD TK											
MSD-01.15A-20N	30	1.640	0.775	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.14A-01N	31	1.230	0.581	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15A-02V	25	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-04E	2	0.006	0.006	382.2	2.258	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-13E	2	0.006	0.006	382.2	2.247	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-15E	2	0.006	0.006	382.2	2.242	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-05E	4	0.005	0.006	382.2	2.229	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-09E	2	0.005	0.006	382.2	2.199	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-11E	2	0.005	0.006	382.2	2.182	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-07E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-17E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-19E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-06P	54	0.005	0.005	382.2	2.198	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-01E (D/S)	16	0.004	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-10P	52	0.004	0.004	382.2	2.205	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-16P	52	0.004	0.004	382.2	2.173	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-14P	52	0.004	0.004	382.2	2.169	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-08P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-18P	52	0.004	0.004	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-12P	52	0.004	0.004	382.2	2.179	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-03P	58	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.14A-03T (D/S)	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14A-03T	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14A-02P	61	0.002	0.003	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15A-01E	16	0.002	0.002	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14A-04P	65	0.002	0.002	382.2	1.257	0.0	8.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.14A TK 33A to HD TK											
MSD-01.15A-22P	9	0.002	0.002	382.2	2.169	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-21P	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.14B TK 33B to HD TK											
MSD-01.15B-29N	30	1.640	0.775	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-13E	2	1.517	0.716	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-15E	2	1.517	0.716	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.14B-01N	31	1.230	0.581	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15B-12P_2	52	1.025	0.484	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-14P	52	1.025	0.484	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-16P	52	1.025	0.484	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-30P	9	0.451	0.213	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-31P_1	9	0.451	0.213	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-05V	25	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-27E	2	0.006	0.006	382.2	2.258	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-07E	4	0.005	0.006	382.2	2.210	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-02E	4	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-04E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-09E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-25E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-11E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-17E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-19E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-21E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-23E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-08P	54	0.005	0.005	382.2	2.219	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-03P	54	0.005	0.005	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-01E (D/S)	16	0.004	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-28P	52	0.004	0.004	382.2	2.170	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-10P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-26P	52	0.004	0.004	382.2	2.188	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-12P_1	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-18P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-20P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-22P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.14B TK 33B to HD TK											
MSD-01.15B-24P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-06P	58	0.003	0.003	382.2	2.146	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.14B-03T (D/S)	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14B-03T	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14B-02P	61	0.002	0.003	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15B-01E	16	0.002	0.002	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14B-04P	65	0.002	0.002	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15B-31P_2	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-32P	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:24:20AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: PD: PRESEPRTR DRAINS
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: PD-01.1 PRESEP 1B DR to HDR											
PD-01.2-100	6	5.631	2.456	387.3	6.460	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-09V	25	1.482	0.597	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-02.1-01T (BR/SE)	10	1.370	0.552	387.3	1.648	0.0	10.000	6.937	0.000	83.00	ARD
PD-01.2-04E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-06E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-02B	3	1.037	0.418	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-08E	1	0.978	0.394	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-01R (D/S)	7	0.948	0.382	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-03P	53	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-05P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-07P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-02.1-01T (D/S)	10	0.678	0.273	387.3	0.606	0.0	16.000	6.937	0.000	83.00	ARD
PD-01.2-01R	7	0.617	0.249	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.1-01N	31	0.001	0.000	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-01.3 PRESEP 1A DR to HDR											
PD-01.4-100	6	5.631	2.456	387.3	6.460	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-09V	25	1.482	0.597	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-06E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-02B	3	1.037	0.418	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-04E	1	0.978	0.394	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-08E	1	0.978	0.394	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-01R (D/S)	7	0.948	0.382	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-03P	53	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-07P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-05P	51	0.652	0.263	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: PD-01.3 PRESEP 1A DR to HDR											
PD-01.4-01R	7	0.617	0.249	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.3-01N	31	0.001	0.000	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-01.5 PRESEP 2B DR to HDR											
PD-01.6-14O	6	5.631	2.456	387.3	6.460	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-13V	25	1.482	0.597	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-04E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-06E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-08E	4	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-10E	4	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-02B	3	1.037	0.418	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-12E	1	0.978	0.394	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-01R (D/S)	7	0.948	0.382	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-09P	54	0.948	0.382	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-11P	54	0.948	0.382	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-03P	53	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-05P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-07P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-01R	7	0.617	0.249	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.5-01N	31	0.001	0.000	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-01.7 PRESEP 2A DR to HDR											
PD-01.8-14O	6	5.631	2.456	387.3	6.460	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-13V	25	1.482	0.597	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-04E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-06E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-08E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-10E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-02B	3	1.037	0.418	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-12E	1	0.978	0.394	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-01R (D/S)	7	0.948	0.382	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-03P	53	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-05P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-07P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-09P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-11P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: PD-01.7 PRESEP 2A DR to HDR											
PD-01.8-01R	7	0.617	0.249	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.7-01N	31	0.001	0.000	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-02.2 PRESEP HDR to HD TK											
PD-02.2-01T (BR/SE)	12	1.164	0.469	387.3	1.648	0.0	10.000	6.937	0.000	83.00	ARD
PD-02.2-01T (D/S)	12	1.010	0.407	387.3	1.216	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-22T (D/S)	15	0.739	0.298	387.3	1.216	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-22T	15	0.739	0.298	387.3	1.216	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.2-01T	12	0.556	0.224	387.3	0.606	0.0	16.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-02.3 PRESEP HDR to HD TK											
PD-02.3-01T (D/S)	12	1.431	0.577	387.3	1.825	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.3-01T (BR/SE)	12	1.164	0.469	387.3	1.648	0.0	10.000	6.937	0.000	83.00	ARD
PD-02.3-01T	12	1.010	0.407	387.3	1.216	0.0	16.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-02.4 PRESEP HDR to HD TK											
PD-02.4-200	6	11.263	5.058	387.3	22.335	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-30V	21	2.933	2.837	387.3	8.992	0.0	8.625	6.937	0.000	83.00	ARD
PD-02.4-21N	30	2.041	0.823	387.3	2.809	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-01T (D/S)	12	1.833	0.739	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-12E	2	1.654	0.667	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-16E	2	1.654	0.667	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-18E	2	1.654	0.667	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-08E	1	1.475	0.594	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-10E	1	1.475	0.594	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-14E	1	1.475	0.594	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-01T	12	1.431	0.577	387.3	1.825	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-07P	54	1.430	0.576	387.3	2.438	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-01T (BR/SE)	12	1.164	0.469	387.3	1.648	0.0	10.000	6.937	0.000	83.00	ARD
PD-02.4-13P	52	1.117	0.450	387.3	2.433	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-17P	52	1.117	0.450	387.3	2.434	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-19P	52	1.117	0.450	387.3	2.434	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-29R (D/S)	17	1.056	1.021	387.3	8.992	0.0	8.625	6.937	0.000	83.00	ARD
PD-02.4-09P	51	0.983	0.396	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-11P	51	0.983	0.396	387.3	2.433	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-15P	51	0.983	0.396	387.3	2.434	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-25T (BR/SE)	13	0.926	0.901	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: PD-02.4 PRESEP HDR to HD TK											
PD-02.4-02E	4	0.686	0.667	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-28E	2	0.686	0.667	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-06E	4	0.686	0.667	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-04E	2	0.686	0.667	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-22E	2	0.686	0.667	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-03P	54	0.593	0.576	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-23R	18	0.519	0.504	387.3	2.450	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-29R	17	0.478	0.464	387.3	2.516	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-05P	52	0.463	0.450	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-27P	63	0.371	0.360	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-25T	13	0.285	0.277	387.3	0.681	0.0	30.000	6.937	0.000	83.00	ARD
PD-02.4-23R (D/S)	18	0.171	0.166	387.3	0.683	0.0	30.000	6.937	0.000	83.00	ARD
PD-02.4-24P	68	0.142	0.138	387.3	0.683	0.0	30.000	6.937	0.000	83.00	ARD
PD-02.4-31R	18	0.006	0.006	387.3	8.707	0.0	8.625	6.937	0.000	83.00	ARD
PD-02.4-31R (D/S)	18	0.002	0.002	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-32P	68	0.002	0.002	387.3	2.434	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-25T (D/S)	13	0.000	0.000	387.3	0.000	0.0	30.000	0.000	0.000	0.00	ARD
PD-02.4-26P	63	0.000	0.000	387.3	0.000	0.0	30.000	0.000	0.000	0.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:24:48AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RH 31 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.1A_1 RH 31A to TK 31A											
RHD01.1A-01N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-03N	30	2.091	1.137	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-02P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR											
RHD01.1A-35F	6	3.179	1.729	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-04N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-02E	2	1.986	1.080	489.8	7.247	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-06E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-08E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-43E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-10E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-12E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-45E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-47E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-16E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-18E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-20E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-29E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-31E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-33E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.2A-01R (D/S)	17	1.876	1.001	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.1A-25E	3	1.830	0.995	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-27E	3	1.830	0.995	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-39E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-41E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR											
RHD01.1A-14E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-04E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-22E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-24E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-34P_1	54	1.720	0.936	489.8	7.257	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-21P_1	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-37T (D/S)	15	1.568	0.853	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-37T	15	1.568	0.853	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.1A-02R	18	1.557	1.557	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.1A-05P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-07P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-09P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-44P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-11P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-46P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-13P_1	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-48P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.2A-01R	17	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-17P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-19P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-03P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-26P	53	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-28P_1	53	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-30P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-32P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-40P	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-42P_1	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-15P	51	1.150	0.625	489.8	7.790	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-05P	51	1.150	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-23P	51	1.150	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-38P	65	1.045	0.569	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-01P	68	0.897	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.1A-02R (D/S)	18	0.853	0.853	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-36P	56	0.636	0.346	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR											
RHD01.1A-34P_2	9	0.591	0.322	489.8	7.257	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-07P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-42P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-09P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-44P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-13P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-21P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-28P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.1A-01V	24	0.010	0.005	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.1B_1 RH 31B to TK 31B											
RHD01.1B-01N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-03N	30	2.091	1.137	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-02P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR											
RHD01.1B-14F	6	3.179	1.729	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-04N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-30E	4	1.986	1.080	489.8	7.247	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.2B-01R (D/S)	17	1.958	1.045	489.8	17.209	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.1B-35E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-06E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-37E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-08E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-39E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-41E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-12E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-43E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-16E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-45E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-18E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-49E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-22E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-51E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-24E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-26E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Average Wear Rate											
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR											
RHD02.2B-02E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-28E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-32E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-10E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-47E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-20E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-04E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-31P	54	1.713	0.932	489.8	7.226	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-36P	54	1.673	0.910	489.8	7.790	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.1B-02R	18	1.603	1.557	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.1B-34T (D/S)	15	1.568	0.853	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-34T	15	1.568	0.853	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-05P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-52P	52	1.345	0.731	489.8	7.262	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-29P	52	1.342	0.730	489.8	9.386	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-07P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-38P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-09P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-40P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-42P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-13P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-44P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-17P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-46P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-19P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-50P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-23P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.2B-01R	17	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-25P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-27P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-03P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-33P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-11P	51	1.150	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-48P	51	1.150	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR											
RHD01.1B-21P_1	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-05P	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-01P	68	0.897	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.1B-02R (D/S)	18	0.880	0.853	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-15P	56	0.636	0.346	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-38P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-42P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-21P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-27P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.1B-01V	24	0.010	0.005	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:25:01AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RH 32A TO HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3A_1 RH 32A to TK 32A											
RHD01.3A-01N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-03N	30	2.091	1.137	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-02P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR											
RHD01.8A-01R (D/S)	7	3.336	1.779	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.5A-03F	6	3.179	1.729	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.8A-02P	57	2.675	1.426	489.8	16.750	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.3A-04N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.3A-02R	18	1.988	1.557	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.4A-02E	2	1.986	1.080	489.8	7.247	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7A-04E	2	1.967	1.070	489.8	7.170	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-06E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-08E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-10E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-12E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-14E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7A-02E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.8A-01R	7	1.830	0.995	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-04E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7A-03P	54	1.673	0.910	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-15R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5A-05R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-05P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-07P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-09P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR											
RHD01.3A-11P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-13P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-03P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-05P	51	1.150	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.6A-04E	2	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-06E	4	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-08E	2	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-10E	2	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-12E	2	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-14E	2	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.3A-02R (D/S)	18	1.077	0.853	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5A-02P	67	1.045	0.569	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-06L (D/S)	10	1.019	0.554	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4A-06L	10	1.019	0.554	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6A-07P	54	0.993	0.540	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.5A-01R (D/S)	17	0.941	0.512	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7A-01R (D/S)	17	0.941	0.512	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.6A-02T (D/S)	15	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.3A-15R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.5A-05R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-02T	15	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.4A-01P	68	0.897	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.6A-05P	52	0.776	0.422	489.8	5.119	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-09P	52	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-11P	52	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-13P	52	0.776	0.422	489.8	11.023	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.4A-01P_1	68	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.5A-01R	17	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-15P_1	52	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.7A-01R	17	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-01P	68	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.5A-04P	56	0.636	0.346	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.6A-03P_1	65	0.621	0.338	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7A-01P	60	0.611	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR											
RHD01.6A-03P_2	9	0.341	0.186	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.4A-01P_2	9	0.341	0.186	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-15P_2	9	0.341	0.186	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.3A-01V	24	0.010	0.005	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:25:18AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RH 32B TO HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3B_1 RH 32B to TK 32B											
RHD01.3B-01N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-03N	30	2.091	1.137	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-02P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR											
RHD01.5B-03F	6	3.179	1.729	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-04N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-06E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-08E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-10E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-12E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-14E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-16E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-18E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.9B-01R (D/S)	17	1.876	1.001	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.3B-02R	18	1.617	1.557	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.7B-03R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-20R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5B-05R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-05P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-07P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-09P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-11P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-13P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-15P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-17P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR											
RHD01.3B-19P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5B-02P	67	1.063	0.578	489.8	7.170	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7B-02P	67	1.045	0.569	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7B-01R (D/S)	17	0.941	0.512	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5B-01R (D/S)	17	0.941	0.512	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.6B-19E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-04E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-06E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-02E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-02E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-06E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-08E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-10E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-11E	4	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-13E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-15E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-02E	1	0.672	0.366	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-04E	1	0.672	0.366	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-06E	1	0.672	0.366	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-04E	1	0.672	0.366	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-12P	54	0.652	0.355	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.5B-04P	56	0.636	0.346	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.6B-21T (D/S)	15	0.611	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-17T (D/S)	15	0.611	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.7B-03R (D/S)	18	0.611	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-21T	15	0.611	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.3B-20R (D/S)	18	0.611	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.5B-05R (D/S)	18	0.611	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-17T	15	0.611	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-01P	68	0.517	0.281	489.8	2.524	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-20P_1	52	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.7B-01R	17	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-01P_1	68	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-05P	52	0.509	0.277	489.8	12.437	3.9	10.750	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR											
RHD01.9B-01R	17	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.4B-01P_1	68	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-03P	52	0.509	0.277	489.8	12.437	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.5B-01R	17	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-03P_1	52	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-07P	52	0.509	0.277	489.8	12.437	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-09P_1	52	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-14P	52	0.509	0.277	489.8	3.172	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-16P	52	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-07P	51	0.451	0.245	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-03P	51	0.448	0.244	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-05P	51	0.448	0.244	489.8	12.437	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-05P	51	0.448	0.244	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-22P_1	65	0.407	0.222	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-18P	65	0.407	0.222	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-01P	68	0.350	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.3B-02R (D/S)	18	0.345	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-22P_2	9	0.224	0.122	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-20P_2	9	0.224	0.122	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-01P_2	9	0.224	0.122	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.4B-01P_2	9	0.224	0.122	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-03P_2	9	0.224	0.122	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-09P_2	9	0.224	0.122	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.3B-01V	24	0.010	0.005	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:25:44AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RH 33 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.10A_1 RH 33A to TK 33A											
RHD01.10A-01N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-03N	30	2.091	1.137	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-02P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.10A_2 TK 33A to A HDR											
RHD01.13A-01R (D/S)	7	3.336	1.779	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.10A-18F	6	3.179	1.729	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-04N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.5A-02R	18	1.988	1.557	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.12A-03E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-04E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-06E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-10E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-08E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-14E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.6A-02E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-16E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.13A-01R	7	1.830	0.995	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-06E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-08E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-12E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.6A-04E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-01T (D/S)	14	1.707	0.928	489.8	7.039	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.12A-01T	14	1.707	0.928	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.12A-05P	54	1.673	0.910	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.10A-20R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.10A_2 TK 33A to A HDR											
RHD01.10A-05P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-07P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-11P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-15P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.6A-03P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-17P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-07P	51	1.150	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-09P	51	1.150	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-13P	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.11A-01E	4	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11A-03E	2	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.5A-02R (D/S)	18	1.077	0.853	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-02P	64	1.045	0.569	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.11A-02P	54	0.993	0.540	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.10A-20R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.6A-01P	57	0.897	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.11A-04P	52	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.6A-05P	51	0.644	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-19P	56	0.636	0.346	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.5A-01V	24	0.010	0.005	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.10B_1 RH 33B to TK 33B											
RHD01.10B-01N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-03N	30	2.091	1.137	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-02P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR											
RHD01.10B-26F	6	3.179	1.729	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-04N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-52T (D/S)	10	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-52T	10	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-54E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-08E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-56E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-10E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-58E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Average Wear Rate											
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR											
RHD01.10B-12E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-60E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-14E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-15E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-62E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-63E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-17E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-19E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-21E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-22E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-24E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-28E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-30E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-42E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-44E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-46E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-48E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-50E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12B-01R (D/S)	17	1.876	1.001	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.10B-06E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-32E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-34E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-36E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-38E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-40E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-13P_1	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-16P	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-23P	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-53P	60	1.568	0.853	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-64R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-05P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-55P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-09P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-57P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Average Wear Rate											
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR											
RHD01.10B-11P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-59P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-61P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-18P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-20P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-25P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-29P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-31P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-43P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-45P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-47P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-49P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-51P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-07P	51	1.150	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-33P	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-35P	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-37P_1	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-39P	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-41P	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.11B-02E	2	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-04E	2	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.6B-02P	54	1.007	0.548	489.8	10.997	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.10B-64R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-01P_1	68	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-03P	52	0.776	0.422	489.8	11.023	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-05P	52	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.12B-01R	17	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.6B-01E	4	0.668	0.643	489.8	4.100	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.10B-27P	56	0.636	0.346	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-57P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-13P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-61P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-25P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-37P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR											
RHD01.10B-47P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.11B-01P_2	9	0.341	0.186	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.5B-01V	24	0.010	0.005	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:13:57PM
 AnalysisDate/Time: 7/22/2011 10:26:21AM

DB Name: IPEC3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RHD HDR TO HTRS
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.10A TK A HDR to FWH 36											
RHD02.10A-11T	14	3.090	1.681	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-11T (BR/SE)	14	2.265	1.232	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.10A-03E	1	1.854	1.008	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-05E	1	1.854	1.008	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-07E	1	1.854	1.008	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-09E	1	1.854	1.008	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-01R (D/S)	7	1.798	0.978	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-11T (D/S)	14	1.707	0.928	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-02P	57	1.405	0.764	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-01R	7	1.291	0.702	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.10A-04P	51	1.236	0.672	489.8	16.051	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-06P	51	1.236	0.672	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-08P	51	1.236	0.672	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-10P	51	1.236	0.672	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.10B B HDR to FWH 36A											
RHD02.10B-16T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.10B-14T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.10B-16T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-12V	22	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-14T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-03E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-05E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-07E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-09E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-11E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.10B B HDR to FWH 36A											
RHD02.10B-01R (D/S)	7	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-06P	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-17R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-02P_1	57	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-04P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-08P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-10P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11B-01N	30	1.241	0.675	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10B-13P	58	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-15P	63	1.045	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-17R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10B-01R	7	0.713	0.388	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.10B-02P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.11A A HDR to FWH 36A											
RHD02.11A-17T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.11A-19T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.11A-19T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-15V	22	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-17T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-03E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-05E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-07E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-08E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-10E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-12E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-14E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-01R (D/S)	7	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-06P	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-09P_1	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-20R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-02P_1	57	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-04P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-11P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-13P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.11A A HDR to FWH 36A											
RHD02.12A-01N	30	1.241	0.675	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.11A-16P	58	1.194	0.649	489.8	7.330	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-01R	7	1.086	0.591	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.11A-18P	63	1.074	0.584	489.8	9.386	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-20R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.11A-02P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-09P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.12B B HDR to FWH 36B											
RHD02.12B-13T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.12B-11T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.12B-13T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-09V	22	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-11T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-02E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-04E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-06E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-08E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-03P	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-14R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-05P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-07P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13B-01N	30	1.241	0.675	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.12B-10P	58	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-01P	64	1.045	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-12P	63	1.045	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-14R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.13A A HDR to FWH 36B											
RHD02.13A-16T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.13A-14T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.13A-16T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-12V	22	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-14T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-02E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-04E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.13A A HDR to FWH 36B											
RHD02.13A-05E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-07E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-09E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-11E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-03P	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-06P_1	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-17R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-08P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-10P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14A-01N	30	1.241	0.675	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.13A-13P	58	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-01P	64	1.045	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-15P	63	1.045	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-17R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.13A-06P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.14B B HDR to FWH 36C											
RHD02.14B-12T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.14B-12T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-08V	22	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-04E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-05E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-07E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-10T (BR/SE)	13	1.760	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.14B-03P	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-06P	54	1.673	0.910	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-13R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-10T	13	1.422	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15B-01N	30	1.201	0.653	489.8	3.829	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.14B-09P	58	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-02E	4	1.083	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-11P	63	1.045	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-01P	64	1.045	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-13R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.14B-14P	63	0.585	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.15A A HDR to FWH 36C											
RHD02.15A-09T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.15A-07V	22	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-09T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-04E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-06E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-11T (BR/SE)	13	1.812	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.15A-12R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-11T	13	1.464	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-03P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-05P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.16A-01N	30	1.241	0.675	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.15A-08P	58	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-02E	2	1.083	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-10P	63	1.045	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-01P	64	1.045	0.569	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-12R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.15A-13P	63	0.585	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.7B TK B HDR to FWH 36											
RHD02.2B-06L (D/S)	12	2.304	1.253	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.2B-06L (BR/SE)	12	2.201	1.197	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.7B-02E	2	2.079	1.131	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-04E	1	1.854	1.008	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-06E	1	1.854	1.008	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-03P	52	1.405	0.764	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-07P	51	1.262	0.687	489.8	8.198	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-05P	51	1.236	0.672	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-01P	62	1.124	0.611	489.8	16.051	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.8A TK A HDR to FWH 36											
RHD02.6A-06L (BR/SE)	12	2.201	1.197	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.6A-06L (D/S)	12	1.512	0.822	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8A-02E	1	1.217	0.662	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.6A-06L	12	0.835	0.454	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8A-03P	51	0.811	0.441	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8A-01P	62	0.738	0.401	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.8B TK B HDR to FWH 36											
RHD02.8B-06T	14	2.877	1.565	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-06T (BR/SE)	14	2.265	1.232	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.7B-08L (BR/SE)	12	2.240	1.218	489.8	9.528	3.9	8.000	6.448	0.000	42.34	HBD
RHD02.7B-08L (D/S)	12	2.145	1.166	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-06T (D/S)	14	2.028	1.103	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-02E	2	1.935	1.053	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-04E	4	1.935	1.053	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-05P	54	1.674	0.910	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-03P	52	1.308	0.711	489.8	9.871	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-01P	62	1.052	0.572	489.8	7.678	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.7B-08L	12	0.839	0.456	489.8	2.492	3.9	10.750	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.9A TK A HDR to FWH 36											
RHD02.9A-11T	14	2.877	1.565	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-11T (BR/SE)	14	2.265	1.232	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.2A-06L (BR/SE)	12	2.201	1.197	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.2A-06L (D/S)	12	2.145	1.166	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-11T (D/S)	14	2.028	1.103	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-07E	3	1.831	0.996	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-09E	3	1.831	0.996	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-02E	1	1.726	0.939	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-04E	1	1.726	0.939	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-06E	1	1.726	0.939	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.2A-06L	12	1.512	0.822	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-08P	53	1.308	0.711	489.8	8.440	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-10P	53	1.308	0.711	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-03P	51	1.151	0.626	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-05P	51	1.151	0.626	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-01P	62	1.046	0.569	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.9B TK B HDR to FWH 36											
RHD02.9B-02T (BR/SE)	14	2.265	1.232	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.9B-02T	14	2.028	1.103	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9B-02T (D/S)	14	1.120	0.609	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9B-01P	64	0.738	0.401	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:15:02AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HDR TO BFP
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-06.1 FWH 35 OUT HDR											
CD-06.1-01T	12	4.921	2.900	377.3	11.388	0.0	30.000	6.893	0.000	69.01	ARD
CD-06.1-01T (D/S)	12	5.538	3.477	375.7	15.688	0.0	30.000	6.903	0.000	69.01	ARD
CD-06.1-02P	62	2.960	1.858	375.7	18.139	0.0	28.000	6.903	0.000	69.01	ARD
CD-06.1-03T	14	7.457	4.682	375.7	15.783	0.0	30.000	6.903	0.000	69.01	ARD
CD-06.1-03T (BR/SE)	14	4.341	2.725	375.7	12.681	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.1-03T (D/S)	14	5.062	3.178	375.7	7.891	0.0	30.000	6.903	0.000	69.01	ARD
CD-06.1-01T (BR/SE)	12	5.462	3.292	370.3	16.286	0.0	16.000	6.928	0.000	69.01	ARD
====>Grouped by Line: CD-06.2A HDR to BFP 31											
CD-06.2A-01P	64	2.481	1.557	375.7	12.681	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-02E	2	4.593	2.884	375.7	12.699	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-03P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-04E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-05P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-06E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-07V	22	6.179	3.879	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-08P	58	2.719	1.707	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-09E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-10P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-11E	4	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-12P	54	3.954	2.483	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-13E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-14P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-15E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-16P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-17E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
===>>Grouped by Line: CD-06.2A HDR to BFP 31											
CD-06.2A-18P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-19E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-20E	4	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-21P	54	3.954	2.483	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-22P	9	1.583	1.008	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-23P	9	1.583	1.008	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-24O	6	9.810	6.159	375.7	26.293	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-25P	56	1.962	1.232	375.7	26.293	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-26E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-27P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-28E	4	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-29P	54	3.954	2.483	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-30E	1	4.078	2.560	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-31E	3	4.325	2.715	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-32P	53	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-33E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-34P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3A-01R (D/S)	17	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3A-01R (D/S)	17	3.216	2.019	375.7	22.658	0.0	18.000	6.903	0.000	69.01	ARD
CD-06.3A-02N	30	7.147	4.487	375.7	22.658	0.0	18.000	6.903	0.000	69.01	ARD
===>>Grouped by Line: CD-06.2B HDR to BFP 32											
CD-06.2B-01R	7	3.199	2.009	375.7	7.807	0.0	30.000	6.903	0.000	69.01	ARD
CD-06.2B-01R (D/S)	7	3.954	2.483	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-02P	57	3.094	1.942	375.7	12.639	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-35P	9	1.583	1.008	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-03T	15	3.707	2.327	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-03T (D/S)	15	3.707	2.327	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-04T	13	6.179	3.879	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-04T (BR/SE)	13	6.179	3.879	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-05V	22	6.179	3.879	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-06E	4	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-07P	54	3.954	2.483	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-36P	9	1.583	1.008	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-08O	6	9.810	6.159	375.7	26.293	0.0	24.000	6.903	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-06.2B HDR to BFP 32											
CD-06.2B-09P	56	1.962	1.232	375.7	26.293	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-10E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-11P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-12E	4	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-13P	54	3.954	2.483	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-14E	2	4.572	2.870	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-15P	52	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3B-01R	17	3.089	1.939	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3B-01R (D/S)	17	3.216	2.019	375.7	22.658	0.0	18.000	6.903	0.000	69.01	ARD
CD-06.3B-02N	30	7.147	4.487	375.7	22.658	0.0	18.000	6.903	0.000	69.01	ARD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:15:08AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HDR TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.8A HDR to FWH 33A											
CD-02.7-01P	64	1.030	0.676	198.0	5.515	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.7-02T	14	2.840	1.864	198.0	5.527	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.7-02T (BR/SE)	14	3.944	2.553	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-01P	64	2.254	1.459	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-02E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-03P	54	3.606	2.334	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-04V	22	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-05E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-06P	54	3.606	2.334	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-07E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-08N	30	4.508	2.918	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.8B HDR to FWH 33B											
CD-02.8B-01P	64	2.257	1.461	198.0	16.461	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-02E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-03P	54	3.606	2.334	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-04V	22	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-05E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-06P	54	3.606	2.334	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-07E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-08N	30	4.508	2.918	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.8C HDR to FWH 33C											
CD-02.8C-01P	64	2.339	1.514	198.0	17.425	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-02E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-03P	54	3.717	2.406	198.0	17.235	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-04V	22	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.8C HDR to FWH 33C											
CD-02.8C-05E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-06P	54	3.606	2.334	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-07E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-08N	30	4.508	2.918	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:15:15AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 31 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-01.1A FWH 31A to FWH 32A											
CD-01.1A-01N	31	4.042	2.544	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-02P	61	2.183	1.374	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-03E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-04P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-05E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-06E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-07E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-08P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-09E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-10P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-11E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-12P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-13N	30	3.234	2.035	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
====>Grouped by Line: CD-01.1B FWH 31B to FWH 32B											
CD-01.1B-01N	31	4.042	2.544	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-02P	61	2.183	1.374	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-03E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-04P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-05E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-06E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-07E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-08P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-09E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-10P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-11E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-01.1B FWH 31B to FWH 32B											
CD-01.1B-12P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-13N	30	3.234	2.035	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
====>Grouped by Line: CD-01.1C FWH 31C to FWH 32C											
CD-01.1C-01N	31	4.042	2.544	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-02P	61	2.183	1.374	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-03E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-04P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-05E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-06E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-07E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-08P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-09E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-10P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-11E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-12P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-13N	30	3.234	2.035	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:15:25AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 32 TO 33 HDR
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.2 FWH 32 OUT HDR											
CD-02.1B-11T	12	2.949	1.909	198.0	8.046	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.1B-11T (BR/SE)	12	3.831	2.480	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-11T (D/S)	12	4.349	2.815	198.0	16.115	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.2-01P	62	2.113	1.368	198.0	16.013	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.2-03P	9	1.455	0.955	198.0	16.013	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.2-02R	18	2.958	1.915	198.0	16.013	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.2-02R (D/S)	18	2.513	1.626	198.0	11.071	0.0	24.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.3 FWH 32 OUT HDR											
CD-02.1C-12T (BR/SE)	12	3.831	2.480	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-12T	12	3.435	2.224	198.0	11.079	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.1C-12T (D/S)	12	4.308	2.789	198.0	16.610	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-01P	62	2.112	1.367	198.0	16.740	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-02T	15	3.151	2.040	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-02T (D/S)	15	3.151	2.040	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-03P	65	2.101	1.360	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-04E	2	3.886	2.516	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-05E	3	3.676	2.380	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-06P	53	2.626	1.700	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-07E	2	3.886	2.516	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-08P	52	2.626	1.700	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-09E	1	3.466	2.244	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-10P	51	2.311	1.496	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-16P	9	1.462	0.960	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-11E	2	3.886	2.516	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-12P	52	2.626	1.700	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.3 FWH 32 OUT HDR											
CD-02.3-13E	4	3.886	2.516	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-14P	54	3.361	2.176	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-15T	14	5.777	3.739	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-15T (D/S)	14	5.653	3.659	198.0	15.968	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-15T (BR/SE)	14	0.476	0.312	198.0	1.117	0.0	18.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.4 FWH 32 OUT HDR											
CD-02.3-17P	62	2.056	1.331	198.0	15.968	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.4-01R	7	3.597	2.329	198.0	15.968	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.4-01R (D/S)	7	4.148	2.685	198.0	23.095	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.4-02V	23	6.482	4.196	198.0	23.095	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.4-03P	58	2.852	1.846	198.0	23.095	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.4-04E	19	5.379	3.482	198.0	24.480	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.4-04E (D/S)	19	4.193	2.714	198.0	16.477	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-01P	69	2.589	1.676	198.0	16.156	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-02E	2	3.936	2.548	198.0	16.868	0.0	24.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.5 FWH 32 OUT HDR											
CD-02.5-03T (BR/SE)	12	0.468	0.307	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.5-03T	12	4.214	2.728	198.0	15.968	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-03T (D/S)	12	4.306	2.788	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-04T	14	5.804	3.757	198.0	16.723	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-04T (BR/SE)	14	3.944	2.553	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.5-04T (D/S)	14	4.628	2.996	198.0	11.154	0.0	24.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.6 FWH 32 OUT HDR											
CD-02.6-01T (D/S)	15	2.514	1.627	198.0	11.081	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.6-02P	65	1.676	1.085	198.0	11.081	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.6-03T	14	4.610	2.984	198.0	11.083	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.6-03T (D/S)	14	2.843	1.866	198.0	5.533	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.6-03T (BR/SE)	14	3.944	2.553	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.6-01T	15	2.514	1.627	198.0	11.081	0.0	24.000	7.096	0.000	89.94	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:15:31AM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 32 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.1A FWH 32A to HDR											
CD-02.1A-01N	31	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-02P	61	3.043	1.970	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-03E	2	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-04P	52	2.817	1.824	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-05V	22	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-06E	5	6.761	4.377	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-08P	55	3.944	2.553	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-09E	2	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-10P	52	2.817	1.824	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-11E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-12P	54	3.606	2.334	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-14P	9	1.564	1.027	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-13R	18	3.155	2.042	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-13R (D/S)	18	2.149	1.391	198.0	7.994	0.0	20.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.1B FWH 32B to HDR											
CD-02.1B-01N	31	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-02P	61	3.043	1.970	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-03E	2	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-04P	52	2.817	1.824	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-05E	2	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-06E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-07V	22	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-08P	58	2.479	1.605	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-09E	2	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-10P	52	2.943	1.905	198.0	17.602	0.0	14.000	7.096	0.000	89.94	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.1C FWH 32C to HDR											
CD-02.1C-01N	31	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-02P	61	3.043	1.970	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-03E	2	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-04P	52	2.817	1.824	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-05E	2	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-06E	4	4.170	2.699	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-07P	54	3.606	2.334	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-08V	22	5.635	3.647	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-09P	58	2.479	1.605	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-10E	2	4.282	2.772	198.0	17.134	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-11P	52	2.817	1.824	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:15:39AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 33 TO HTR 34
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-03.1A FWH 33A to FWH 34A											
CD-03.1A-01N	31	8.487	5.354	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-02E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-03E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-04P	54	5.432	3.427	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-05E	1	5.602	3.534	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-15P	51	3.734	2.356	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-06E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-07P	54	5.432	3.427	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-14P	9	2.371	1.516	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-08E	1	5.602	3.534	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-09P	51	3.734	2.356	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-10E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-11P	54	5.432	3.427	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-12E	1	5.602	3.534	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-13N	30	6.790	4.283	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
====>Grouped by Line: CD-03.1B FWH 33B to FWH 34B											
CD-03.1B-01N	31	8.487	5.354	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-02E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-03E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-04P	54	5.432	3.427	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-05E	2	6.414	4.046	245.2	17.336	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-06E	4	6.424	4.053	245.2	17.379	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-07P	54	5.473	3.452	245.2	16.966	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-12P	9	2.371	1.516	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-08E	2	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-03.1B FWH 33B to FWH 34B											
CD-03.1B-09P	52	4.244	2.677	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-10E	1	5.602	3.534	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-11N	30	6.790	4.283	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
====>Grouped by Line: CD-03.1C FWH 33C to FWH 34C											
CD-03.1C-01N	31	8.487	5.354	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-02E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-03E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-04P	54	5.432	3.427	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-05E	2	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-06E	4	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-07P	54	5.432	3.427	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-12P	9	2.371	1.516	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-08E	2	6.281	3.962	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-09P	52	4.244	2.677	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-10E	1	5.602	3.534	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-11N	30	6.790	4.283	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:15:48AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 34 TO HTR 35
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-04.1A FWH 34A to FWH 35A											
CD-04.1A-01N	31	11.069	6.973	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-02E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-03E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-04P	54	7.084	4.463	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-05E	2	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-06P	52	5.535	3.486	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-07E	2	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-08P	52	5.535	3.486	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-09E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-10P	54	7.084	4.463	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-15P	9	3.116	1.991	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-11E	2	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-12P	52	5.535	3.486	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-13E	1	7.306	4.602	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-14N	30	8.856	5.578	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
====>Grouped by Line: CD-04.1B FWH 34B to FWH 35B											
CD-04.1B-01N	31	11.069	6.973	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-02E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-03E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-04P	54	7.084	4.463	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-05E	2	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-06E	3	7.749	4.881	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-07P	53	5.535	3.486	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-08E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-09P	54	7.084	4.463	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-04.1B FWH 34B to FWH 35B											
CD-04.1B-10E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-11P	54	7.084	4.463	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-17P	9	3.116	1.991	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-12E	1	7.306	4.602	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-13E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-14P	54	7.084	4.463	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-15E	1	7.306	4.602	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-16N	30	8.856	5.578	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
====>Grouped by Line: CD-04.1C FWH 34C to FWH 35C											
CD-04.1C-01N	31	11.069	6.973	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-02E	4	8.443	5.318	298.3	18.078	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-03E	4	8.403	5.293	298.3	17.943	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-04P	54	7.084	4.463	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-05E	2	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-06P	52	5.535	3.486	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-07E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-08E	4	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-09P	54	7.084	4.463	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-14P	9	3.116	1.991	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-10E	2	8.191	5.160	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-11P	52	5.535	3.486	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-12E	1	7.306	4.602	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-13N	30	8.856	5.578	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:15:51AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 35 TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-05.3 FWH 35 OUT HDR											
CD-05.1B-09T	12	3.324	2.070	377.3	6.134	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.1B-09T (BR/SE)	12	5.810	3.567	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-09T (D/S)	12	5.228	3.210	377.3	12.287	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.3-01P	62	2.550	1.566	377.3	12.287	0.0	24.000	6.880	0.000	82.05	HBD
====>Grouped by Line: CD-05.4 FWH 35 OUT HDR											
CD-05.1C-10T (BR/SE)	12	5.810	3.567	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-10T	12	5.207	3.197	377.3	12.208	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.1C-10T (D/S)	12	6.530	4.009	377.3	18.304	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-04P	62	3.185	1.956	377.3	18.304	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-01E	4	5.893	3.618	377.3	18.304	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-02P	54	5.116	3.141	377.3	18.414	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-03T (BR/SE)	10	6.376	3.915	377.3	18.329	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-03T (D/S)	10	5.928	3.639	377.3	11.447	0.0	30.000	6.880	0.000	82.05	HBD
CD-05.4-05P	60	3.535	2.170	377.3	11.334	0.0	30.000	6.880	0.000	82.05	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:15:56AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 35 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-05.1A FWH 35A to HDR											
CD-05.1A-01N	31	8.544	5.246	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-02E	4	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-03E	4	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-04P	54	5.468	3.357	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-05V	22	8.544	5.246	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-06P	58	3.759	2.308	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-07E	2	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-08P	52	4.272	2.623	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-09E	4	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-10P	54	5.468	3.357	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-11R	18	4.785	2.938	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-11R (D/S)	18	2.417	1.506	377.3	6.095	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.2-01P	68	2.015	1.255	377.3	6.095	0.0	24.000	6.880	0.000	82.05	HBD
====>Grouped by Line: CD-05.1B FWH 35B to HDR											
CD-05.1B-01N	31	8.544	5.246	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-02E	4	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-03E	4	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-04P	54	5.468	3.357	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-05V	22	8.544	5.246	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-06P	58	3.759	2.308	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-07E	2	6.493	3.986	377.3	18.894	0.0	14.000	6.880	0.000	82.05	HBD
====>Grouped by Line: CD-05.1C FWH 35C to HDR											
CD-05.1C-01N	31	8.544	5.246	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-02E	4	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-03E	4	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-05.1C FWH 35C to HDR											
CD-05.1C-04P	54	5.468	3.357	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-05V	22	8.544	5.246	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-06P	58	3.759	2.308	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-07E	2	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-08E	4	6.323	3.882	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-09P	54	5.532	3.396	377.3	18.449	0.0	14.000	6.880	0.000	82.05	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:16:02AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: S/G BLWDN HX IN
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.9 FWH HDR to SGBD HX3											
CD-02.9-01P	63	0.275	0.181	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-02E	4	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-03P	54	0.441	0.289	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-04V	22	0.689	0.452	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-05P	58	0.303	0.199	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-06E	2	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-07P	52	0.344	0.226	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-08E	4	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-09P	54	0.441	0.289	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-10P	9	0.151	0.099	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-11E	2	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-12P	52	0.344	0.226	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-13E	2	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-14P	52	0.344	0.226	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-15P	9	0.151	0.099	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-16E	2	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-17T	14	0.757	0.497	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-17T (BR/SE)	14	2.259	1.483	198.0	5.966	0.0	8.000	7.096	0.000	89.94	HBD
CD-02.10-01P	64	1.109	0.728	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-03P	56	1.187	0.768	198.0	14.012	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-04E	2	2.052	1.347	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-05P	52	1.386	0.910	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-06E	2	2.052	1.347	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-07P	52	1.386	0.910	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-08E	2	2.052	1.347	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-09P	52	1.386	0.910	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD

Sorted By: Flow Order

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.9 FWH HDR to SGBD HX3											
CD-02.10-10E	4	2.052	1.347	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-11N	30	2.830	1.858	198.0	6.587	0.0	8.625	7.096	0.000	89.94	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:16:16AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: S/G BLWDN HX OUT
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.11 SGBD HX3 to FWH HDR											
CD-02.11-01N	31	3.537	2.322	198.0	6.587	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-02P	61	1.497	0.983	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-03E	2	2.052	1.347	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-04P	52	1.386	0.910	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-05E	1	1.830	1.201	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-06P	51	1.220	0.801	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-07E	2	2.052	1.347	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-08P	52	1.386	0.910	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-09P	9	0.610	0.400	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-10E	2	2.052	1.347	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-11P	52	1.386	0.910	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-12E	2	2.052	1.347	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-13T (BR/SE)	10	2.581	1.694	198.0	5.966	0.0	8.000	7.096	0.000	89.94	HBD
CD-02.11-13T (D/S)	10	0.689	0.452	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-01P	60	0.413	0.271	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-02E	2	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-03P	52	0.344	0.226	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-04V	22	0.689	0.452	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-05P	58	0.303	0.199	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-06E	2	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-07P	52	0.344	0.226	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-08E	2	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-09P	52	0.344	0.226	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-10E	2	0.510	0.334	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-11P	52	0.344	0.226	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:16:21AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: BFPT DRN TO COND
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-07.1 BFPT 31 Drain to Cond											
EX-07.1-01N	31	0.285	0.291	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-02E	4	0.177	0.181	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-03EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-04P	56	0.069	0.072	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-05E	3	0.162	0.164	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-06P	53	0.183	0.186	101.7	0.046	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-07E	1	0.152	0.155	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-08EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-09P	56	0.069	0.072	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-10EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-11R	18	0.120	0.122	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-11R (D/S)	18	0.068	0.068	101.7	0.020	87.3	54.000	7.276	0.000	68.22	HBD
EX-07.1-12N	30	0.102	0.101	101.7	0.020	87.3	54.000	7.276	0.000	68.22	HBD
====>Grouped by Line: EX-07.2 BFPT 32 Drain to Cond											
EX-07.2-01N	31	0.285	0.291	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-02E	4	0.177	0.181	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-03EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-04P	56	0.069	0.072	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-05E	3	0.162	0.164	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-06P	53	0.183	0.186	101.7	0.046	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-07E	1	0.152	0.155	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-08EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-09P	56	0.069	0.072	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-10EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-11R	18	0.120	0.122	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-07.2 BFPT 32 Drain to Cond											
EX-07.2-11R (D/S)	18	0.068	0.068	101.7	0.020	87.3	54.000	7.276	0.000	68.22	HBD
EX-07.2-12N	30	0.102	0.101	101.7	0.020	87.3	54.000	7.276	0.000	68.22	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:16:29AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: HDR TO 35 HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.16 HDR 35 to FWH 35A											
EX-02.19-01P	64	0.028	0.031	385.2	7.029	93.8	28.000	0.000	0.000	0.00	ARD
EX-02.16-01R	7	0.059	0.066	385.2	7.029	93.8	28.000	0.000	0.000	0.00	ARD
EX-02.16-01R (D/S)	7	0.075	0.083	385.2	29.715	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-02P	57	0.073	0.074	385.2	29.474	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-03E	2	0.091	0.093	385.2	30.943	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-04P	52	0.061	0.062	385.2	30.232	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-05V	22	23.371	27.586	385.2	29.945	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-06E	4	0.090	0.092	385.2	30.250	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-07P	54	0.094	0.096	385.2	30.292	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-08E	2	23.255	26.776	385.2	35.427	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-09N	30	21.311	25.176	385.2	29.549	93.8	18.000	0.000	0.000	0.00	ARD
====>Grouped by Line: EX-02.17 HDR 35 to FWH 35B											
EX-02.17-01P	64	0.032	0.036	385.2	30.483	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-02V	22	23.371	27.586	385.2	29.945	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-03E	4	0.090	0.092	385.2	30.250	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-04P	54	0.094	0.096	385.2	30.276	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-05E	2	23.378	26.921	385.2	35.888	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-06N	30	21.311	25.176	385.2	29.549	93.8	18.000	0.000	0.000	0.00	ARD
====>Grouped by Line: EX-02.18 HDR 35 to FWH 35C											
EX-02.18-01P	64	0.032	0.036	385.2	30.483	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-02V	22	23.371	27.586	385.2	29.945	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-03E	4	0.084	0.092	385.2	30.250	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-04P	54	0.078	0.086	385.2	30.250	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-05E	2	21.737	24.981	385.2	29.715	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-06N	30	21.311	25.176	385.2	29.549	93.8	18.000	0.000	0.000	0.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:16:49AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: HDR TO 36 HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-01.5A HP EX HDR to FWH 36A											
EX-01.7-01P	63	0.002	0.001	441.8	15.740	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.5A-01R	7	0.004	0.003	441.8	15.740	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.5A-01R (D/S)	7	0.006	0.005	441.8	35.727	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-02P	57	0.006	0.004	441.8	36.793	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-03E	102	0.011	0.008	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-04P	52	0.004	0.003	441.8	53.650	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-05E	4	0.007	0.005	441.8	37.401	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-06P	54	0.008	0.005	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-16L	12	0.013	0.009	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-16L (D/S)	12	0.013	0.009	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-07L	12	0.013	0.009	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-07L (D/S)	12	0.013	0.009	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-08P	62	0.002	0.002	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-09E	102	0.011	0.008	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-10P	52	0.005	0.003	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-11V	22	13.313	6.209	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-12P	58	0.003	0.002	441.8	37.331	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-13E	2	0.007	0.005	441.8	37.496	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-17P	52	0.005	0.003	441.8	36.275	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-14E	4	0.008	0.006	441.8	38.106	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-15N	30	0.008	0.006	441.8	35.935	93.7	12.750	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.5B HP EX HDR to FWH 36B											
EX-01.5B-01P	64	0.002	0.002	441.8	53.069	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-02E	2	0.007	0.005	441.8	38.209	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-03P	52	0.005	0.003	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-01.5B HP EX HDR to FWH 36B											
EX-01.5B-14L	12	0.013	0.009	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-14L (D/S)	12	0.013	0.009	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-04L	12	0.013	0.009	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-04L (D/S)	12	0.013	0.009	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-05P	62	0.002	0.002	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-06E	1	0.006	0.004	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-07E	4	0.007	0.005	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-08P	54	0.007	0.005	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-09V	22	13.313	6.209	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-10P	58	0.003	0.002	441.8	37.153	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-11E	2	0.007	0.005	441.8	37.854	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-15P	52	0.005	0.004	441.8	36.954	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-12E	4	0.008	0.006	441.8	39.151	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-13N	30	0.008	0.006	441.8	35.935	93.7	12.750	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.5C HP EX HDR to FWH 36C											
EX-01.5C-01P	64	0.002	0.002	441.8	54.131	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-02E	2	0.007	0.005	441.8	37.455	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-03P	52	0.005	0.003	441.8	36.831	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-14L	12	0.013	0.009	441.8	36.778	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-14L (D/S)	12	0.013	0.009	441.8	36.778	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-04L	12	0.013	0.009	441.8	36.659	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-04L (D/S)	12	0.013	0.009	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-05P	62	0.002	0.002	441.8	36.778	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-06E	1	0.006	0.004	441.8	37.564	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-07E	4	0.007	0.005	441.8	37.360	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-08P	54	0.008	0.005	441.8	36.913	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-09V	22	13.313	6.209	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-10P	58	0.003	0.002	441.8	36.939	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-11E	2	0.007	0.005	441.8	37.800	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-15P	52	0.005	0.003	441.8	36.301	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-12E	4	0.008	0.006	441.8	38.321	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-13N	30	0.008	0.006	441.8	35.935	93.7	12.750	6.679	0.000	196.44	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:17:07AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: HTR 36 HEADER
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-01.1 HP EXT to FWH 36 HDR											
EX-01.1-01N	31	22.695	10.559	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-02E	4	0.009	0.006	441.8	57.590	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-03P	54	0.009	0.007	441.8	55.741	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-04E	4	0.009	0.006	441.8	57.672	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-05P	54	0.007	0.005	441.8	75.097	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-06E	2	0.010	0.007	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-07P	52	0.006	0.004	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-08R	18	0.006	0.004	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-08R (D/S)	18	0.004	0.003	441.8	26.318	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.6-01P	68	0.003	0.002	441.8	25.914	93.7	18.000	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.2 HP EXT to FWH 36 HDR											
EX-01.2-01N	31	22.695	10.559	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-02E	4	0.010	0.007	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-03P	54	0.009	0.007	441.8	56.380	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-04E	3	0.008	0.006	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-05P	53	0.007	0.005	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-06E	4	0.009	0.006	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-07P	54	0.007	0.005	441.8	74.401	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-08E	1	0.008	0.005	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-09P	51	0.004	0.003	441.8	74.893	93.7	12.750	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER											
EX-01.2-10L	12	0.011	0.008	441.8	26.618	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.2-10L (BR/SE)	12	0.011	0.008	441.8	56.495	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-10L (D/S)	12	0.015	0.011	441.8	55.283	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-01P	62	0.003	0.002	441.8	54.933	93.7	18.000	6.679	0.000	196.44	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER											
EX-01.3-02E	2	0.009	0.006	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-03P	52	0.006	0.004	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-04T	15	0.007	0.005	441.8	55.094	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-04T (D/S)	15	0.006	0.004	441.8	55.094	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-05P	65	0.007	0.005	441.8	55.038	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-06V	22	15.946	7.414	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-07V	25	17.393	8.087	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-08V	25	17.393	8.087	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-09E	4	0.009	0.006	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-10P	54	0.006	0.005	441.8	83.334	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-11T	15	0.005	0.004	441.8	83.334	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-11T (D/S)	15	0.004	0.003	441.8	83.334	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-12P	65	0.005	0.004	441.8	83.334	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-13E	2	0.009	0.006	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-14P	52	0.006	0.004	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-15E	2	0.009	0.006	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-16P	52	0.006	0.004	441.8	54.987	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-17T	15	0.007	0.005	441.8	55.547	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-17T (D/S)	15	0.006	0.004	441.8	55.547	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-19E	4	0.009	0.007	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-20P	54	0.009	0.006	441.8	55.224	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-21E	2	0.009	0.007	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-22P	52	0.006	0.004	441.8	55.924	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-23T	14	0.018	0.013	441.8	56.075	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-23T (D/S)	14	0.015	0.010	441.8	36.716	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-23T (BR/SE)	14	0.006	0.004	441.8	39.487	93.7	12.750	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.4 HP EXT FWH 36 HEADER											
EX-01.4-01P	63	0.002	0.002	441.8	36.616	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.4-02T	14	0.015	0.010	441.8	35.801	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.4-02T (D/S)	14	0.011	0.008	441.8	15.745	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.4-02T (BR/SE)	14	0.006	0.004	441.8	36.644	93.7	12.750	6.679	0.000	196.44	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:17:19AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: LP TO 31 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-06.1A LP EXT 19 to FWH 31A											
EX-06.1A-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1A-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1A-03E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1A-04N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.1B LP EXT 19 to FWH 31B											
EX-06.1B-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1B-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1B-03E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1B-04N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.1C LP EXT 19 to FWH 31C											
EX-06.1C-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1C-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1C-03E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1C-04N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.2A LP EXT 17 to FWH 31A											
EX-06.2A-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2A-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2A-03E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2A-04N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.2B LP EXT 17 to FWH 31B											
EX-06.2B-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2B-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2B-03E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2B-04N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.2C LP EXT 17 to FWH 31C											

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-06.2C LP EXT 17 to FWH 31C											
EX-06.2C-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2C-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2C-03E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2C-04N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.3A LP EXT 20 to FWH 31A											
EX-06.3A-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3A-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3A-03P	54	4.774	4.118	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3A-04E	1	3.929	3.387	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3A-05N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.3B LP EXT 20 to FWH 31B											
EX-06.3B-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3B-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3B-03P	54	4.774	4.118	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3B-04E	2	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3B-05N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.3C LP EXT 20 to FWH 31C											
EX-06.3C-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3C-02E	4	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3C-03P	54	4.774	4.118	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3C-04E	2	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3C-05N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.4A LP EXT 18 to FWH 31A											
EX-06.4A-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4A-02E	3	4.167	3.593	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4A-03P	53	1.438	1.046	168.3	19.532	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4A-04E	2	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4A-05N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.4B LP EXT 18 to FWH 31B											
EX-06.4B-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4B-02E	3	4.167	3.593	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4B-03P	53	1.438	1.046	168.3	19.532	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4B-04E	2	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4B-05N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-06.4C LP EXT 18 to FWH 31C											
EX-06.4C-01N	31	7.726	6.710	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4C-02E	3	4.167	3.593	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4C-03P	53	1.438	1.046	168.3	19.532	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4C-04E	2	4.586	3.954	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4C-05N	30	5.107	4.424	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:17:25AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: LP TO 32 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-05.1A LP EXT 16 to FWH 32A											
EX-05.1A-01N	31	24.280	12.829	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1A-02P	61	4.317	3.069	206.9	36.385	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1A-03E	3	13.893	7.435	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1A-04N	30	16.260	8.610	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.1B LP EXT 16 to FWH 32B											
EX-05.1B-01N	31	24.280	12.829	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1B-02P	61	4.317	3.069	206.9	36.385	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1B-03E	3	13.893	7.435	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1B-04N	30	16.260	8.610	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.1C LP EXT 16 to FWH 32C											
EX-05.1C-01N	31	24.280	12.829	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1C-02P	61	4.317	3.069	206.9	36.385	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1C-03E	3	13.893	7.435	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1C-04N	30	16.260	8.610	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.2A LP EXT 15 to FWH 32A											
EX-05.2A-01N	31	24.280	12.829	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-02E	4	15.295	8.185	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-03E	3	13.893	7.435	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-04P	53	12.454	6.666	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-05E	1	13.099	7.010	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-06N	30	16.260	8.610	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B											
EX-05.2B-01N	31	24.280	12.829	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2B-02E	4	15.295	8.185	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2B-03E	3	13.893	7.435	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B											
EX-05.2B-04P	53	12.454	6.666	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2B-05E	1	13.099	7.010	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2B-06N	30	16.260	8.610	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.2C LP EXT 15 to FWH 32C											
EX-05.2C-01N	31	24.280	12.829	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-02E	4	15.295	8.185	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-03E	3	13.893	7.435	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-04P	53	12.454	6.666	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-05E	1	13.099	7.010	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-06N	30	16.260	8.610	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:18:08AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: LP TO 33 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.1 LPEX14 to FWH33A HDR											
EX-04.1-01N	31	5.543	6.679	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-08X	6	2.181	2.031	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-02E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-03E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-04P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-05E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-07P	52	1.591	1.482	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-06T (BR/SE)	10	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-06T (D/S)	10	3.445	3.624	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.3-01P	60	1.250	1.315	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR											
EX-04.9-09T (D/S)	12	7.017	8.103	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-01P	62	1.285	1.484	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-02T	15	3.210	3.708	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-02T (D/S)	15	2.826	3.263	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-03P	65	3.166	3.657	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-04V	22	3.842	4.508	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-05P	58	1.537	1.803	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-06V	25	5.137	5.932	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-07P	58	1.884	2.176	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-08E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-09E	3	3.579	4.134	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-10P	53	1.833	1.707	254.8	17.234	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-11E	3	3.579	4.134	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-12P	53	3.210	3.707	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR											
EX-04.11-13E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-14P	52	1.527	1.423	254.8	17.234	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-15E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-16P	52	2.675	3.090	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-17T	15	3.210	3.708	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-17T (D/S)	15	2.826	3.263	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-18P	65	3.166	3.657	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-20P	9	0.941	1.087	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-19T	14	8.237	9.513	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-19T (D/S)	14	5.287	5.562	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-19T (BR/SE)	14	2.622	3.181	254.8	7.012	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-09T	12	4.500	4.734	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.9-09T (BR/SE)	12	4.076	4.943	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.13 LP EXT 32 to FWH 33B											
EX-04.12-01P	64	1.106	1.163	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.13-01R	7	2.125	2.236	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.13-01R (D/S)	7	3.117	3.780	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-02P	57	2.809	3.407	254.8	6.994	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-07T	15	2.810	3.408	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-07T (D/S)	15	2.473	2.999	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-03E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-04P	52	2.316	2.804	254.8	7.164	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-05E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-06N	30	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.14 LP EXT 32 to FWH 33B											
EX-04.14-01P	64	1.480	1.792	254.8	7.285	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.14-02E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.14-03N	30	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.15 LPEX14 to FWH33C HDR											
EX-04.15-01N	31	5.543	6.679	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-08X	6	2.181	2.031	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-02E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-03E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-04P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.15 LPEX14 to FWH33C HDR											
EX-04.15-05E	2	3.449	4.183	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-07P	52	2.342	2.840	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-06T (BR/SE)	10	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-06T (D/S)	10	3.445	3.624	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.17-01P	60	1.250	1.315	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.16 LPEX13 to FWH33C HDR											
EX-04.16-01N	31	5.543	6.679	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-10X	6	2.181	2.031	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-02E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-03E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-04P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-05E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-06P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-07E	2	3.449	4.183	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-08P	52	1.591	1.482	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.18 LPEX FWH 33C IN HDR											
EX-04.16-09T	12	4.500	4.734	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.16-09T (BR/SE)	12	4.076	4.943	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-09T (D/S)	12	7.017	8.103	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-01P	62	1.285	1.484	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-02T	15	3.210	3.708	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-02T (D/S)	15	2.826	3.263	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-03P	65	3.166	3.657	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-04V	22	3.842	4.508	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-05P	58	1.537	1.803	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-06V	25	5.137	5.932	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.19-01R	7	3.296	3.807	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.19-01R (D/S)	7	2.884	3.332	254.8	14.052	90.5	24.000	7.255	0.000	69.67	HBD
EX-04.19-02V	23	2.604	2.991	254.8	14.424	90.5	24.000	7.255	0.000	69.67	HBD
EX-04.19-03R	18	2.135	2.467	254.8	14.052	90.5	24.000	7.255	0.000	69.67	HBD
EX-04.19-03R (D/S)	18	2.826	3.263	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-01P	68	2.141	2.473	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-02E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-03P	52	1.527	1.423	254.8	17.234	90.5	28.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.18 LPEX FWH 33C IN HDR											
EX-04.20-04E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-05P	52	2.675	3.090	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-06E	4	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-07P	54	4.109	4.745	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-08E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-09P	52	2.675	3.090	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-10E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-11P	52	1.527	1.423	254.8	17.234	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-12E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-13P	52	2.675	3.090	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-14T	15	3.210	3.708	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-14T (D/S)	15	2.826	3.263	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-15P	65	3.166	3.657	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-16T	14	8.181	9.470	254.8	5.676	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-16T (D/S)	14	5.433	5.714	254.8	0.304	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-16T (BR/SE)	14	2.623	3.182	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.2 LPEX13 to FWH33A HDR											
EX-04.2-01N	31	5.543	6.679	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-10X	6	2.181	2.031	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-02E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-03E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-04P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-05E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-06P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-07E	2	3.449	4.183	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-08P	52	1.591	1.482	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.21 LP EXT 31 to FWH 33C											
EX-04.20-17P	64	1.106	1.163	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.21-01R	7	2.125	2.236	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.21-01R (D/S)	7	3.117	3.780	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-02P	57	2.806	3.406	254.8	7.050	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-07T	15	2.810	3.408	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-07T (D/S)	15	2.473	2.999	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-03E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.21 LP EXT 31 to FWH 33C											
EX-04.21-04P	52	2.316	2.804	254.8	7.164	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-05E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-06N	30	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.22 LP EXT 31 to FWH 33C											
EX-04.22-01P	64	1.481	1.794	254.8	7.260	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.22-02E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.22-03N	30	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.4 LPEX FWH 33A IN HDR											
EX-04.2-09T	12	4.500	4.734	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.2-09T (BR/SE)	12	4.076	4.943	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-09T (D/S)	12	7.017	8.103	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-01P	62	1.285	1.484	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-02T	15	3.210	3.708	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-02T (D/S)	15	2.826	3.263	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-03P	65	3.166	3.657	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-04V	22	3.842	4.508	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-05P	58	1.537	1.803	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-06V	25	5.137	5.932	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-07P	58	1.884	2.176	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-08E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-09P	52	1.527	1.423	254.8	17.235	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-10E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-11P	52	2.675	3.090	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-12E	4	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-13P	54	4.108	4.745	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-14E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-15P	52	2.675	3.090	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-16E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-17P	52	1.527	1.423	254.8	17.235	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-18E	2	4.240	4.896	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-19P	52	2.675	3.090	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-20T	15	3.210	3.708	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-20T (D/S)	15	2.826	3.263	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-21P	65	3.166	3.657	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.4 LPEX FWH 33A IN HDR											
EX-04.4-23P	9	0.941	1.087	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-22T	14	8.205	9.489	254.8	5.575	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-22T (D/S)	14	5.367	5.645	254.8	0.297	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-22T (BR/SE)	14	2.622	3.181	254.8	7.012	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.6 LP EXT to FWH 33A											
EX-04.5-01P	64	1.106	1.163	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.6-01R	7	2.125	2.236	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.6-01R (D/S)	7	3.117	3.780	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-02P	57	2.807	3.407	254.8	7.033	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-07T	15	2.808	3.408	254.8	7.025	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-07T (D/S)	15	2.471	2.999	254.8	7.025	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-03E	2	3.638	4.359	254.8	7.997	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-04P	52	2.311	2.797	254.8	7.299	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-05E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-06N	30	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.7 LP EXT to FWH 33A											
EX-04.7-01P	64	1.482	1.795	254.8	7.229	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.7-02E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.7-03N	30	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.8 LPEX14 to FWH33B HDR											
EX-04.8-01N	31	5.543	6.679	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-08X	6	2.181	2.031	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-02E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-03E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-04P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-05E	2	3.711	4.501	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-07P	52	1.591	1.482	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-06T (BR/SE)	10	3.747	4.544	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-06T (D/S)	10	3.445	3.624	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.10-01P	60	1.250	1.315	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.9 LPEX13 to FWH33B HDR											
EX-04.9-01N	31	5.543	6.679	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-10X	6	2.181	2.031	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-02E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.9 LPEX13 to FWH33B HDR											
EX-04.9-03E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-04P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-05E	3	3.133	3.800	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-06P	53	2.810	3.407	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-07E	2	3.449	4.183	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-08P	52	1.591	1.482	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:18:42AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: PRESEP TO 35 HDR
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.1 PSEP 2A 10" to 35 HDR											
EX-02.1-01N	31	0.009	0.010	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-02P	61	0.007	0.007	385.2	23.337	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-03E	4	0.006	0.006	385.2	23.905	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-04P	54	0.006	0.006	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-05O	6	0.007	0.007	385.2	45.863	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-06T (BR/SE)	10	0.007	0.007	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-06T (D/S)	10	0.007	0.007	385.2	3.409	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.5-01P	60	0.001	0.001	385.2	17.778	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.11 PSEP1B 14" to 35 HDR											
EX-02.11-02P	64	0.003	0.003	385.2	73.301	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-03E	4	0.008	0.008	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-04P	54	0.008	0.008	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-06O	6	0.009	0.009	385.2	95.761	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-07P	56	0.002	0.002	385.2	95.761	93.8	14.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.12 PSEP 1B&2B to 35 HDR											
EX-02.9-10T (D/S)	12	0.013	0.013	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.12-01P	62	0.002	0.002	385.2	75.930	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.9-10T (BR/SE)	12	0.007	0.007	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-10T	12	0.009	0.009	385.2	3.409	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR											
EX-02.11-05T (BR/SE)	12	0.009	0.009	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-05T	12	0.013	0.013	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.11-05T (D/S)	12	0.013	0.013	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-01P	62	0.002	0.002	385.2	75.930	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-02B	1	0.006	0.006	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR											
EX-02.13-03E	4	0.008	0.008	385.2	48.757	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-03P	54	0.006	0.006	385.2	75.933	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-04E	3	0.007	0.007	385.2	48.757	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-05P	53	0.006	0.006	385.2	48.757	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-06R	18	0.018	0.019	385.2	47.982	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-06R (D/S)	18	0.014	0.014	385.2	15.155	93.8	28.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.14 FWH 35 HEADER											
EX-02.7-02T	12	0.030	0.032	385.2	15.155	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.7-02T (D/S)	12	0.037	0.040	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-01P	62	1.979	2.062	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-02E	2	5.968	6.324	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-03P	52	4.121	4.293	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-04T	15	4.945	5.152	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-04T (D/S)	15	4.352	4.534	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-05P	65	4.878	5.082	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-06E	2	6.324	6.324	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-07P	52	4.102	4.270	385.2	38.039	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-08E	2	6.324	6.324	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-09P	52	4.121	4.293	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-10V	22	8.691	9.134	385.2	54.705	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-11V	25	7.912	8.243	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-12P	58	2.901	3.023	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-13V	25	7.912	8.243	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-31P	58	2.901	3.023	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-14E	3	5.513	5.744	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-32T	15	4.945	5.152	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-32T (D/S)	15	4.352	4.534	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-16E	2	6.530	6.804	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-17P	52	2.917	2.550	385.2	76.600	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-18E	2	6.530	6.804	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-19P	52	4.121	4.293	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-20E	4	6.530	6.804	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-21P	54	6.329	6.594	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-33P	9	0.008	0.009	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.14 FWH 35 HEADER											
EX-02.14-22T	15	0.017	0.018	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-22T (D/S)	15	0.015	0.016	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-23P	65	0.017	0.018	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-24E	2	6.530	6.804	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-25E	4	6.804	6.804	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-26P	54	6.301	6.557	385.2	38.039	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-27E	2	6.530	6.804	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-28P	52	0.014	0.015	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-29T	14	0.044	0.047	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-29T (D/S)	14	0.037	0.040	385.2	23.240	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-29T (BR/SE)	14	0.016	0.017	385.2	29.715	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.7-02T (BR/SE)	12	0.029	0.031	385.2	48.757	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.15 FWH 35 HEADER											
EX-02.15-01P	64	0.008	0.008	385.2	24.405	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.15-02T	14	0.038	0.040	385.2	24.551	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.15-02T (D/S)	14	0.037	0.039	385.2	7.714	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.15-02T (BR/SE)	14	0.016	0.017	385.2	29.715	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.2 PSEP 1A 10" to 35 HDR											
EX-02.2-02P	61	0.007	0.007	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-03E	2	0.006	0.006	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-04P	52	0.003	0.003	385.2	38.302	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-05E	2	0.006	0.006	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-06P	52	0.004	0.004	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-08O	6	0.005	0.005	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.4 PSEP2A 14" to 35 HDR											
EX-02.4-02P	64	0.003	0.003	385.2	73.301	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-03E	4	0.008	0.008	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-04P	54	0.008	0.008	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-06O	6	0.009	0.009	385.2	95.761	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-07P	56	0.002	0.002	385.2	95.761	93.8	14.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.6 PSEP 1A&2A to 35 HDR											
EX-02.2-07T	12	0.009	0.009	385.2	3.409	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.2-07T (BR/SE)	12	0.007	0.007	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-07T (D/S)	12	0.013	0.013	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.6 PSEP 1A&2A to 35 HDR											
EX-02.6-01P	62	0.002	0.002	385.2	75.930	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.7 PSEP 1A&2A to 35 HDR											
EX-02.4-05T (BR/SE)	12	0.009	0.009	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-05T	12	0.013	0.013	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.4-05T (D/S)	12	0.013	0.013	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.7-01P	62	0.002	0.002	385.2	75.930	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.8 PSEP 2B 10" to 35 HDR											
EX-02.8-01N	31	0.009	0.010	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-02E	3	0.006	0.005	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-03P	53	0.003	0.003	385.2	38.302	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-04E	1	0.005	0.005	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-05P	51	0.004	0.004	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-07O	6	0.007	0.007	385.2	45.863	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-06E	3	0.006	0.005	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-09P	53	0.005	0.005	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-08T (BR/SE)	10	0.007	0.007	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-08T (D/S)	10	0.007	0.007	385.2	3.409	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.9 PSEP 1B 10" to 35 HDR											
EX-02.9-01N	31	0.009	0.010	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-02P	61	0.007	0.007	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-03E	2	0.006	0.006	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-04P	52	0.003	0.003	385.2	38.302	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-05E	2	0.006	0.006	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-06P	52	0.004	0.004	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-11O	6	0.005	0.005	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-07E	4	0.006	0.006	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-08P	54	0.006	0.006	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-09E	4	0.006	0.006	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-10P	54	0.006	0.006	385.2	23.379	93.8	10.750	6.854	0.000	41.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:18:51AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: FW: 36 HTR TO SG HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.1A FWH 36A to SG HDR											
FW-02.1A-01N	31	3.082	1.843	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-02E	4	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-03P	54	1.972	1.179	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-04E	4	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-05V	22	4.354	2.603	430.4	29.883	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-06P	58	1.356	0.811	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-07E	2	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-08P	52	1.541	0.921	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-09E	2	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-10P	52	1.541	0.921	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-11E	2	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-12P	52	1.541	0.921	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-13R	18	1.726	1.032	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-13R (D/S)	18	0.878	0.532	430.4	5.938	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.1B FWH 36B to SG HDR											
FW-02.1B-01N	31	3.082	1.843	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-02E	4	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-03P	54	1.972	1.179	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-04E	4	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-05V	22	4.354	2.603	430.4	29.883	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-06P	58	1.356	0.811	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-07E	2	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-08P	52	1.541	0.921	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-09E	2	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-10P	52	1.547	0.925	430.4	17.364	0.0	18.000	6.657	0.000	69.01	HBD

Sorted By: Flow Order

Sorted By: Flow Order

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.1C FWH 36C to SG HDR											
FW-02.1C-01N	31	3.082	1.843	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-02E	4	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-03P	54	1.972	1.179	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-04E	4	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-05V	22	4.354	2.603	430.4	29.883	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-06P	58	1.356	0.811	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-07E	2	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-08P	52	1.541	0.921	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-09E	2	2.280	1.363	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-10P	52	1.555	0.930	430.4	17.508	0.0	18.000	6.657	0.000	69.01	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:19:13AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: FW: BFP TO 36 HTR
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.1A BFP 31 to RCIRC T											
FW-01.1A-01N	31	0.022	0.013	378.8	33.290	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.1A-02P	61	6.628	3.796	378.8	33.715	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.1A-03R	18	6.899	3.951	378.8	33.910	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.1A-03R (D/S)	18	5.367	3.074	378.8	20.389	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-01E	4	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-02P	54	5.683	3.255	378.8	20.153	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-03T	15	5.325	3.050	378.8	20.135	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-03T (D/S)	15	5.325	3.050	378.8	20.135	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-03T (BR/SE)	15	40.126	22.984	378.8	539.374	0.0	6.625	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.1B BFP 32 to RCIRC T											
FW-01.1B-01N	31	0.022	0.013	378.8	33.290	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.1B-02P	61	6.752	3.867	378.8	34.720	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.1B-03R	18	6.899	3.951	378.8	33.910	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.1B-03R (D/S)	18	5.367	3.074	378.8	20.389	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-01E	4	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-02P	54	5.674	3.250	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-03E	1	6.037	3.458	378.8	21.122	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-04P	51	3.901	2.235	378.8	20.103	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-05T	15	5.323	3.049	378.8	20.121	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-05T (D/S)	15	5.323	3.049	378.8	20.121	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-05T (BR/SE)	15	40.126	22.984	378.8	539.374	0.0	6.625	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR											
FW-01.2A-04P	65	3.550	2.033	378.8	20.135	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-05V	25	9.942	5.695	378.8	24.119	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-06V	22	12.386	7.095	378.8	34.207	0.0	20.000	6.892	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR											
FW-01.2A-07E	4	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-08T	15	5.319	3.047	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-08T (D/S)	15	5.319	3.047	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-09P	65	3.546	2.031	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-10E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-11P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-12E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-13P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-14E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-15P_1	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-15P_2	9	2.608	1.519	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-16E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-17P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-18E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-19P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-20E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-21P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-22E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-23P	52	4.446	2.547	378.8	20.198	0.0	20.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR											
FW-01.2B-06P	65	3.559	2.039	378.8	20.216	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-07V	25	9.942	5.695	378.8	24.119	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-08V	22	12.386	7.095	378.8	34.207	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-09E	4	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-10P	54	5.674	3.250	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-11T	15	5.319	3.047	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-11T (D/S)	15	5.319	3.047	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-12P	65	3.546	2.031	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-13E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-14P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-15E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-16P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-17E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-18P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR											
FW-01.2B-19E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-20P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-21E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-22P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-23E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-24P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-25E	2	6.560	3.758	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-26P	52	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-27R	18	4.964	2.844	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-27R (D/S)	18	3.110	1.782	378.8	8.564	0.0	30.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.3 BFP DISCHARGE HDR											
FW-01.3-01T (BR/SE)	12	6.038	3.458	378.8	20.148	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.3-01T	12	4.296	2.461	378.8	8.709	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-01T (D/S)	12	6.329	3.625	378.8	17.419	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-02P	62	3.086	1.768	378.8	17.409	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-03E	4	5.786	3.314	378.8	17.780	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-04E	4	5.853	3.353	378.8	18.111	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-05P	54	4.888	2.800	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-06E	2	5.651	3.237	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-07P	52	3.819	2.187	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-08E	4	5.651	3.237	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-09P	54	4.888	2.800	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-10E	2	5.651	3.237	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-11P	52	3.819	2.187	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-12E	2	5.651	3.237	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-13P	52	3.819	2.187	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-14E	2	5.651	3.237	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-15E	4	5.651	3.237	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-16P	54	4.888	2.800	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-17T	15	4.582	2.625	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-17T (D/S)	15	4.582	2.625	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-18P	65	3.080	1.764	378.8	17.350	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.4-01T	14	8.471	4.852	378.8	17.358	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.4-01T (D/S)	14	6.755	3.869	378.8	11.577	0.0	30.000	6.892	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.3 BFP DISCHARGE HDR											
FW-01.4-01T (BR/SE)	14	5.726	3.280	378.8	16.905	0.0	18.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.4 BFP DISCHARGE HDR											
FW-01.4-02P	63	2.454	1.406	378.8	11.561	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.5-01T	14	6.776	3.881	378.8	11.635	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.5-01T (D/S)	14	4.229	2.463	378.8	5.809	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.5-01T (BR/SE)	14	5.723	3.278	378.8	16.888	0.0	18.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.6A BFP HDR to FWH 36A											
FW-01.6A-01R	7	2.646	1.541	378.8	5.704	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.6A-01R (D/S)	7	5.169	2.961	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-02P	57	4.084	2.339	378.8	16.863	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-03E	2	5.977	3.424	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-04P	52	4.039	2.313	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-05E	2	5.977	3.424	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-06P	52	4.039	2.313	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-07V	22	11.412	6.537	378.8	28.703	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-08E	4	5.977	3.424	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-09P	54	5.169	2.961	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-10E	3	5.654	3.238	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-11P	53	4.039	2.313	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-12N	30	6.462	3.701	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.6B BFP HDR to FWH 36B											
FW-01.6B-02P	64	3.227	1.848	378.8	16.534	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-03E	2	5.977	3.424	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-04P	52	4.039	2.313	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-05V	22	11.412	6.537	378.8	28.703	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-06E	4	5.977	3.424	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-07P	54	5.169	2.961	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-08E	3	5.654	3.238	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-10N	30	6.462	3.701	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.6C BFP HDR to FWH 36C											
FW-01.6C-02P	64	3.231	1.851	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-03E	2	5.977	3.424	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-04P	52	4.039	2.313	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-05V	22	11.412	6.537	378.8	28.703	0.0	18.000	6.892	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.6C BFP HDR to FWH 36C											
FW-01.6C-06E	4	5.977	3.424	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-08E	3	5.654	3.238	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-10N	30	6.462	3.701	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:19:30AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 0.020

Run Name: FW: FW RECIRC

Ending Period: RO17

Total Plant Operating Hours: 220,317

WRA Data Option: NFA->ARD->HBD->COMP

Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-04.1A BFP 31 RECIRC											
FW-04.1A-10P	64	0.112	0.056	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-01E	4	0.218	0.109	378.8	581.324	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-02P	54	0.180	0.090	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-03E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-04P_1	52	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-04P_2	9	0.223	0.113	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-05E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-06P_1	52	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-06P_2	9	0.223	0.113	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-07E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-08E	4	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-09P	54	0.183	0.092	378.8	553.754	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2A-01R	17	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2A-01R (D/S)	17	0.176	0.088	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-02P	67	0.201	0.101	378.8	1,361.711	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-03B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-04E	3	0.343	0.172	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-05P	53	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-06E	1	0.323	0.162	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-07P_1	51	0.215	0.108	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-07P_2	9	0.505	0.257	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-08B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-09P_1	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-09P_2	9	0.505	0.257	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-10B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-11P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD

Sorted By: Flow Order

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-04.1A BFP 31 RECIRC											
FW-04.2A-12B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-13P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-14B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-15P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-16B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-17P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-18B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-19P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-20B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-21P	52	0.250	0.125	378.8	1,345.944	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-22B	2	0.396	0.198	378.8	1,500.508	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-23P	52	0.255	0.128	378.8	1,388.613	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-24R (D/S)	18	0.274	0.137	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-05.1A-01V	18	0.169	0.084	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-02P	24	0.574	0.288	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-03V	58	0.125	0.063	378.8	549.199	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-04R	22	0.574	0.288	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-04R (D/S)	18	0.157	0.079	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.2A-01N	18	0.110	0.055	378.8	273.656	0.0	8.625	6.927	2.860	98.41	ARD
FW-05.2A-01N	30	0.147	0.074	378.8	273.656	0.0	8.625	6.927	2.860	98.41	ARD
====>Grouped by Line: FW-04.1B BFP 32 RECIRC											
FW-04.1B-10P	64	0.112	0.056	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-01E	4	0.221	0.111	378.8	593.847	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-02P	54	0.185	0.092	378.8	561.160	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-03E	4	0.234	0.117	378.8	650.542	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-04P_1	54	0.180	0.090	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-04P_2	9	0.223	0.113	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-05E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-06P_1	52	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-06P_2	9	0.223	0.113	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-07E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-08E	4	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-09P	54	0.180	0.090	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2B-01R	17	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-04.1B BFP 32 RECIRC											
FW-04.2B-01R (D/S)	17	0.176	0.088	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-02P	67	0.196	0.098	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-03B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-04P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-05E	1	0.323	0.162	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-06P	51	0.215	0.108	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-07E	1	0.323	0.162	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-08P_1	51	0.215	0.108	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-08P_2	9	0.505	0.257	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-09B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-10P_1	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-10P_2	9	0.505	0.257	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-11B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-12P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-13B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-14P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-15B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-16P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-17B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-18P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-19B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-20P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-21B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-22P	52	0.253	0.127	378.8	1,374.167	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-23R	18	0.274	0.137	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-23R (D/S)	18	0.178	0.089	378.8	585.288	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1B-01V	24	0.574	0.288	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1B-02P	58	0.124	0.062	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1B-03V	22	0.574	0.288	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1B-04R	18	0.157	0.079	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1B-04R (D/S)	18	0.110	0.055	378.8	273.656	0.0	8.625	6.927	2.860	98.41	ARD
FW-05.2B-01N	30	0.147	0.074	378.8	273.656	0.0	8.625	6.927	2.860	98.41	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:20:10AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: FW: SG HEADERS

Ending Period: RO17

Total Plant Operating Hours: 220.317

WRA Data Option: NFA->ARD->HBD->COMP

Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.3 SG INLET HEADER											
FW-02.1B-11T	12	1.222	0.741	430.4	6.059	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.1B-11T (BR/SE)	12	2.107	1.260	430.4	17.403	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-11T (D/S)	12	1.930	1.154	430.4	12.137	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.3-01P	62	0.940	0.562	430.4	12.105	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.4 SG INLET HEADER											
FW-02.1C-11T (BR/SE)	12	2.108	1.260	430.4	17.408	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-11T	12	1.926	1.151	430.4	12.096	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.1C-11T (D/S)	12	2.415	1.444	430.4	18.135	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-02T	15	1.748	1.045	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-02T (D/S)	15	1.748	1.045	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-03P	65	1.165	0.697	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-04E	2	2.156	1.289	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-05E	4	2.156	1.289	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-06P	54	1.865	1.115	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-07E	2	2.156	1.289	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-08P	52	1.457	0.871	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-09E	2	2.156	1.289	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-10P	52	1.457	0.871	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-11E	2	2.156	1.289	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-12P_1	52	1.457	0.871	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-12P_2	9	0.829	0.503	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-13E	2	2.156	1.289	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-14P	52	1.457	0.871	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-15E	2	2.156	1.289	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-16P	52	1.457	0.871	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.4 SG INLET HEADER											
FW-02.4-17E	2	2.156	1.289	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-18P	52	1.471	0.880	430.4	18.108	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-19T	14	3.237	1.935	430.4	18.116	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-19T (BR/SE)	14	1.848	1.105	430.4	13.066	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.4-19T (D/S)	14	2.756	1.648	430.4	13.587	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.5 SG INLET HEADER											
FW-02.5-01T (D/S)	15	1.504	0.899	430.4	13.595	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-02P	65	0.992	0.593	430.4	13.374	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-03T	15	1.489	0.890	430.4	13.374	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-03T (D/S)	15	1.489	0.890	430.4	13.374	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-06P	65	1.002	0.599	430.4	13.581	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-04T	14	2.756	1.648	430.4	13.587	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-04T (D/S)	14	2.197	1.314	430.4	9.058	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-04T (BR/SE)	14	1.856	1.110	430.4	13.157	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.5-01T	15	1.504	0.899	430.4	13.595	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.6 SG INLET HEADER											
FW-02.6-01P	63	0.798	0.477	430.4	9.049	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.6-03T	14	2.196	1.313	430.4	9.049	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.6-03T (BR/SE)	14	1.857	1.111	430.4	13.170	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.6-03T (D/S)	14	1.275	0.773	430.4	4.524	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.8A SG HDR to SG 31											
FW-02.8A-01P	64	1.055	0.631	430.4	13.046	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-02E	2	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-03T	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-03T (D/S)	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-04V	22	3.709	2.218	430.4	22.434	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-25R	7	1.099	1.099	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-25R (D/S)	7	1.614	1.614	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8A-05V	24	4.713	2.818	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8A-26R	18	2.362	1.412	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8A-26R (D/S)	18	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-06E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-07P	54	1.680	1.005	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-08T	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8A SG HDR to SG 31											
FW-02.8A-08T (D/S)	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-09P	65	1.050	0.628	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-10E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-11P_1	54	1.680	1.005	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-11P_2	9	0.678	0.411	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-12F	6	3.000	1.794	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-13P	56	0.600	0.359	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-14E	1	1.733	1.036	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-15P	51	1.155	0.691	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-16E	2	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-17P	52	1.313	0.785	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-18V	25	3.442	2.058	430.4	19.921	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-19V	22	3.909	2.337	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-20P	58	1.720	1.028	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-21T	15	1.530	0.915	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-21T (D/S)	15	1.530	0.915	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-22E	4	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-23E	4	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-24P	54	1.632	0.976	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-01P	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-02E	2	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-03P	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-04B	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-05B	3	1.785	1.067	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-06P_1	53	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-06P_2	9	0.650	0.394	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-07B	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-08B	4	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-09N	30	0.030	0.018	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.8B SG HDR to SG 32											
FW-02.8B-01P	64	1.050	0.628	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-02E	2	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-03P	52	1.313	0.785	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-04T	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
=====>Grouped by Line: FW-02.8B SG HDR to SG 32											
FW-02.8B-04T (D/S)	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-05V	22	3.709	2.218	430.4	22.434	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-25R	7	1.838	1.099	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-25R (D/S)	7	3.017	1.804	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8B-06V	24	4.713	2.818	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8B-26R	18	1.412	1.412	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8B-26R (D/S)	18	0.942	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-07E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-08P	54	1.680	1.005	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-09T	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-09T (D/S)	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-10P	65	1.050	0.628	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-11E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-12P_1	54	1.696	1.014	430.4	13.144	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-12P_2	9	0.678	0.411	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-13F	6	3.000	1.794	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-14P	56	0.600	0.359	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-15E	1	1.733	1.036	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-16P	51	1.155	0.691	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-17E	2	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-18P	52	1.313	0.785	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-19V	25	3.442	2.058	430.4	19.921	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-20V	22	3.909	2.337	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-21P	58	1.720	1.028	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-22T	15	1.530	0.915	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-22T (D/S)	15	1.530	0.915	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-23E	4	1.939	1.159	430.4	12.904	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-24P	54	1.632	0.976	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-01P	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-02E	2	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-03P	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-04B	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-05B	3	1.785	1.067	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-06P	53	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8B SG HDR to SG 32											
FW-03.1B-07B	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-08E	2	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-09P	53	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-10E	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-11E	3	1.785	1.067	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-12N	30	0.030	0.018	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.8C SG HDR to SG 34											
FW-02.8C-01P	64	1.051	0.629	430.4	12.975	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-02E	2	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-03P	52	1.313	0.785	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-04T	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-04T (D/S)	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-05V	22	3.709	2.218	430.4	22.434	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-24R	7	1.838	1.099	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-24R (D/S)	7	2.699	1.614	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8C-06V	24	4.713	2.818	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8C-25R	18	2.362	1.412	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8C-25R (D/S)	18	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-07E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-08P	54	1.680	1.005	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-09T	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-09T (D/S)	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-10P	65	1.050	0.628	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-11E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-12P_1	54	1.680	1.005	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-12P_2	9	0.678	0.411	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-13F	6	3.000	1.794	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-14P	56	0.600	0.359	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-15E	1	1.733	1.036	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-16E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-17P	52	1.313	0.785	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-18V	25	3.442	2.058	430.4	19.921	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-19V	22	3.909	2.337	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-20P	58	1.720	1.028	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Flow Order											
====>Grouped by Line: FW-02.8C SG HDR to SG 34											
FW-02.8C-21T	15	1.530	0.915	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-21T (D/S)	15	1.530	0.915	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-22E	4	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-23P	54	1.632	0.976	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-01P	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-02E	2	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-03P	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-04B	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-16P_1	51	1.122	0.671	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-16P_2	9	0.650	0.394	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-05B	2	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-06P_1	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-06P_2	9	0.650	0.394	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-07B	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-09P	51	1.122	0.671	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-10E	4	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-11P	54	1.632	0.976	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-12E	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-13P	51	1.122	0.671	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-14E	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-15N	30	0.030	0.018	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
Sorted By: Flow Order											
====>Grouped by Line: FW-02.8D SG HDR to SG 33											
FW-02.6-02T (D/S)	15	0.686	0.416	430.4	4.458	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.7-01P	63	0.464	0.282	430.4	4.532	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.7-02T	15	0.686	0.416	430.4	4.458	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.7-02T (D/S)	15	0.686	0.416	430.4	4.458	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.7-03P	65	0.464	0.282	430.4	4.532	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.7-04T	14	1.281	0.777	430.4	4.547	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.7-04T (BR/SE)	14	1.859	1.112	430.4	13.194	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-01P	64	1.054	0.630	430.4	13.033	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-02E	2	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-03P	52	1.313	0.785	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-04T	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-04T (D/S)	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Flow Order											
====>Grouped by Line: FW-02.8D SG HDR to SG 33											
FW-02.8D-05V	22	3.709	2.218	430.4	22.434	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-24R	7	1.838	1.099	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-24R (D/S)	7	3.017	1.804	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8D-06V	24	4.713	2.818	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8D-25R	18	2.640	1.578	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8D-25R (D/S)	18	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-07E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-08P	54	1.680	1.005	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-09T	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-09T (D/S)	15	1.575	0.942	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-10P	65	1.050	0.628	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-11E	4	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-12P_1	54	1.680	1.005	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-12P_2	9	0.678	0.411	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-13F	6	3.000	1.794	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-14P	56	0.600	0.359	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-15E	2	1.943	1.162	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-16P	52	1.313	0.785	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-17V	25	3.442	2.058	430.4	19.921	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-18V	22	3.909	2.337	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-19P	58	1.720	1.028	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-20T	15	1.530	0.915	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-20T (D/S)	15	1.530	0.915	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-21E	4	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-22E	4	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-23P	54	1.632	0.976	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-01P	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-02E	2	1.887	1.128	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-03P	52	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-04B	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-05B	3	1.785	1.067	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-06P_1	53	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-06P_2	9	0.650	0.394	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-07B	1	1.683	1.006	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8D SG HDR to SG 33											
FW-03.1D-08B	3	1.785	1.067	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-09P	53	1.275	0.762	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-10N	30	0.030	0.018	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.6-02T	15	0.686	0.416	430.4	4.458	0.0	30.000	6.657	0.000	69.01	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
Plant: Indian Point
Unit: 3
DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
AnalysisDate/Time: 7/22/2011 10:20:22AM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
Duty Factor (Global) : 1.000

Run Name: HD: HD PMP TO BFP HDR
Ending Period: RO17
Total Plant Operating Hours:220.317
WRA Data Option: NFA->ARD->HBD->COMP
Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-11.1A HD PMP 31 to HDR											
HD-11.1A-01N	31	6.495	4.204	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.1A-02V	25	6.495	4.204	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.2A-01R	7	4.547	2.943	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.2A-01R (D/S)	7	6.762	4.377	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-12.1A-01V	24	11.191	7.244	370.3	31.512	0.0	8.625	6.959	0.000	53.12	ARD
HD-12.1A-02R	18	5.917	3.830	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-12.1A-02R (D/S)	18	3.897	2.523	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-01V	22	6.495	4.204	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-02P	58	2.858	1.850	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-03E	4	4.807	3.111	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-04T	15	3.897	2.523	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-04T (D/S)	15	3.897	2.523	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-05P	65	2.692	1.743	370.3	14.043	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-06O	6	11.614	7.518	370.3	33.430	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-07P	56	2.323	1.504	370.3	33.430	0.0	12.750	6.959	0.000	53.12	ARD
====>Grouped by Line: HD-11.1B HD PMP 32 to HDR											
HD-11.1B-01N	31	6.495	4.204	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.1B-02V	25	6.495	4.204	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.2B-01R	7	4.547	2.943	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.2B-01R (D/S)	7	6.762	4.377	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-12.1B-01V	24	10.566	6.840	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-12.1B-02R	18	5.917	3.830	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-12.1B-02R (D/S)	18	3.897	2.523	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-01V	22	6.495	4.204	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-02P	58	2.882	1.866	370.3	13.448	0.0	12.750	6.959	0.000	53.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-11.1B HD PMP 32 to HDR											
HD-12.2B-03E	4	4.843	3.135	370.3	13.430	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-04T	15	3.897	2.523	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-04T (D/S)	15	3.897	2.523	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-05P	65	2.607	1.688	370.3	13.343	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-06O	6	11.614	7.518	370.3	33.430	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-07P	56	2.323	1.504	370.3	33.430	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-08T (BR/SE)	10	5.196	3.364	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-08T (D/S)	10	4.521	3.175	370.3	8.492	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.3-01P	60	2.711	1.905	370.3	8.488	0.0	16.000	6.959	0.000	53.12	ARD
====>Grouped by Line: HD-12.2A HD PMP HDR to CD SYS											
HD-12.2A-08T (BR/SE)	12	4.417	2.859	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-08T	12	3.745	2.623	370.3	8.595	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.2A-08T (D/S)	12	7.182	3.836	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-01E	4	6.632	3.542	370.3	17.617	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-02P	54	5.605	2.994	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-03E	2	6.481	3.462	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-04P	52	4.379	2.339	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-05E	1	5.781	3.087	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-06P	51	3.854	2.058	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-07E	2	6.481	3.462	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-08P	52	4.379	2.339	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-09E	2	6.481	3.462	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-10P_1	52	4.379	2.339	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-10P_2	9	2.441	1.330	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-11E	2	6.481	3.462	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-12P	52	4.379	2.339	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-13E	2	6.481	3.462	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-14P	52	4.379	2.339	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-15T	15	5.255	2.807	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-15T (D/S)	15	5.255	2.807	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-16P	65	3.503	1.871	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-17E	2	6.481	3.462	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-18P	52	4.379	2.339	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD

Company: Entergy Nuclear Operations, Inc.
Plant: Indian Point
Unit: 3
DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
AnalysisDate/Time: 7/22/2011 10:20:36AM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
Duty Factor (Global) : 1.000

Run Name: HD: HTR 31 TO COND
Ending Period: RO17
Total Plant Operating Hours:220.317
WRA Data Option: NFA->ARD->HBD->COMP
Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-13.1 FWH 31A to Cond 33											
HD-13.1-01N	31	1.241	0.765	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-02P	61	0.670	0.413	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-03E	4	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-04P	54	0.794	0.490	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-05E	2	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-06P	52	0.620	0.382	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-07T	15	0.745	0.459	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-07T (D/S)	15	0.745	0.459	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-08E	4	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-09V	22	1.241	0.765	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-10E	4	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-11E	4	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-12E	3	0.869	0.535	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-13P	53	0.620	0.382	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-14E	2	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-15P	52	0.620	0.382	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-16E	2	0.918	0.566	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-17P	52	0.620	0.382	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-18E	16	0.620	0.382	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-18E (D/S)	16	4.248	2.609	102.3	46.214	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.1-19V	8	2.482	1.525	102.3	9.199	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.1-20R	18	3.837	2.357	102.3	46.214	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.1-20R (D/S)	18	0.745	0.459	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-21V	22	1.241	0.765	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-22P	58	0.546	0.337	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-23N	30	0.993	0.612	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-13.2 FWH 31B to Cond 32											
HD-13.2-01N	31	1.233	0.759	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-02P	61	0.666	0.410	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-03E	4	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-04P	54	0.789	0.486	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-05E	1	0.814	0.501	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-06P	51	0.542	0.334	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-07T	12	1.011	0.622	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-07T (BR/SE)	12	0.838	0.516	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-08V	22	1.233	0.759	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-09E	4	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-10E	4	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-11P	54	0.789	0.486	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-12E	2	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-13P	52	0.616	0.379	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-14E	2	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-15P	52	0.616	0.379	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-16E	16	0.616	0.379	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-16E (D/S)	16	1.532	0.940	102.2	9.114	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.2-17V	8	2.472	1.517	102.2	9.114	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.2-18R	18	1.384	0.849	102.2	9.114	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.2-18R (D/S)	18	0.740	0.455	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-19V	22	1.233	0.759	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-20P	58	0.542	0.334	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-21N	30	0.986	0.607	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
====>Grouped by Line: HD-13.3 FWH 31C to Cond 31											
HD-13.3-01N	31	1.235	0.763	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-02P	61	0.667	0.412	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-03E	4	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-04P	54	0.791	0.488	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-05E	1	0.815	0.503	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-06P	51	0.544	0.336	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-07T	12	1.013	0.626	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-07T (BR/SE)	12	0.840	0.519	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-08V	22	1.235	0.763	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-13.3 FWH 31C to Cond 31											
HD-13.3-09E	4	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-10E	4	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-11P	54	0.791	0.488	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-12E	2	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-13P	52	0.618	0.381	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-14E	2	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-15P	52	0.618	0.381	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-16E	16	0.618	0.381	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-16E (D/S)	16	1.535	0.944	102.1	9.169	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.3-17V	8	2.475	1.522	102.1	9.169	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.3-18R	18	1.386	0.852	102.1	9.169	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.3-18R (D/S)	18	0.741	0.458	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-19V	22	1.235	0.763	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-20P	58	0.544	0.336	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-21N	30	0.988	0.610	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:20:52AM

CHECWOKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 32 TO HTR 31
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-08.1A FWH 32A to FWH 31A											
HD-8.1A-01N	31	3.378	0.811	165.8	2.896	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-02P	61	1.933	0.422	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-03E	4	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-04P	54	2.079	0.500	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-05E	2	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-06P	52	1.624	0.390	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-07T (BR/SE)	10	2.598	0.625	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-07T (D/S)	10	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-08P	60	2.008	0.469	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-09E	2	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-10V	22	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2A-01R	7	2.274	0.547	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2A-01R (D/S)	7	2.913	0.696	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1A-01V	24	4.551	1.088	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1A-02R	18	2.549	0.609	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1A-02R (D/S)	18	1.949	0.469	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.2A-01V	22	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-02P	58	0.001	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-03E	3	0.001	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-04T	13	0.002	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-04T (BR/SE)	13	0.001	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-04T (D/S)	13	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-08.1B FWH 32B to FWH 31B											
HD-8.1B-01N	31	3.378	0.811	165.8	2.896	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-02P	61	1.933	0.422	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Flow Order											
====>Grouped by Line: HD-08.1B FWH 32B to FWH 31B											
HD-8.1B-03E	4	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-04P	54	2.079	0.500	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-05E	2	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-06P	52	1.624	0.390	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-07T (BR/SE)	10	2.598	0.625	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-07T (D/S)	10	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-08P	60	2.008	0.469	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-09E	2	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-10V	22	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2B-01R	7	2.274	0.547	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2B-01R (D/S)	7	2.913	0.696	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1B-01V	24	4.551	1.088	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1B-02R	18	2.549	0.609	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1B-02R (D/S)	18	1.949	0.469	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-01V	22	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-02P	58	0.001	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-03E	3	0.001	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-04T	13	0.002	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-04T (BR/SE)	13	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-04T (D/S)	13	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
Sorted By: Flow Order											
====>Grouped by Line: HD-08.1C FWH 32C to FWH 31C											
HD-8.1C-01N	31	3.378	0.811	165.8	2.896	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-02P	61	1.933	0.422	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-03E	4	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-04P	54	2.079	0.500	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-05E	2	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-06P	52	1.624	0.390	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-07T (BR/SE)	10	2.598	0.625	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-07T (D/S)	10	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-08P	60	2.008	0.469	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-09E	2	2.403	0.578	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-10V	22	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2C-01R	7	2.274	0.547	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2C-01R (D/S)	7	2.913	0.696	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-08.1C FWH 32C to FWH 31C											
HD-09.1C-01V	24	4.551	1.088	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1C-02R	18	2.549	0.609	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1C-02R (D/S)	18	1.949	0.469	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-01V	22	3.248	0.781	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-02P	58	0.001	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-03E	3	0.001	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-04T	13	0.002	0.000	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-04T (BR/SE)	13	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-04T (D/S)	13	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.3A FWH 32A to FWH 31A											
HD-09.3A-01P	64	0.001	0.000	165.8	1.469	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.3A-02N	30	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.3B FWH 32B to FWH 31B											
HD-09.3B-01P	64	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.3B-02N	30	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.3C FWH 32C to FWH 31C											
HD-09.3C-01P	64	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.3C-02N	30	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.4A FWH 32A to FWH 31A											
HD-09.4A-01P	63	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4A-02E	4	0.001	0.000	165.8	1.495	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4A-03P	54	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4A-04N	30	0.001	0.000	165.8	1.452	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.4B FWH 32B to FWH 31B											
HD-09.4B-01P	63	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4B-02E	4	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4B-03P	54	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4B-04N	30	0.001	0.000	165.8	1.452	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.4C FWH 32C to FWH 31C											
HD-09.4C-01P	63	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4C-02E	4	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4C-03P	54	0.001	0.000	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4C-04N	30	0.001	0.000	165.8	1.452	0.0	12.750	7.096	0.000	9.12	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:21:24AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 33 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Flow Order											
====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A											
HD-6.1A-01N	31	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-02P	61	3.344	0.904	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-03E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-04P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-05E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-06P_1	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-06P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-07E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-08P	52	3.096	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-09E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-10P	54	3.514	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-11E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-12P_1	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-12P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-13E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-43P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-14E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-15P	54	3.963	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-16E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-17P_1	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-17P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-18E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-19P	52	3.096	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-20E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-21P_1	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-21P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A											
HD-6.1A-22E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-23P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-24E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-25P_1	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-25P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-26E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-27P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-28T	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-28T (D/S)	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-29P	65	2.196	0.670	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-44T	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-44T (D/S)	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-30E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-31P	52	2.878	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-32E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-33P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-34E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-37E	3	3.844	1.172	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-38P	53	2.809	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-39E	1	3.624	1.105	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-40P	51	2.416	0.737	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-41E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-42P	54	3.651	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2A-01E	16	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2A-01E (D/S)	16	5.828	1.746	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1A-01V	24	9.831	2.817	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1A 02R	18	5.264	1.577	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1A 02R (D/S)	18	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-01V	22	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-02P	58	2.416	0.737	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-03T	13	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-03T (BR/SE)	13	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-04P	63	2.268	0.670	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-05R	18	3.176	0.938	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A											
HD-07.2A-05R (D/S)	18	2.204	0.652	204.2	2.747	0.0	10.750	7.096	0.000	9.12	ARD
HD-07.3A-01N	30	2.952	0.907	204.2	2.875	0.0	10.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-06.1B FWH 33B to FWH 32B											
HD-6.1B-01N	31	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-02P	61	3.344	0.904	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-03E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-04E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-05P_1	54	3.514	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-05P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-06E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-07P	52	3.096	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-08E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-09P	54	3.514	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-10E	3	3.844	1.172	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-11P_1	53	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-11P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-12E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-13E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-14P	54	3.963	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-15E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-16P_1	54	3.514	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-16P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-17E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-18P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-19E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-20P	52	3.096	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-21E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-22P_1	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-22P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-23T	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-23T (D/S)	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-24P	65	2.196	0.670	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-38T	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-38T (D/S)	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1B FWH 33B to FWH 32B											
HD-6.1B-25E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-26P	52	2.878	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-27E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-28P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-29E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-32E	3	3.844	1.172	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-33P	53	2.809	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-34E	1	3.624	1.105	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-35P	51	2.416	0.737	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-36E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-37P	54	3.514	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2B-01E	16	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2B-01E (D/S)	16	5.828	1.746	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1B-01V	24	9.401	2.817	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1B-02R	18	5.264	1.577	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1B-02R (D/S)	18	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-01V	22	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-02P	58	2.416	0.737	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-03T	13	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-03T (BR/SE)	13	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-04P	63	2.268	0.670	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-05R	18	3.176	0.938	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-05R (D/S)	18	2.204	0.652	204.2	2.747	0.0	10.750	7.096	0.000	9.12	ARD
HD-07.3B-01N	30	2.952	0.907	204.2	2.875	0.0	10.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-06.1C FWH 33C to FWH 32C											
HD-6.1C-01N	31	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-02P	61	3.344	0.904	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-03E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-04P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-05E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-06P	52	3.096	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-07E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-08P_1	54	3.514	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-08P_2	9	1.208	0.368	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Flow Order											
====>Grouped by Line: HD-06.1C FWH 33C to FWH 32C											
HD-6.1C-09E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-10P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-11E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-12P	52	3.096	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-13E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-14P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-15E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-16P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-17E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-18P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-19T	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-19T (D/S)	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-20P	65	2.196	0.670	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-34T	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-34T (D/S)	15	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-35P	65	2.196	0.670	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-21E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-22P	52	2.878	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-23E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-24P	52	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-25E	2	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-28E	3	3.844	1.172	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-29P	53	2.809	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-30E	1	3.624	1.105	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-31P	51	2.416	0.737	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-32E	4	4.063	1.239	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-33P	54	3.684	1.072	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2C-01E	16	2.746	0.837	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2C-01E (D/S)	16	5.828	1.746	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1C-01V	24	9.401	2.817	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1C-02R	18	5.264	1.577	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1C-02R (D/S)	18	3.295	1.005	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-01V	22	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-02P	58	2.416	0.737	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1C FWH 33C to FWH 32C											
HD-07.2C-03T	13	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-03T (BR/SE)	13	5.491	1.675	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-04P	63	2.268	0.670	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-05R	18	3.176	0.938	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-05R (D/S)	18	2.204	0.652	204.2	2.747	0.0	10.750	7.096	0.000	9.12	ARD
HD-07.3C-01N	30	2.952	0.907	204.2	2.875	0.0	10.750	7.096	0.000	9.12	ARD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:21:45AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 34 TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-04.1A FWH 34A to FWH 33A											
HD-4.1A-01N	31	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-02P	61	3.307	1.396	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-03T	15	3.675	1.551	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-03T (D/S)	15	3.675	1.551	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-04P	65	2.450	1.034	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-05E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-06E	3	3.648	1.809	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-07P	53	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-08E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-09P_1	52	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-09P_2	9	1.147	0.569	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-10E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-11P	52	2.802	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-12E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-13P	52	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-14E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-15P	52	2.802	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.2A-01E	16	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.2A-01E (D/S)	16	6.501	3.138	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.2A-02V	22	10.486	5.061	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3A-01R	7	7.340	3.543	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3A-01R (D/S)	7	9.461	4.559	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1A-01V	24	14.782	7.124	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1A-02R	18	8.278	3.989	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1A-02R (D/S)	18	3.127	1.551	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-01T	13	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD

Sorted By: Flow Order

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-04.1A FWH 34A to FWH 33A											
HD-05.2A-01T (BR/SE)	13	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-02P	63	2.241	1.034	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-03E	1	3.440	1.706	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-04E	4	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-05P	54	3.336	1.654	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-06N	30	4.170	2.068	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-04.1B FWH 34B to FWH 33B											
HD-4.1B-01N	31	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-02P	61	3.307	1.396	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-03E	1	3.440	1.706	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-04P	51	2.695	1.137	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-05T (BR/SE)	10	4.170	2.068	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-05T (D/S)	10	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-06P	60	3.127	1.551	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-07E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-08P	52	3.062	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-09E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-10E	3	3.648	1.809	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-11P_1	53	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-11P_2	9	1.147	0.569	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-12E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-13P	52	2.802	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-14E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-15P	52	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-16E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-17P	52	2.802	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.2B-01E	16	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.2B-01E (D/S)	16	6.501	3.138	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.2B-02V	22	10.486	5.061	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3B-01R	7	7.340	3.543	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3B-01R (D/S)	7	9.461	4.559	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1B-01V	24	14.782	7.124	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1B-02R	18	8.278	3.989	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1B-02R (D/S)	18	3.127	1.551	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-04.1B FWH 34B to FWH 33B											
HD-05.2B-01T	13	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-01T (BR/SE)	13	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-02P	63	2.241	1.034	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-03E	1	3.440	1.706	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-04E	4	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-05P	54	3.336	1.654	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-06N	30	4.170	2.068	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-04.1C FWH 34C to FWH 33C											
HD-4.1C-01N	31	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-02P	61	3.307	1.396	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-03E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-04P	52	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-05E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-06T	15	3.675	1.551	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-06T (D/S)	15	3.675	1.551	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-07P	65	2.450	1.034	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-08E	4	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-09P	54	3.336	1.654	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-10E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-11P	52	3.062	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-12E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-13P_1	52	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-13P_2	9	1.147	0.569	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-14E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-15P	52	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-16E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-17P_1	52	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-17P_2	9	1.147	0.569	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-18E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-19P	52	2.802	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-20E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-21P	52	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-22E	2	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-23P	52	2.802	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-04.1C FWH 34C to FWH 33C											
HD-4.2C-01E	16	2.606	1.292	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.2C-01E (D/S)	16	6.501	3.138	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.2C-02V	22	10.486	5.061	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3C-01R	7	7.340	3.543	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3C-01R (D/S)	7	9.461	4.559	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1C-01V	24	14.782	7.124	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1C-02R	18	8.278	3.989	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1C-02R (D/S)	18	3.127	1.551	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-01T	13	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-01T (BR/SE)	13	5.212	2.585	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-02P	63	2.241	1.034	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-03E	1	3.440	1.706	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-04E	4	3.857	1.913	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-05P	54	3.336	1.654	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-06N	30	4.170	2.068	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:21:55AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 35 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-03.1A FWH 35A to HD TK											
HD-03.1A-01N	31	2.404	1.477	379.8	3.077	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-02P	61	1.303	0.801	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-03E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-04P	52	1.207	0.741	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-05E	4	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-06P	54	1.544	0.949	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-07E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-08P	52	1.207	0.741	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-09E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-10P	52	1.207	0.741	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-11E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-12E	4	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-13P	54	1.544	0.949	379.8	3.116	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-14E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-15V	22	2.413	1.483	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-16N	30	1.930	1.186	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
====>Grouped by Line: HD-03.1B FWH 35B to HD TK											
HD-03.1B-01N	31	2.404	1.477	379.8	3.077	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-02P	61	1.303	0.801	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-03E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-04P	52	1.207	0.741	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-05E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-06P	52	1.207	0.741	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-07E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-08P	52	1.207	0.741	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-03.1B FWH 35B to HD TK											
HD-03.1B-09E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-10E	4	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-11P	54	1.544	0.949	379.8	3.116	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-12E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-13V	22	2.413	1.483	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-14N	30	1.930	1.186	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
====>Grouped by Line: HD-03.1C FWH 35C to HD TK											
HD-03.1C-01N	31	2.404	1.477	379.8	3.077	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-02P	61	1.303	0.801	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-03E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-04P	52	1.207	0.741	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-05E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-06P	52	1.207	0.741	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-07E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-08P	52	1.207	0.741	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-09E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-10P	52	1.207	0.741	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-11E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-12P	52	1.207	0.741	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-13E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-14E	4	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-15P	54	1.544	0.949	379.8	3.116	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-16E	2	1.786	1.097	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-17V	22	2.413	1.483	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-18N	30	1.930	1.186	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:22:05AM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 36 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-01.1A FWH 36A to HD TK											
HD-01.1A-01N	31	3.465	1.982	394.5	5.239	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-02P	61	1.884	1.078	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-03E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-04P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-05E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-06P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-07E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-08P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-09E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-10P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.2A-01R	7	2.442	1.397	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.2A-01R (D/S)	7	4.846	2.681	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1A 01V	24	0.061	0.034	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1A-02R	18	4.240	2.345	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1A-02R (D/S)	18	2.139	1.223	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2A-01V	22	0.029	0.016	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2A-02N	30	2.852	1.631	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
====>Grouped by Line: HD-01.1B FWH 36B to HD TK											
HD-01.1B-01N	31	3.465	1.982	394.5	5.239	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-02P	61	1.884	1.078	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-03E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-04P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-05E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-06P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-07E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-01.1B FWH 36B to HD TK											
HD-01.2B-01R	7	2.442	1.397	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.2B-01R (D/S)	7	4.846	2.681	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1B-01V	24	0.061	0.034	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1B-02R	18	4.240	2.345	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1B-02R (D/S)	18	2.139	1.223	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2B-01V	22	0.029	0.016	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2B-02N	30	2.852	1.631	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
====>Grouped by Line: HD-01.1C FWH 36C to HD TK											
HD-01.1C-01N	31	3.465	1.982	394.5	5.239	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-02P	61	1.884	1.078	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-03E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-04P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-05E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-06P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-07E	4	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-08P	54	2.233	1.277	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-09E	2	2.582	1.477	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-10P	52	1.745	0.998	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-11E	2	2.694	1.540	394.5	5.524	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.2C-01R	7	2.442	1.397	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.2C-01R (D/S)	7	4.846	2.681	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1C-01V	24	0.061	0.034	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1C-02R	18	4.240	2.345	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1C-02R (D/S)	18	2.139	1.223	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2C-01V	22	0.029	0.016	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2C-02N	30	2.852	1.631	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:22:16AM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR DN TO PUMPS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-10.1A HD TK to HD PMP 31											
HD-10.1A-01N	31	1.640	1.348	383.2	3.408	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.1A-02P	61	0.859	0.706	383.2	3.299	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.2A-01E	16	0.796	0.654	383.2	3.299	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.2A-01E (D/S)	16	1.696	1.394	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-02E	3	1.915	1.574	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-03P	53	1.368	1.124	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-04V	22	2.736	2.248	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-05P	58	1.204	0.989	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-07X	6	3.317	2.729	383.2	7.293	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-06N	30	2.189	1.798	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
====>Grouped by Line: HD-10.1B HD TK to HD PMP 32											
HD-10.1B-01N	31	1.640	1.348	383.2	3.408	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.1B-02P	61	0.859	0.706	383.2	3.299	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.2B-01E	16	0.796	0.654	383.2	3.299	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.2B-01E (D/S)	16	1.696	1.394	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-02P	54	1.751	1.439	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-03V	22	2.736	2.248	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-04P	58	1.204	0.989	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-06X	6	3.317	2.729	383.2	7.293	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-05N	30	2.189	1.798	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:22:25AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MS 31 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.1A_1 MSEP 31A to HDR											
MSD-01.1A-01N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-02T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-02T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-03P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.1A_2 MSEP 31A to HDR											
MSD-01.1A-04N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-08P	61	0.117	0.055	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.1A_3 MSEP 31A to HDR											
MSD-01.1A-05N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-06T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-06T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-07P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.1B_1 MSEP 31B to HDR											
MSD-01.1B-01N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-02T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-02T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-03P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.1B_2 MSEP 31B to HDR											
MSD-01.1B-04N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-08P	61	0.117	0.055	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.1B_3 MSEP 31B to HDR											
MSD-01.1B-05N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-06T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-06T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-07P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.2A MSEP 31A DR HDR											
MSD-01.2A-01T	12	0.178	0.084	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.2A-01T (BR/SE)	12	0.147	0.070	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.2A-01T (D/S)	12	0.320	0.151	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.2B MSEP 31B DR HDR											
MSD-01.2B-01T	12	0.178	0.084	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.2B-01T (BR/SE)	12	0.147	0.070	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.2B-01T (D/S)	12	0.320	0.151	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.3A HDR to MSEP TK 31A											
MSD-01.3A-01T (D/S)	11	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-01T	11	0.390	0.184	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-01T (BR/SE)	11	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-02P	61	0.299	0.141	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-03E	2	0.410	0.194	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-04V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-05P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-06V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-07P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-08N	30	0.444	0.209	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.3B HDR to MSEP TK 31B											
MSD-01.3B-01T (D/S)	11	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-01T	11	0.390	0.184	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-01T (BR/SE)	11	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-02P	61	0.299	0.141	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-03E	2	0.410	0.194	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-04V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-05P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-06V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-07P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-08N	30	0.444	0.209	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:22:34AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MS 32 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.6A_1 MSEP 32A to HDR											
MSD-01.6A-01N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-02T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-02T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-03P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.6A_2 MSEP 32A to HDR											
MSD-01.6A-04N	31	0.289	0.136	382.2	0.241	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-08P	61	0.117	0.055	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.6A_3 MSEP 32A to HDR											
MSD-01.6A-05N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-06T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-06T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-07P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.6B_1 MSEP 32B to HDR											
MSD-01.6B-01N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-02T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-02T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-03P	60	0.132	0.063	382.2	0.181	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.6B_2 MSEP 32B to HDR											
MSD-01.6B-04N	31	0.289	0.136	382.2	0.241	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-08P	61	0.119	0.056	382.2	0.181	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.6B_3 MSEP 32B to HDR											
MSD-01.6B-05N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-06T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-06T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-07P	60	0.131	0.062	382.2	0.178	0.0	12.750	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.7A MSEP 32A DR HDR											
MSD-01.7A-01T	12	0.178	0.084	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7A-01T (BR/SE)	12	0.147	0.070	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7A-01T (D/S)	12	0.320	0.151	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7A-02P	62	0.156	0.074	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.7B MSEP 32B DR HDR											
MSD-01.7B-01T	12	0.178	0.084	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7B-01T (BR/SE)	12	0.147	0.070	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7B-01T (D/S)	12	0.320	0.151	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7B-02P	62	0.159	0.075	382.2	0.358	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.8A HDR to MSEP TK 32A											
MSD-01.8A-01T (D/S)	11	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-01T	11	0.390	0.184	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-01T (BR/SE)	11	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-02P	61	0.299	0.141	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-03E	2	0.410	0.194	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-04V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-05P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-06V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-07P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-08N	30	0.444	0.209	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.8B HDR to MSEP TK 32B											
MSD-01.8B-01T (D/S)	11	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-01T	11	0.390	0.184	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-01T (BR/SE)	11	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-02P	61	0.303	0.143	382.2	0.535	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-03E	2	0.410	0.194	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-04V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-05P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-06V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-07P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-08N	30	0.444	0.209	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:22:45AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MS 33 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.11A_1 MSEP 33A to HDR											
MSD-01.11A-01N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-02T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-02T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-03P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.11A_2 MSEP 33A to HDR											
MSD-01.11A-04N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-08P	61	0.117	0.055	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.11A_3 MSEP 33A to HDR											
MSD-01.11A-05N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-06T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-06T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-07P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.11B_1 MSEP 33B to HDR											
MSD-01.11B-01N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-02T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-02T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-03P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.11B_2 MSEP 33B to HDR											
MSD-01.11B-04N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-08P	61	0.117	0.055	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.11B_3 MSEP 33B to HDR											
MSD-01.11B-05N	31	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-06T (BR/SE)	10	0.173	0.082	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-06T (D/S)	10	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-07P	60	0.130	0.061	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.12A MSEP 33A DR HDR											
MSD-01.12A-01T	12	0.178	0.084	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12A-01T (BR/SE)	12	0.147	0.070	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12A-01T (D/S)	12	0.320	0.151	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12A-02P	62	0.156	0.074	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.12B MSEP 33B DR HDR											
MSD-01.12B-01T	12	0.178	0.084	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12B-01T (BR/SE)	12	0.147	0.070	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12B-01T (D/S)	12	0.320	0.151	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12B-02P	62	0.156	0.074	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.13A HDR to MSEP TK 33A											
MSD-01.13A-01T (D/S)	11	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-01T	11	0.390	0.184	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-01T (BR/SE)	11	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-02P	61	0.299	0.141	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-03E	2	0.410	0.194	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-04V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-05P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-06V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-07P	58	0.245	0.116	382.2	0.533	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-08E	2	0.435	0.205	382.2	0.563	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-09P	52	0.289	0.136	382.2	0.553	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-10N	30	0.444	0.209	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.13B HDR to MSEP TK 33B											
MSD-01.13B-01T (D/S)	11	0.217	0.102	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-01T	11	0.390	0.184	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-01T (BR/SE)	11	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-02P	61	0.299	0.141	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-03E	2	0.410	0.194	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-04V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-05P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-06V	25	0.554	0.262	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-07P	58	0.244	0.115	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-08E	2	0.410	0.194	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-09P	52	0.277	0.131	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.13B-10N	30	0.444	0.209	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD

MSD-01.13B HDR to MSEP TK 33B

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:23:11AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MSDT 31 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.4A TK 31A to HD TK											
MSD-01.4A-01N	31	1.230	0.581	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4A-02P	61	0.002	0.003	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4A-03T	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4A-03T (D/S)	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4A-04P	65	0.002	0.002	382.2	1.273	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5A-01E	16	0.002	0.002	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5A-01E (D/S)	16	0.004	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-02P	66	0.003	0.003	382.2	2.217	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-03E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-04P	52	0.004	0.004	382.2	2.296	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-05E	2	0.005	0.006	382.2	2.224	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-06V	25	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-07P	58	0.003	0.003	382.2	2.180	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-08E	4	0.005	0.006	382.2	2.224	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-09P	54	0.005	0.005	382.2	2.246	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-10E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-11P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-12E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-13P	52	0.004	0.004	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-14E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-15P_1	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-15P_2	52	1.025	0.484	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-28P_1	9	0.451	0.213	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-28P_2	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-16E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-17P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.4A TK 31A to HD TK											
MSD-01.5A-18E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-19P	52	0.004	0.004	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-20E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-21P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-29P	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-22E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-23P	52	0.004	0.004	382.2	2.217	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-24E	2	0.005	0.006	382.2	2.199	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-25P	52	0.004	0.004	382.2	2.248	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-26E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-27N	30	1.640	0.775	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.4B TK 31B to HD TK											
MSD-01.4B-01N	31	0.538	0.581	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-02P	61	0.002	0.003	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-03E	2	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-04P	52	0.002	0.002	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-05E	2	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-07P	52	0.002	0.002	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-06T	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-06T (D/S)	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-08P	65	0.002	0.002	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5B-01R	7	0.003	0.003	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5B-01R (D/S)	7	0.005	0.005	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-02P	57	0.004	0.004	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-03E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-04V	25	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-05P	58	0.003	0.003	382.2	2.207	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-06E	2	0.005	0.006	382.2	2.201	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-07P	52	0.004	0.004	382.2	2.240	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-08E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-09P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-10E	4	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-11P_1	54	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-11P_2	54	1.312	0.620	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.4B TK 31B to HD TK											
MSD-01.5B-29P	9	0.451	0.213	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-12E	2	1.517	0.716	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-13P	52	1.025	0.484	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-14E	2	1.517	0.716	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-15P	52	1.025	0.484	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-30P_1	9	0.451	0.213	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-30P_2	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-16E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-17P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-18E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-19P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-20E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-21P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-22E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-23P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-31P	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-24E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-25P	52	0.004	0.004	382.2	2.224	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-32P	52	0.004	0.004	382.2	2.199	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-26E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-27P	52	0.004	0.004	382.2	2.213	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-28N	30	1.640	0.775	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:23:36AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD:MSDT 32 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.9A TK 32A to HD TK											
MSD-01.9A-01N	31	1.230	0.581	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9A-02P	61	0.002	0.003	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9A-03T	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9A-03T (D/S)	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9A-04P	65	0.002	0.002	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10A-01E	16	0.002	0.002	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10A-01E (D/S)	16	0.004	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-02P	66	0.003	0.003	382.2	2.202	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-03E	2	0.005	0.006	382.2	2.210	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-04P	52	0.004	0.004	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-05E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-06V	25	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-07P	58	0.003	0.003	382.2	2.186	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-08E	2	0.005	0.006	382.2	2.207	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-09P	52	0.004	0.004	382.2	2.210	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-10E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-11P	51	0.003	0.003	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-12E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-13P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-26P_1	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-26P_2	9	0.451	0.213	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-26P_3	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-14E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-15P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-16E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-17P	52	0.004	0.004	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.9A TK 32A to HD TK											
MSD-01.10A-18E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-19P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-27P	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-20E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-21P	52	0.004	0.004	382.2	2.188	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-22E	2	0.005	0.006	382.2	2.221	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-23P	52	0.004	0.004	382.2	2.204	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-24E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-25N	30	1.640	0.775	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.9B TK 32B to HD TK											
MSD-01.9B-01N	31	1.230	0.581	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9B-02P	61	0.002	0.003	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9B-03T	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9B-03T (D/S)	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9B-04P	65	0.002	0.002	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10B-01E	16	0.002	0.002	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10B-01E (D/S)	16	0.004	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-02E	4	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-03P	54	0.005	0.005	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-04E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-05V	25	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-06P	58	0.003	0.003	382.2	2.195	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-07E	2	0.006	0.006	382.2	2.238	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-08P	52	0.004	0.004	382.2	2.204	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-09E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-10P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-28P	9	0.451	0.213	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-11E	2	1.517	0.716	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-12P	52	1.025	0.484	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-13E	2	1.517	0.716	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-14P	52	1.025	0.484	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-29P_1	9	0.451	0.213	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-29P_2	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-15E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.9B TK 32B to HD TK											
MSD-01.10B-16P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-17E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-18P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-19E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-20P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-21E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-22P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-30P	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-23E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-24P	52	0.004	0.004	382.2	2.198	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-25E	2	0.005	0.006	382.2	2.220	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-26P	52	0.004	0.004	382.2	2.182	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-27N	30	1.640	0.775	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:23:59AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MSDT 33 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.14A TK 33A to HD TK											
MSD-01.14A-01N	31	1.230	0.581	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14A-02P	61	0.002	0.003	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14A-03T	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14A-03T (D/S)	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14A-04P	65	0.002	0.002	382.2	1.257	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15A-01E	16	0.002	0.002	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15A-01E (D/S)	16	0.004	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-02V	25	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-03P	58	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-04E	2	0.006	0.006	382.2	2.258	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-05E	4	0.005	0.006	382.2	2.229	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-06P	54	0.005	0.005	382.2	2.198	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-07E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-08P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-21P	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-09E	2	0.005	0.006	382.2	2.199	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-10P	52	0.004	0.004	382.2	2.205	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-11E	2	0.005	0.006	382.2	2.182	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-12P	52	0.004	0.004	382.2	2.179	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-13E	2	0.006	0.006	382.2	2.247	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-14P	52	0.004	0.004	382.2	2.169	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-22P	9	0.002	0.002	382.2	2.169	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-15E	2	0.006	0.006	382.2	2.242	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-16P	52	0.004	0.004	382.2	2.173	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-17E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-18P	52	0.004	0.004	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD

Sorted By: Flow Order

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.14A TK 33A to HD TK											
MSD-01.15A-19E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-20N	30	1.640	0.775	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.14B TK 33B to HD TK											
MSD-01.14B-01N	31	1.230	0.581	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14B-02P	61	0.002	0.003	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14B-03T	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14B-03T (D/S)	15	0.003	0.003	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14B-04P	65	0.002	0.002	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15B-01E	16	0.002	0.002	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15B-01E (D/S)	16	0.004	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-02E	4	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-03P	54	0.005	0.005	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-04E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-05V	25	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-06P	58	0.003	0.003	382.2	2.146	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-07E	4	0.005	0.006	382.2	2.210	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-08P	54	0.005	0.005	382.2	2.219	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-09E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-10P	52	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-11E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-12P_1	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-12P_2	52	1.025	0.484	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-30P	9	0.451	0.213	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-13E	2	1.517	0.716	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-14P	52	1.025	0.484	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-15E	2	1.517	0.716	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-16P	52	1.025	0.484	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-31P_1	9	0.451	0.213	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-31P_2	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-17E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-18P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-19E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-20P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-21E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.14B TK 33B to HD TK											
MSD-01.15B-22P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-23E	1	0.005	0.005	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-24P	51	0.003	0.003	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-32P	9	0.002	0.002	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-25E	2	0.005	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-26P	52	0.004	0.004	382.2	2.188	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-27E	2	0.006	0.006	382.2	2.258	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-28P	52	0.004	0.004	382.2	2.170	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-29N	30	1.640	0.775	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:24:20AM

Pass 1 Analysis Exclude Measured Wear

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: PD: PRESEPRTR DRAINS

Ending Period: RO17

Total Plant Operating Hours: 220.317

WRA Data Option: NFA->ARD->HBD->COMP

Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: PD-01.1 PRESEP 1B DR to HDR											
PD-01.1-01N	31	0.001	0.000	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.2-01R	7	0.617	0.249	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.2-01R (D/S)	7	0.948	0.382	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-02B	3	1.037	0.418	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-03P	53	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-04E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-05P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-06E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-07P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-08E	1	0.978	0.394	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-09V	25	1.482	0.597	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-10O	6	5.631	2.456	387.3	6.460	0.0	10.750	6.937	0.000	83.00	ARD
PD-02.1-01T (BR/SE)	10	1.370	0.552	387.3	1.648	0.0	10.000	6.937	0.000	83.00	ARD
PD-02.1-01T (D/S)	10	0.678	0.273	387.3	0.606	0.0	16.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-01.3 PRESEP 1A DR to HDR											
PD-01.3-01N	31	0.001	0.000	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.4-01R	7	0.617	0.249	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.4-01R (D/S)	7	0.948	0.382	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-02B	3	1.037	0.418	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-03P	53	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-04E	1	0.978	0.394	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-05P	51	0.652	0.263	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-06E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-07P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-08E	1	0.978	0.394	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: PD-01.3 PRESEP 1A DR to HDR											
PD-01.4-09V	25	1.482	0.597	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-10O	6	5.631	2.456	387.3	6.460	0.0	10.750	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-01.5 PRESEP 2B DR to HDR											
PD-01.5-01N	31	0.001	0.000	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.6-01R	7	0.617	0.249	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.6-01R (D/S)	7	0.948	0.382	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-02B	3	1.037	0.418	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-03P	53	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-04E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-05P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-06E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-07P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-08E	4	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-09P	54	0.948	0.382	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-10E	4	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-11P	54	0.948	0.382	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-12E	1	0.978	0.394	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-13V	25	1.482	0.597	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-14O	6	5.631	2.456	387.3	6.460	0.0	10.750	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-01.7 PRESEP 2A DR to HDR											
PD-01.7-01N	31	0.001	0.000	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.8-01R	7	0.617	0.249	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.8-01R (D/S)	7	0.948	0.382	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-02B	3	1.037	0.418	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-03P	53	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-04E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-05P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-06E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-07P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-08E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-09P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-10E	2	1.096	0.442	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-11P	52	0.741	0.299	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-12E	1	0.978	0.394	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: PD-01.7 PRESEP 2A DR to HDR											
PD-01.8-13V	25	1.482	0.597	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-14O	6	5.631	2.456	387.3	6.460	0.0	10.750	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-02.2 PRESEP HDR to HD TK											
PD-02.2-01T (BR/SE)	12	1.164	0.469	387.3	1.648	0.0	10.000	6.937	0.000	83.00	ARD
PD-02.2-01T (D/S)	12	1.010	0.407	387.3	1.216	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-22T	15	0.739	0.298	387.3	1.216	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-22T (D/S)	15	0.739	0.298	387.3	1.216	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.2-01T	12	0.556	0.224	387.3	0.606	0.0	16.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-02.3 PRESEP HDR to HD TK											
PD-02.3-01T (BR/SE)	12	1.164	0.469	387.3	1.648	0.0	10.000	6.937	0.000	83.00	ARD
PD-02.3-01T (D/S)	12	1.431	0.577	387.3	1.825	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.3-01T	12	1.010	0.407	387.3	1.216	0.0	16.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-02.4 PRESEP HDR to HD TK											
PD-02.4-01T (BR/SE)	12	1.164	0.469	387.3	1.648	0.0	10.000	6.937	0.000	83.00	ARD
PD-02.4-01T	12	1.431	0.577	387.3	1.825	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-01T (D/S)	12	1.833	0.739	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-02E	4	0.686	0.667	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-03P	54	0.593	0.576	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-04E	2	0.686	0.667	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-05P	52	0.463	0.450	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-22E	2	0.686	0.667	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-23R	18	0.519	0.504	387.3	2.450	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-23R (D/S)	18	0.171	0.166	387.3	0.683	0.0	30.000	6.937	0.000	83.00	ARD
PD-02.4-24P	68	0.142	0.138	387.3	0.683	0.0	30.000	6.937	0.000	83.00	ARD
PD-02.4-25T	13	0.285	0.277	387.3	0.681	0.0	30.000	6.937	0.000	83.00	ARD
PD-02.4-25T (BR/SE)	13	0.926	0.901	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-27P	63	0.371	0.360	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-28E	2	0.686	0.667	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-06E	4	0.686	0.667	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-07P	54	1.430	0.576	387.3	2.438	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-08E	1	1.475	0.594	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-09P	51	0.983	0.396	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-10E	1	1.475	0.594	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-11P	51	0.983	0.396	387.3	2.433	0.0	16.000	6.937	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: PD-02.4 PRESEP HDR to HD TK											
PD-02.4-12E	2	1.654	0.667	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-13P	52	1.117	0.450	387.3	2.433	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-14E	1	1.475	0.594	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-15P	51	0.983	0.396	387.3	2.434	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-16E	2	1.654	0.667	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-17P	52	1.117	0.450	387.3	2.434	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-18E	2	1.654	0.667	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-19P	52	1.117	0.450	387.3	2.434	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-29R	17	0.478	0.464	387.3	2.516	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-29R (D/S)	17	1.056	1.021	387.3	8.992	0.0	8.625	6.937	0.000	83.00	ARD
PD-02.4-30V	21	2.933	2.837	387.3	8.992	0.0	8.625	6.937	0.000	83.00	ARD
PD-02.4-31R	18	0.006	0.006	387.3	8.707	0.0	8.625	6.937	0.000	83.00	ARD
PD-02.4-31R (D/S)	18	0.002	0.002	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-32P	68	0.002	0.002	387.3	2.434	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-20O	6	11.263	5.058	387.3	22.335	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-21N	30	2.041	0.823	387.3	2.809	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-25T (D/S)	13	0.000	0.000	387.3	0.000	0.0	30.000	0.000	0.000	0.00	ARD
PD-02.4-26P	63	0.000	0.000	387.3	0.000	0.0	30.000	0.000	0.000	0.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:24:48AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RH 31 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.1A_1 RH 31A to TK 31A											
RHD01.1A-01N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-02P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-03N	30	2.091	1.137	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR											
RHD01.1A-04N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-05P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-06E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-07P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-07P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-08E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-09P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-09P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-10E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-11P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-12E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-13P_1	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-13P_2	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-14E	51	1.150	0.625	489.8	7.790	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-15P	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-16E	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-17P	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-18E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-19P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-20E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-21P_1	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Flow Order											
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR											
RHD01.1A-21P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-22E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-23P	51	1.150	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-24E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-25E	3	1.830	0.995	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-26P	53	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-27E	3	1.830	0.995	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-28P_1	53	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-28P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-29E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-30P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-31E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-32P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-33E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-34P_1	54	1.720	0.936	489.8	7.257	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-34P_2	9	0.591	0.322	489.8	7.257	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-35F	6	3.179	1.729	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-36P	56	0.636	0.346	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-37T	15	1.568	0.853	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-37T (D/S)	15	1.568	0.853	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-38P	65	1.045	0.569	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-39E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-40P	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-41E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-42P_1	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-42P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-43E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-44P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-44P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-45E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-46P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-47E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-48P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.2A-01R	17	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR											
RHD01.2A-01R (D/S)	17	1.876	1.001	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.1A-01V	24	0.010	0.005	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.1A-02R	18	1.557	1.557	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.1A-02R (D/S)	18	0.853	0.853	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-01P	68	0.897	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-02E	2	1.986	1.080	489.8	7.247	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-03P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-04E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-05P	51	1.150	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.1B_1 RH 31B to TK 31B											
RHD01.1B-01N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-02P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-03N	30	2.091	1.137	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR											
RHD01.1B-04N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-05P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-06E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-07P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-08E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-09P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-10E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-11P	51	1.150	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-12E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-13P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-14F	6	3.179	1.729	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-15P	56	0.636	0.346	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-16E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-17P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-18E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-19P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-20E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-21P_1	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-21P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-22E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Flow Order											
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR											
RHD01.1B-23P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-24E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-25P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-26E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-27P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-27P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-28E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-29P	52	1.342	0.730	489.8	9.386	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-30E	4	1.986	1.080	489.8	7.247	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-31P	54	1.713	0.932	489.8	7.226	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-32E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-33P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-34T	15	1.568	0.853	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-34T (D/S)	15	1.568	0.853	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-35E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-36P	54	1.673	0.910	489.8	7.790	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-37E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-38P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-38P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-39E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-40P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-41E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-42P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-42P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-43E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-44P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-45E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-46P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-47E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-48P	51	1.150	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-49E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-50P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-51E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-52P	52	1.345	0.731	489.8	7.262	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR											
RHD01.2B-01R	17	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.2B-01R (D/S)	17	1.958	1.045	489.8	17.209	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.1B-01V	24	0.010	0.005	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.1B-02R	18	1.603	1.557	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.1B-02R (D/S)	18	0.880	0.853	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-01P	68	0.897	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-02E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-03P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-04E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-05P	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:25:01AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RH 32A TO HDR
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3A_1 RH 32A to TK 32A											
RHD01.3A-01N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-02P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-03N	30	2.091	1.137	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR											
RHD01.3A-04N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-05P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-06E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-07P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-08E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-09P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-10E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-11P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-12E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-13P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-14E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-15R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-15R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.4A-01P_1	68	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.4A-01P_2	9	0.341	0.186	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.5A-01R	17	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.5A-01R (D/S)	17	0.941	0.512	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5A-02P	67	1.045	0.569	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5A-03F	6	3.179	1.729	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5A-04P	56	0.636	0.346	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5A-05R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Flow Order											
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR											
RHD01.5A-05R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-01P	68	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-02T	15	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-02T (D/S)	15	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-03P_1	65	0.621	0.338	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-03P_2	9	0.341	0.186	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-04E	2	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-05P	52	0.776	0.422	489.8	5.119	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-06E	4	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-07P	54	0.993	0.540	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-08E	2	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-09P	52	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-10E	2	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-11P	52	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-12E	2	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-13P	52	0.776	0.422	489.8	11.023	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-14E	2	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-15P_1	52	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-15P_2	9	0.341	0.186	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.7A-01R	17	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.7A-01R (D/S)	17	0.941	0.512	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7A-02E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7A-03P	54	1.673	0.910	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7A-04E	2	1.967	1.070	489.8	7.170	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.8A-01R	7	1.830	0.995	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.8A-01R (D/S)	7	3.336	1.779	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.8A-02P	57	2.675	1.426	489.8	16.750	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.3A-01V	24	0.010	0.005	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.3A-02R	18	1.988	1.557	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.3A-02R (D/S)	18	1.077	0.853	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-01P	68	0.897	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-02E	2	1.986	1.080	489.8	7.247	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-03P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-04E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR											
RHD02.4A-05P	51	1.150	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-06L	10	1.019	0.554	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4A-06L (D/S)	10	1.019	0.554	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.7A-01P	60	0.611	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:25:18AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RH 32B TO HDR
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3B_1 RH 32B to TK 32B											
RHD01.3B-01N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-02P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-03N	30	2.091	1.137	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR											
RHD01.3B-04N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-05P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-06E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-07P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-08E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-09P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-10E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-11P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-12E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-13P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-14E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-15P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-16E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-17P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-18E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-19P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-20R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-20R (D/S)	18	0.611	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.4B-01P_1	68	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.4B-01P_2	9	0.224	0.122	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.5B-01R	17	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Flow Order											
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR											
RHD01.5B-01R (D/S)	17	0.941	0.512	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5B-02P	67	1.063	0.578	489.8	7.170	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5B-03F	6	3.179	1.729	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5B-04P	56	0.636	0.346	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5B-05R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5B-05R (D/S)	18	0.611	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-01P	68	0.517	0.281	489.8	2.524	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-02E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-03P_1	52	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-03P_2	9	0.224	0.122	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-04E	1	0.672	0.366	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-05P	51	0.448	0.244	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-06E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-07P	52	0.509	0.277	489.8	12.437	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-08E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-09P_1	52	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-09P_2	9	0.224	0.122	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-10E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-11E	4	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-12P	54	0.652	0.355	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-13E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-14P	52	0.509	0.277	489.8	3.172	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-15E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-16P	52	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-17T	15	0.611	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-17T (D/S)	15	0.611	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-18P	65	0.407	0.222	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-19E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-20P_1	52	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-20P_2	9	0.224	0.122	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-21T	15	0.611	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-21T (D/S)	15	0.611	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-22P_1	65	0.407	0.222	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-22P_2	9	0.224	0.122	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR											
RHD01.7B-01R	17	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.7B-01R (D/S)	17	0.941	0.512	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7B-02P	67	1.045	0.569	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7B-03R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7B-03R (D/S)	18	0.611	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-01P_1	68	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-01P_2	9	0.224	0.122	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-02E	1	0.672	0.366	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-03P	51	0.448	0.244	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-04E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-05P	52	0.509	0.277	489.8	12.437	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-06E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.9B-01R	17	0.509	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.9B-01R (D/S)	17	1.876	1.001	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.3B-01V	24	0.010	0.005	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.3B-02R	18	1.617	1.557	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.3B-02R (D/S)	18	0.345	0.332	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-01P	68	0.350	0.277	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-02E	2	0.754	0.410	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-03P	52	0.509	0.277	489.8	12.437	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-04E	1	0.672	0.366	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-05P	51	0.448	0.244	489.8	12.437	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-06E	1	0.672	0.366	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-07P	51	0.451	0.245	489.8	2.496	3.9	10.750	6.448	0.000	42.34	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:25:44AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RH 33 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.10A_1 RH 33A to TK 33A											
RHD01.10A-01N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-02P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-03N	30	2.091	1.137	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.10A_2 TK 33A to A HDR											
RHD01.10A-04N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-05P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-06E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-07P	51	1.150	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-08E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-09P	51	1.150	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-10E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-11P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-12E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-13P	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-14E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-15P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-16E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-17P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-18F	6	3.179	1.729	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-19P	56	0.636	0.346	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-20R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-20R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11A-01E	4	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11A-02P	54	0.993	0.540	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11A-03E	2	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.10A_2 TK 33A to A HDR											
RHD01.11A-04P	52	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.12A-01T	14	1.707	0.928	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.12A-01T (D/S)	14	1.707	0.928	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.12A-02P	64	1.045	0.569	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-03E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-04E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-05P	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-06E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-07P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-08E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.13A-01R	7	1.830	0.995	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.13A-01R (D/S)	7	3.336	1.779	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.5A-01V	24	0.010	0.005	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.5A-02R	18	1.988	1.557	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.5A-02R (D/S)	18	1.077	0.853	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.6A-01P	57	0.897	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.6A-02E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.6A-03P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.6A-04E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.6A-05P	51	0.644	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.10B_1 RH 33B to TK 33B											
RHD01.10B-01N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-02P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-03N	30	2.091	1.137	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR											
RHD01.10B-04N	31	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-05P	61	1.411	0.768	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-06E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-07P	51	1.150	0.625	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-08E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-09P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-10E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-11P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-12E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR											
RHD01.10B-13P_1	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-13P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-14E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-15E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-16P	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-17E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-18P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-19E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-20P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-21E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-22E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-23P	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-24E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-25P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-25P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-26F	6	3.179	1.729	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-27P	56	0.636	0.346	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-28E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-29P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-30E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-31P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-32E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-33P	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-34E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-35P	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-36E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-37P_1	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-37P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-38E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-39P	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-40E	1	1.725	0.938	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-41P	51	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-42E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-43P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR											
RHD01.10B-44E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-45P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-46E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-47P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-47P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-48E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-49P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-50E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-51P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-52T	10	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-52T (D/S)	10	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-53P	60	1.568	0.853	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-54E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-55P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-56E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-57P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-57P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-58E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-59P	52	1.307	0.711	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-60E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-61P_1	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-61P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-62E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-63E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-64R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-64R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-01P_1	68	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-01P_2	9	0.341	0.186	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-02E	2	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-03P	52	0.776	0.422	489.8	11.023	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-04E	2	1.148	0.625	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-05P	52	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.12B-01R	17	0.776	0.422	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.12B-01R (D/S)	17	1.876	1.001	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR											
RHD02.5B-01V	24	0.010	0.005	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.6B-01E	4	0.668	0.643	489.8	4.100	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.6B-02P	54	1.007	0.548	489.8	10.997	3.9	8.625	6.448	0.000	42.34	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3

Wear Rate Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:17:16PM
 AnalysisDate/Time: 7/22/2011 10:26:21AM

DB Name: IPEC 3 (v4).DB

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RHD HDR TO HTRS
 Ending Period: RO17
 Total Plant Operating Hours:220.317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.10A TK A HDR to FWH 36											
RHD02.10A-01R	7	1.291	0.702	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.10A-01R (D/S)	7	1.798	0.978	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-02P	57	1.405	0.764	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-03E	1	1.854	1.008	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-04P	51	1.236	0.672	489.8	16.051	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-05E	1	1.854	1.008	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-06P	51	1.236	0.672	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-07E	1	1.854	1.008	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-08P	51	1.236	0.672	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-09E	1	1.854	1.008	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-10P	51	1.236	0.672	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-11T	14	3.090	1.681	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-11T (D/S)	14	1.707	0.928	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-11T (BR/SE)	14	2.265	1.232	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.10B B HDR to FWH 36A											
RHD02.10B-01R	7	0.713	0.388	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.10B-01R (D/S)	7	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-02P_1	57	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-02P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-03E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-04P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-05E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-06P	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-07E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-08P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.10B B HDR to FWH 36A											
RHD02.10B-09E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-10P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-11E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-12V	22	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-13P	58	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-14T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-14T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.10B-15P	63	1.045	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-16T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-16T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.10B-17R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-17R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.11B-01N	30	1.241	0.675	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.11A A HDR to FWH 36A											
RHD02.11A-01R	7	1.086	0.591	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.11A-01R (D/S)	7	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-02P_1	57	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-02P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-03E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-04P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-05E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-06P	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-07E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-08E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-09P_1	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-09P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-10E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-11P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-12E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-13P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-14E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-15V	22	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-16P	58	1.194	0.649	489.8	7.330	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-17T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.11A A HDR to FWH 36A											
RHD02.11A-17T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.11A-18P	63	1.074	0.584	489.8	9.386	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-19T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-19T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.11A-20R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-20R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.12A-01N	30	1.241	0.675	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.12B B HDR to FWH 36B											
RHD02.12B-01P	64	1.045	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-02E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-03P	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-04E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-05P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-06E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-07P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-08E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-09V	22	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-10P	58	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-11T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-11T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.12B-12P	63	1.045	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-13T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-13T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.12B-14R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-14R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.13B-01N	30	1.241	0.675	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.13A A HDR to FWH 36B											
RHD02.13A-01P	64	1.045	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-02E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-03P	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-04E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-05E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-06P_1	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-06P_2	9	0.575	0.313	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.13A A HDR to FWH 36B											
RHD02.13A-07E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-08P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-09E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-10P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-11E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-12V	22	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-13P	58	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-14T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-14T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.13A-15P	63	1.045	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-16T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-16T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.13A-17R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-17R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.14A-01N	30	1.241	0.675	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.14B B HDR to FWH 36C											
RHD02.14B-01P	64	1.045	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-02E	4	1.083	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-03P	54	1.673	0.910	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-04E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-05E	4	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-06P	54	1.673	0.910	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-07E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-08V	22	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-09P	58	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-10T	13	1.422	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-10T (BR/SE)	13	1.760	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.14B-11P	63	1.045	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-12T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-12T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.14B-14P	63	0.585	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-13R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-13R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.15B-01N	30	1.201	0.653	489.8	3.829	3.9	8.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.15A A HDR to FWH 36C											
RHD02.15A-01P	64	1.045	0.569	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-02E	2	1.083	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-03P	52	1.307	0.711	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-04E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-05P	52	1.307	0.711	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-06E	2	1.934	1.052	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-07V	22	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-08P	58	1.150	0.625	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-09T	13	2.614	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-09T (BR/SE)	13	3.236	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.15A-10P	63	1.045	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-11T	13	1.464	1.422	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-11T (BR/SE)	13	1.812	1.760	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.15A-13P	63	0.585	0.569	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-12R	18	1.464	0.796	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-12R (D/S)	18	0.931	0.506	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.16A-01N	30	1.241	0.675	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.7B TK B HDR to FWH 36											
RHD02.2B-06L (BR/SE)	12	2.201	1.197	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.2B-06L (D/S)	12	2.304	1.253	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-01P	62	1.124	0.611	489.8	16.051	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-02E	2	2.079	1.131	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-03P	52	1.405	0.764	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-04E	1	1.854	1.008	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-05P	51	1.236	0.672	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-06E	1	1.854	1.008	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-07P	51	1.262	0.687	489.8	8.198	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.8A TK A HDR to FWH 36											
RHD02.6A-06L (BR/SE)	12	2.201	1.197	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.6A-06L	12	0.835	0.454	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.6A-06L (D/S)	12	1.512	0.822	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8A-01P	62	0.738	0.401	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8A-02E	1	1.217	0.662	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8A-03P	51	0.811	0.441	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.8B TK B HDR to FWH 36											
RHD02.7B-08L	12	0.839	0.456	489.8	2.492	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-06T (BR/SE)	14	2.265	1.232	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.7B-08L (BR/SE)	12	2.240	1.218	489.8	9.528	3.9	8.000	6.448	0.000	42.34	HBD
RHD02.7B-08L (D/S)	12	2.145	1.166	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-01P	62	1.052	0.572	489.8	7.678	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-02E	2	1.935	1.053	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-03P	52	1.308	0.711	489.8	9.871	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-04E	4	1.935	1.053	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-05P	54	1.674	0.910	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-06T	14	2.877	1.565	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-06T (D/S)	14	2.028	1.103	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.9A TK A HDR to FWH 36											
RHD02.2A-06L (BR/SE)	12	2.201	1.197	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.9A-11T (D/S)	14	2.028	1.103	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-11T (BR/SE)	14	2.265	1.232	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.2A-06L	12	1.512	0.822	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.2A-06L (D/S)	12	2.145	1.166	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-01P	62	1.046	0.569	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-02E	1	1.726	0.939	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-03P	51	1.151	0.626	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-04E	1	1.726	0.939	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-05P	51	1.151	0.626	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-06E	1	1.726	0.939	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-07E	3	1.831	0.996	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-08P	53	1.308	0.711	489.8	8.440	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-09E	3	1.831	0.996	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-10P	53	1.308	0.711	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-11T	14	2.877	1.565	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.9B TK B HDR to FWH 36											
RHD02.9B-02T (D/S)	14	1.120	0.609	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9B-02T (BR/SE)	14	2.265	1.232	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.9B-01P	64	0.738	0.401	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9B-02T	14	2.028	1.103	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:15:02AM

Run Name: CD: HDR TO BFP
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			
====>Grouped by Line: CD-06.1 FWH 35 OUT HDR						
CD-06.1-03T	0.702	0.603	0.561	77,042	No	220,317
CD-06.1-03T (D/S)	0.702	0.625	0.561	173,936	No	220,317
CD-06.1-01T (D/S)	0.659	0.659	0.561	245,861	No	220,317
CD-06.1-01T	0.659	0.658	0.561	292,154	No	220,317
CD-06.1-01T (BR/SE)	0.000	0.430	0.299	348,553	Yes	220,317
CD-06.1-03T (BR/SE)	0.721	0.594	0.449	467,009	No	220,317
CD-06.1-02P	0.663	0.647	0.524	578,185	No	220,317
====>Grouped by Line: CD-06.2A HDR to BFP 31						
CD-06.2A-24O	0.688	0.441	0.523	-115,299	No	220,317
CD-06.2A-07V	0.688	0.533	0.559	-58,669	No	220,317
CD-06.2A-04E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-06E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-09E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-13E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-15E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-17E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-19E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-20E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-26E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-28E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-33E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-31E	0.688	0.579	0.523	182,261	No	220,317
CD-06.2A-30E	0.688	0.585	0.523	214,576	No	220,317
CD-06.2A-12P	0.688	0.589	0.523	232,248	No	220,317
CD-06.2A-21P	0.688	0.589	0.523	232,248	No	220,317
CD-06.2A-29P	0.688	0.589	0.523	232,248	No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====> Grouped by Line: CD-06.2A HDR to BFP 31							
CD-06.2A-05P	0.688	0.610	0.523	0.523	395,540	No	220,317
CD-06.2A-10P	0.688	0.610	0.523	0.523	395,540	No	220,317
CD-06.2A-14P	0.688	0.610	0.523	0.523	395,540	No	220,317
CD-06.2A-16P	0.688	0.610	0.523	0.523	395,540	No	220,317
CD-06.2A-18P	0.688	0.610	0.523	0.523	395,540	No	220,317
CD-06.2A-27P	0.688	0.610	0.523	0.523	395,540	No	220,317
CD-06.2A-32P	0.688	0.610	0.523	0.523	395,540	No	220,317
CD-06.2A-34P	0.688	0.610	0.523	0.523	395,540	No	220,317
CD-06.2A-02E	0.729	0.658	0.523	0.523	411,646	Yes	220,317
CD-06.2A-11E	0.688	0.663	0.523	0.523	428,870	Yes	220,317
CD-06.3A-01R	0.000	0.623	0.523	0.523	450,781	Yes	220,317
CD-06.3A-01R (D/S)	0.000	0.523	0.392	0.392	569,129	Yes	220,317
CD-06.2A-08P	0.688	0.643	0.523	0.523	615,177	Yes	220,317
CD-06.2A-01P	0.721	0.659	0.523	0.523	764,366	Yes	220,317
CD-06.2A-03P	0.688	0.703	0.523	0.523	814,772	Yes	220,317
CD-06.2A-25P	0.688	0.641	0.523	0.523	843,098	Yes	220,317
CD-06.2A-22P	0.688	0.648	0.523	0.523	1,090,132	No	220,317
CD-06.2A-23P	0.688	0.648	0.523	0.523	1,090,132	No	220,317
CD-06.3A-02N	0.562	1.012	0.392	0.392	1,210,084	Yes	220,317
====> Grouped by Line: CD-06.2B HDR to BFP 32							
CD-06.2B-08O	0.688	0.441	0.523	0.523	-115,299	No	220,317
CD-06.2B-05V	0.688	0.533	0.559	0.559	-58,669	No	220,317
CD-06.2B-10E	0.688	0.573	0.523	0.523	153,440	No	220,317
CD-06.2B-12E	0.688	0.573	0.523	0.523	153,440	No	220,317
CD-06.2B-14E	0.688	0.573	0.523	0.523	153,440	No	220,317
CD-06.2B-13P	0.688	0.589	0.523	0.523	232,248	No	220,317
CD-06.2B-03T	0.688	0.595	0.523	0.523	271,127	No	220,317
CD-06.2B-03T (D/S)	0.000	0.595	0.523	0.523	271,127	No	220,317
CD-06.2B-07P	0.688	0.615	0.523	0.523	327,152	Yes	220,317
CD-06.2B-06E	0.688	0.631	0.523	0.523	330,266	Yes	220,317
CD-06.3B-01R (D/S)	0.000	0.481	0.392	0.392	386,414	No	220,317
CD-06.2B-11P	0.688	0.610	0.523	0.523	395,540	No	220,317
CD-06.2B-15P	0.688	0.610	0.523	0.523	395,540	No	220,317
CD-06.3B-01R	0.000	0.610	0.523	0.523	395,540	No	220,317
CD-06.2B-02P	0.702	0.615	0.523	0.523	415,652	Yes	220,317
CD-06.2B-01R (D/S)	0.000	0.668	0.492	0.492	620,876	Yes	220,317

Sorted By: Remaining Life

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: CD-06.2B HDR to BFP 32						
CD-06.2B-09P	0.688	0.614	0.523	651,084	Yes	220,317
CD-06.2B-04T (BR/SE)	0.000	0.876	0.523	797,958	Yes	220,317
CD-06.2B-01R	0.000	0.819	0.615	891,410	Yes	220,317
CD-06.2B-04T	0.688	0.949	0.523	962,818	Yes	220,317
CD-06.3B-02N	0.562	0.914	0.392	1,018,328	No	220,317
CD-06.2B-35P	0.688	0.648	0.523	1,090,132	No	220,317
CD-06.2B-36P	0.688	0.648	0.523	1,090,132	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:15:08AM

Pass 1 Analysis Exclude Measured Wear

Run Name: CD: HDR TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			

====> Grouped by Line: CD-02.8A HDR to FWH 33A

CD-02.8A-03P	0.438	0.353	0.305	0.305	Yes	220,317
CD-02.7-02T (BR/SE)	0.000	0.365	0.305	0.305	Yes	220,317
CD-02.8A-06P	0.438	0.375	0.305	0.305	Yes	220,317
CD-02.8A-01P	0.438	0.381	0.305	0.305	No	220,317
CD-02.8A-05E	0.438	0.446	0.305	0.305	Yes	220,317
CD-02.8A-07E	0.438	0.451	0.305	0.305	Yes	220,317
CD-02.8A-08N	0.438	0.481	0.305	0.305	Yes	220,317
CD-02.7-02T	0.688	0.651	0.523	0.523	Yes	220,317
CD-02.8A-02E	0.438	0.494	0.305	0.305	Yes	220,317
CD-02.8A-04V	0.438	0.711	0.326	0.326	No	220,317
CD-02.7-01P	0.675	0.649	0.523	0.523	No	220,317

Sorted By: Remaining Life

====> Grouped by Line: CD-02.8B HDR to FWH 33B

CD-02.8B-04V	0.438	0.296	0.326	0.326	No	220,317
CD-02.8B-03P	0.438	0.376	0.305	0.305	Yes	220,317
CD-02.8B-06P	0.438	0.394	0.305	0.305	Yes	220,317
CD-02.8B-02E	0.000	0.418	0.305	0.305	Yes	220,317
CD-02.8B-01P	0.445	0.367	0.305	0.305	Yes	220,317
CD-02.8B-08N	0.438	0.466	0.305	0.305	Yes	220,317
CD-02.8B-05E	0.438	0.475	0.305	0.305	Yes	220,317
CD-02.8B-07E	0.438	0.475	0.305	0.305	Yes	220,317

Sorted By: Remaining Life

====> Grouped by Line: CD-02.8C HDR to FWH 33C

CD-02.8C-03P	0.594	0.359	0.305	0.305	Yes	220,317
CD-02.8C-02E	0.000	0.380	0.305	0.305	Yes	220,317
CD-02.8C-06P	0.438	0.371	0.305	0.305	Yes	220,317
CD-02.8C-08N	0.438	0.442	0.305	0.305	Yes	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1] Thoop			
====> Grouped by Line: CD-02.8C HDR to FWH 33C					
CD-02.8C-05E	0.438	0.447	0.305	459,856	220,317
CD-02.8C-07E	0.438	0.451	0.305	475,587	220,317
CD-02.8C-04V	0.438	0.961	0.326	1,523,754	220,317
CD-02.8C-01P	0.629	0.570	0.305	1,534,555	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:15:15AM

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Run Name: CD: HTR 31 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: CD-01.1A FWH 31A to FWH 32A						
CD-01.1A-01N	0.438	0.336	0.305	108,208	No	220,317
CD-01.1A-13N	0.438	0.357	0.305	222,786	No	220,317
CD-01.1A-11E	0.438	0.363	0.305	269,237	No	220,317
CD-01.1A-06E	0.438	0.363	0.305	269,237	No	220,317
CD-01.1A-07E	0.438	0.363	0.305	269,237	No	220,317
CD-01.1A-09E	0.438	0.363	0.305	269,237	No	220,317
CD-01.1A-03E	0.438	0.363	0.305	269,237	No	220,317
CD-01.1A-05E	0.438	0.363	0.305	269,237	No	220,317
CD-01.1A-12P	0.438	0.373	0.305	366,009	No	220,317
CD-01.1A-08P	0.438	0.373	0.305	366,009	No	220,317
CD-01.1A-02P	0.438	0.383	0.305	498,622	No	220,317
CD-01.1A-10P	0.438	0.387	0.305	566,521	No	220,317
CD-01.1A-04P	0.438	0.387	0.305	566,521	No	220,317

Sorted By: Remaining Life

====>Grouped by Line: CD-01.1B FWH 31B to FWH 32B

CD-01.1B-01N	0.438	0.336	0.305	108,208	No	220,317
CD-01.1B-13N	0.438	0.357	0.305	222,786	No	220,317
CD-01.1B-11E	0.438	0.363	0.305	269,237	No	220,317
CD-01.1B-09E	0.438	0.363	0.305	269,237	No	220,317
CD-01.1B-07E	0.438	0.363	0.305	269,237	No	220,317
CD-01.1B-05E	0.438	0.363	0.305	269,237	No	220,317
CD-01.1B-06E	0.438	0.363	0.305	269,237	No	220,317
CD-01.1B-03E	0.438	0.363	0.305	269,237	No	220,317
CD-01.1B-12P	0.438	0.373	0.305	366,009	No	220,317
CD-01.1B-08P	0.438	0.373	0.305	366,009	No	220,317
CD-01.1B-02P	0.438	0.383	0.305	498,622	No	220,317
CD-01.1B-10P	0.438	0.387	0.305	566,521	No	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1] Thoop				
====> Grouped by Line: CD-01.1B FWH 31B to FWH 32B						
CD-01.1B-04P	0.438	0.387	0.305	0.305	No	220,317
====> Grouped by Line: CD-01.1C FWH 31C to FWH 32C						
CD-01.1C-01N	0.438	0.336	0.305	0.305	No	220,317
CD-01.1C-13N	0.438	0.357	0.305	0.305	No	220,317
CD-01.1C-03E	0.438	0.363	0.305	0.305	No	220,317
CD-01.1C-05E	0.438	0.363	0.305	0.305	No	220,317
CD-01.1C-06E	0.438	0.363	0.305	0.305	No	220,317
CD-01.1C-07E	0.438	0.363	0.305	0.305	No	220,317
CD-01.1C-09E	0.438	0.363	0.305	0.305	No	220,317
CD-01.1C-11E	0.438	0.363	0.305	0.305	No	220,317
CD-01.1C-08P	0.438	0.373	0.305	0.305	No	220,317
CD-01.1C-12P	0.438	0.373	0.305	0.305	No	220,317
CD-01.1C-02P	0.438	0.383	0.305	0.305	No	220,317
CD-01.1C-04P	0.438	0.387	0.305	0.305	No	220,317
CD-01.1C-10P	0.438	0.387	0.305	0.305	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:15:25AM

Run Name: CD: HTR 32 TO 33 HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				

=====>Grouped by Line: CD-02.2 FWH 32 OUT HDR

CD-02.1B-11T (BR/SE)	0.000	0.347	0.305	0.305	148,226	Yes	220,317
CD-02.1B-11T (D/S)	0.624	0.545	0.436	0.436	339,308	Yes	220,317
CD-02.1B-11T	0.624	0.551	0.436	0.436	531,530	Yes	220,317
CD-02.2-01P	0.594	0.547	0.436	0.436	711,629	Yes	220,317
CD-02.2-02R (D/S)	0.000	0.672	0.523	0.523	805,089	Yes	220,317
CD-02.2-02R	0.000	0.679	0.436	0.436	1,111,414	Yes	220,317
CD-02.2-03P	0.594	0.557	0.436	0.436	1,117,336	No	220,317

Sorted By: Remaining Life

=====>Grouped by Line: CD-02.3 FWH 32 OUT HDR

CD-02.1C-12T (BR/SE)	0.000	0.369	0.305	0.305	227,737	Yes	220,317
CD-02.3-13E	0.688	0.590	0.523	0.523	235,166	No	220,317
CD-02.3-04E	0.688	0.590	0.523	0.523	235,166	No	220,317
CD-02.3-11E	0.688	0.590	0.523	0.523	235,166	No	220,317
CD-02.3-07E	0.688	0.590	0.523	0.523	235,166	No	220,317
CD-02.3-05E	0.688	0.596	0.523	0.523	268,053	No	220,317
CD-02.3-15T (D/S)	0.000	0.646	0.523	0.523	294,340	Yes	220,317
CD-02.3-09E	0.688	0.601	0.523	0.523	304,927	No	220,317
CD-02.3-14P	0.688	0.603	0.523	0.523	325,092	No	220,317
CD-02.1C-12T (D/S)	0.692	0.627	0.523	0.523	328,914	Yes	220,317
CD-02.3-02T	0.688	0.609	0.523	0.523	369,455	No	220,317
CD-02.3-02T (D/S)	0.000	0.609	0.523	0.523	369,455	No	220,317
CD-02.3-15T	0.688	0.681	0.523	0.523	369,652	No	220,317
CD-02.1C-12T	0.692	0.632	0.523	0.523	430,090	Yes	220,317
CD-02.3-06P	0.688	0.622	0.523	0.523	511,418	No	220,317
CD-02.3-12P	0.688	0.622	0.523	0.523	511,418	No	220,317
CD-02.3-08P	0.688	0.622	0.523	0.523	511,418	No	220,317
CD-02.3-10P	0.688	0.630	0.523	0.523	627,570	No	220,317

Sorted By: Remaining Life

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====> Grouped by Line: CD-02.3 FWH 32 OUT HDR							
CD-02.3-03P	0.688	0.635	0.523	0.523	724,363	No	220,317
CD-02.3-01P	0.736	0.667	0.523	0.523	924,182	Yes	220,317
CD-02.3-16P	0.688	0.651	0.523	0.523	1,172,767	No	220,317
CD-02.3-15T (BR/SE)	0.000	0.495	0.392	0.392	2,899,944	No	220,317
====> Grouped by Line: CD-02.4 FWH 32 OUT HDR							
CD-02.4-02V	0.594	0.431	0.466	0.466	-71,020	No	220,317
CD-02.4-01R (D/S)	0.000	0.490	0.436	0.436	176,355	No	220,317
CD-02.4-01R	0.000	0.598	0.523	0.523	281,373	No	220,317
CD-02.4-03P	0.594	0.522	0.436	0.436	411,225	No	220,317
CD-02.5-02E	0.994	0.662	0.523	0.523	479,450	No	220,317
CD-02.4-04E (D/S)	0.864	0.682	0.523	0.523	512,642	Yes	220,317
CD-02.4-04E	0.864	0.715	0.436	0.436	703,018	Yes	220,317
CD-02.3-17P	0.688	0.636	0.523	0.523	747,672	No	220,317
CD-02.5-01P	0.754	0.709	0.523	0.523	971,995	No	220,317
====> Grouped by Line: CD-02.5 FWH 32 OUT HDR							
CD-02.5-04T (BR/SE)	0.000	0.354	0.305	0.305	168,966	No	220,317
CD-02.5-03T	0.688	0.607	0.523	0.523	270,069	Yes	220,317
CD-02.5-04T	0.730	0.644	0.523	0.523	281,687	Yes	220,317
CD-02.5-03T (D/S)	0.000	0.614	0.523	0.523	286,041	Yes	220,317
CD-02.5-04T (D/S)	0.730	0.634	0.523	0.523	326,728	Yes	220,317
CD-02.5-03T (BR/SE)	0.000	0.550	0.392	0.392	4,508,023	No	220,317
====> Grouped by Line: CD-02.6 FWH 32 OUT HDR							
CD-02.6-03T (BR/SE)	0.000	0.368	0.305	0.305	216,051	Yes	220,317
CD-02.6-03T	0.694	0.656	0.523	0.523	391,355	Yes	220,317
CD-02.6-01T	0.693	0.628	0.523	0.523	567,644	Yes	220,317
CD-02.6-03T (D/S)	0.694	0.645	0.523	0.523	575,301	Yes	220,317
CD-02.6-01T (D/S)	0.693	0.644	0.523	0.523	653,772	Yes	220,317
CD-02.6-02P	0.693	0.637	0.523	0.523	918,919	Yes	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:15:31AM

Run Name: CD: HTR 32 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: CD-02.1A FWH 32A to HDR							
CD-02.1A-05V	0.438	0.296	0.326	0.326	-69,645	No	220,317
CD-02.1A-11E	0.438	0.333	0.305	0.305	91,554	No	220,317
CD-02.1A-09E	0.438	0.333	0.305	0.305	91,554	No	220,317
CD-02.1A-03E	0.438	0.333	0.305	0.305	91,554	No	220,317
CD-02.1A-08P	0.438	0.339	0.305	0.305	116,235	No	220,317
CD-02.1A-12P	0.438	0.347	0.305	0.305	159,041	No	220,317
CD-02.1A-02P	0.438	0.361	0.305	0.305	251,522	No	220,317
CD-02.1A-01N	0.438	0.428	0.305	0.305	294,891	No	220,317
CD-02.1A-04P	0.438	0.367	0.305	0.305	298,873	No	220,317
CD-02.1A-10P	0.438	0.367	0.305	0.305	298,873	No	220,317
CD-02.1A-06E	0.438	0.481	0.305	0.305	352,905	Yes	220,317
CD-02.1A-13R (D/S)	0.000	0.549	0.436	0.436	716,965	Yes	220,317
CD-02.1A-14P	0.438	0.399	0.305	0.305	799,947	No	220,317
CD-02.1A-13R	0.000	0.599	0.305	0.305	1,261,887	Yes	220,317
Sorted By: Remaining Life							

====>Grouped by Line: CD-02.1B FWH 32B to HDR

CD-02.1B-07V	0.438	0.296	0.326	0.326	-69,645	No	220,317
CD-02.1B-06E	0.438	0.333	0.305	0.305	91,554	No	220,317
CD-02.1B-05E	0.438	0.333	0.305	0.305	91,554	No	220,317
CD-02.1B-02P	0.438	0.361	0.305	0.305	251,522	No	220,317
CD-02.1B-04P	0.438	0.367	0.305	0.305	298,873	No	220,317
CD-02.1B-01N	0.438	0.432	0.305	0.305	304,498	No	220,317
CD-02.1B-03E	0.438	0.408	0.305	0.305	333,252	Yes	220,317
CD-02.1B-08P	0.438	0.376	0.305	0.305	386,041	No	220,317
CD-02.1B-09E	0.438	0.474	0.305	0.305	548,887	Yes	220,317
CD-02.1B-10P	0.661	0.587	0.305	0.305	1,297,273	No	220,317
Sorted By: Remaining Life							

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Component Actual Service Time (hrs)
	Init.	Pred.[1]			
====> Grouped by Line: CD-02.1C FWH 32C to HDR					
CD-02.1C-08V	0.438	0.296	0.326	-69,645	220,317
CD-02.1C-05E	0.438	0.333	0.305	91,554	220,317
CD-02.1C-06E	0.438	0.333	0.305	91,554	220,317
CD-02.1C-07P	0.438	0.347	0.305	159,041	220,317
CD-02.1C-02P	0.438	0.349	0.305	196,302	220,317
CD-02.1C-01N	0.438	0.389	0.305	201,221	220,317
CD-02.1C-04P	0.438	0.367	0.305	298,873	220,317
CD-02.1C-11P	0.438	0.367	0.305	298,873	220,317
CD-02.1C-09P	0.438	0.376	0.305	386,041	220,317
CD-02.1C-03E	0.438	0.461	0.305	505,272	220,317
CD-02.1C-10E	0.575	0.491	0.305	586,757	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:15:39AM

Run Name: CD: HTR 33 TO HTR 34
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: CD-03.1A FWH 33A to FWH 34A							
CD-03.1A-13N	0.438	0.267	0.305	0.305	-74,887	No	220,317
CD-03.1A-10E	0.438	0.280	0.305	0.305	-53,431	No	220,317
CD-03.1A-06E	0.438	0.280	0.305	0.305	-53,431	No	220,317
CD-03.1A-12E	0.438	0.297	0.305	0.305	-19,355	No	220,317
CD-03.1A-08E	0.438	0.297	0.305	0.305	-19,355	No	220,317
CD-03.1A-05E	0.438	0.297	0.305	0.305	-19,355	No	220,317
CD-03.1A-11P	0.438	0.301	0.305	0.305	-9,046	No	220,317
CD-03.1A-07P	0.438	0.301	0.305	0.305	-9,046	No	220,317
CD-03.1A-01N	0.438	0.379	0.305	0.305	121,287	Yes	220,317
CD-03.1A-04P	0.438	0.361	0.305	0.305	142,727	Yes	220,317
CD-03.1A-09P	0.438	0.344	0.305	0.305	145,590	No	220,317
CD-03.1A-15P	0.438	0.344	0.305	0.305	145,590	No	220,317
CD-03.1A-02E	0.438	0.451	0.305	0.305	321,998	Yes	220,317
CD-03.1A-03E	0.438	0.466	0.305	0.305	355,163	Yes	220,317
CD-03.1A-14P	0.438	0.378	0.305	0.305	424,334	No	220,317
====>Grouped by Line: CD-03.1B FWH 33B to FWH 34B							
CD-03.1B-01N	0.438	0.225	0.305	0.305	-126,106	No	220,317
CD-03.1B-11N	0.438	0.267	0.305	0.305	-74,887	No	220,317
CD-03.1B-08E	0.438	0.280	0.305	0.305	-53,431	No	220,317
CD-03.1B-10E	0.438	0.297	0.305	0.305	-19,355	No	220,317
CD-03.1B-09P	0.438	0.331	0.305	0.305	86,210	No	220,317
CD-03.1B-07P	0.477	0.340	0.305	0.305	88,599	Yes	220,317
CD-03.1B-04P	0.438	0.383	0.305	0.305	199,101	Yes	220,317
CD-03.1B-05E	0.547	0.403	0.305	0.305	212,271	Yes	220,317
CD-03.1B-02E	0.438	0.435	0.305	0.305	288,075	Yes	220,317
CD-03.1B-03E	0.438	0.461	0.305	0.305	344,517	Yes	220,317

Sorted By: Remaining Life

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: CD-03.1B FWH 33B to FWH 34B						
CD-03.1B-06E	0.555	0.471	0.305	359,829	Yes	220,317
CD-03.1B-12P	0.438	0.378	0.305	424,334	No	220,317
====> Grouped by Line: CD-03.1C FWH 33C to FWH 34C						
CD-03.1C-11N	0.438	0.267	0.305	-74,887	No	220,317
CD-03.1C-05E	0.438	0.280	0.305	-53,431	No	220,317
CD-03.1C-03E	0.438	0.280	0.305	-53,431	No	220,317
CD-03.1C-06E	0.438	0.280	0.305	-53,431	No	220,317
CD-03.1C-08E	0.438	0.280	0.305	-53,431	No	220,317
CD-03.1C-10E	0.438	0.297	0.305	-19,355	No	220,317
CD-03.1C-04P	0.438	0.301	0.305	-9,046	No	220,317
CD-03.1C-07P	0.438	0.301	0.305	-9,046	No	220,317
CD-03.1C-09P	0.438	0.331	0.305	86,210	No	220,317
CD-03.1C-01N	0.438	0.411	0.305	174,350	Yes	220,317
CD-03.1C-02E	0.438	0.427	0.305	269,200	Yes	220,317
CD-03.1C-12P	0.438	0.378	0.305	424,334	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:15:48AM

Run Name: CD: HTR 34 TO HTR 35
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: CD-04.1A FWH 34A to FWH 35A							
CD-04.1A-14N	0.438	0.215	0.305	0.305	-131,278	No	220,317
CD-04.1A-05E	0.438	0.232	0.305	0.305	-120,519	No	220,317
CD-04.1A-11E	0.438	0.232	0.305	0.305	-120,519	No	220,317
CD-04.1A-09E	0.438	0.232	0.305	0.305	-120,519	No	220,317
CD-04.1A-07E	0.438	0.232	0.305	0.305	-120,519	No	220,317
CD-04.1A-13E	0.438	0.254	0.305	0.305	-95,629	No	220,317
CD-04.1A-10P	0.438	0.260	0.305	0.305	-86,724	No	220,317
CD-04.1A-01N	0.438	0.287	0.305	0.305	-22,323	No	220,317
CD-04.1A-12P	0.438	0.299	0.305	0.305	-15,391	No	220,317
CD-04.1A-08P	0.438	0.299	0.305	0.305	-15,391	No	220,317
CD-04.1A-06P	0.438	0.299	0.305	0.305	-15,391	No	220,317
CD-04.1A-04P	0.438	0.348	0.305	0.305	84,035	Yes	220,317
CD-04.1A-02E	0.438	0.439	0.305	0.305	228,081	Yes	220,317
CD-04.1A-03E	0.438	0.443	0.305	0.305	234,871	Yes	220,317
CD-04.1A-15P	0.438	0.360	0.305	0.305	240,671	No	220,317
====>Grouped by Line: CD-04.1B FWH 34B to FWH 35B							
CD-04.1B-16N	0.438	0.215	0.305	0.305	-131,278	No	220,317
CD-04.1B-05E	0.438	0.232	0.305	0.305	-120,519	No	220,317
CD-04.1B-08E	0.438	0.232	0.305	0.305	-120,519	No	220,317
CD-04.1B-10E	0.438	0.232	0.305	0.305	-120,519	No	220,317
CD-04.1B-13E	0.438	0.232	0.305	0.305	-120,519	No	220,317
CD-04.1B-06E	0.438	0.243	0.305	0.305	-111,112	No	220,317
CD-04.1B-12E	0.438	0.254	0.305	0.305	-95,629	No	220,317
CD-04.1B-15E	0.438	0.254	0.305	0.305	-95,629	No	220,317
CD-04.1B-09P	0.438	0.260	0.305	0.305	-86,724	No	220,317
CD-04.1B-11P	0.438	0.260	0.305	0.305	-86,724	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: CD-04.1B FWH 34B to FWH 35B						
CD-04.1B-14P	0.438	0.260	0.305	-86,724	No	220,317
CD-04.1B-07P	0.438	0.299	0.305	-15,391	No	220,317
CD-04.1B-01N	0.438	0.352	0.305	59,297	Yes	220,317
CD-04.1B-04P	0.438	0.375	0.305	136,691	Yes	220,317
CD-04.1B-03E	0.438	0.429	0.305	210,257	Yes	220,317
CD-04.1B-17P	0.438	0.360	0.305	240,671	No	220,317
CD-04.1B-02E	0.438	0.451	0.305	247,607	Yes	220,317
====> Grouped by Line: CD-04.1C FWH 34C to FWH 35C						
CD-04.1C-13N	0.438	0.215	0.305	-131,278	No	220,317
CD-04.1C-08E	0.438	0.232	0.305	-120,519	No	220,317
CD-04.1C-10E	0.438	0.232	0.305	-120,519	No	220,317
CD-04.1C-12E	0.438	0.254	0.305	-95,629	No	220,317
CD-04.1C-04P	0.438	0.260	0.305	-86,724	No	220,317
CD-04.1C-09P	0.438	0.260	0.305	-86,724	No	220,317
CD-04.1C-11P	0.438	0.299	0.305	-15,391	No	220,317
CD-04.1C-01N	0.438	0.432	0.305	159,597	No	220,317
CD-04.1C-07E	0.438	0.419	0.305	193,041	Yes	220,317
CD-04.1C-14P	0.438	0.360	0.305	240,671	No	220,317
CD-04.1C-02E	0.594	0.451	0.305	241,198	Yes	220,317
CD-04.1C-03E	0.570	0.453	0.305	245,727	Yes	220,317
CD-04.1C-05E	0.438	0.451	0.305	247,368	Yes	220,317
CD-04.1C-06P	0.438	0.416	0.305	280,296	Yes	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:15:51AM

Pass 1 Analysis Exclude Measured Wear

Run Name: CD: HTR 35 TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			
====> Grouped by Line: CD-05.3 FWH 35 OUT HDR						
CD-05.1B-09T (BR/SE)	0.000	0.401	0.305	0.305	Yes	220,317
CD-05.1B-09T (D/S)	0.724	0.648	0.523	0.523	Yes	220,317
CD-05.1B-09T	0.724	0.632	0.523	0.523	Yes	220,317
CD-05.3-01P	0.724	0.659	0.523	0.523	Yes	220,317
====> Grouped by Line: CD-05.4 FWH 35 OUT HDR						
CD-05.4-03T (D/S)	0.696	0.649	0.653	0.653	Yes	220,317
CD-05.4-02P	0.722	0.593	0.523	0.523	No	220,317
CD-05.1C-10T (BR/SE)	0.000	0.396	0.305	0.305	Yes	220,317
CD-05.1C-10T (D/S)	0.000	0.649	0.523	0.523	Yes	220,317
CD-05.4-01E	0.688	0.638	0.523	0.523	Yes	220,317
CD-05.4-03T (BR/SE)	0.696	0.651	0.523	0.523	Yes	220,317
CD-05.4-05P	0.625	0.656	0.561	0.561	No	220,317
CD-05.1C-10T	0.000	0.668	0.523	0.523	Yes	220,317
CD-05.4-04P	0.688	0.633	0.523	0.523	No	220,317

Sorted By: Remaining Life

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:15:56AM

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Run Name: CD: HTR 35 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: CD-05.1A FWH 35A to HDR							
CD-05.1A-05V	0.438	0.223	0.326	0.326	-146,025	No	220,317
CD-05.1A-09E	0.438	0.279	0.305	0.305	-56,757	No	220,317
CD-05.1A-04P	0.438	0.300	0.305	0.305	-11,618	No	220,317
CD-05.1A-10P	0.438	0.300	0.305	0.305	-11,618	No	220,317
CD-05.1A-11R	0.000	0.318	0.305	0.305	37,985	No	220,317
CD-05.1A-01N	0.438	0.344	0.305	0.305	64,429	Yes	220,317
CD-05.1A-08P	0.438	0.331	0.305	0.305	85,604	No	220,317
CD-05.1A-02E	0.438	0.348	0.305	0.305	98,249	Yes	220,317
CD-05.1A-03E	0.438	0.356	0.305	0.305	116,302	Yes	220,317
CD-05.1A-06P	0.438	0.370	0.305	0.305	248,428	Yes	220,317
CD-05.1A-07E	0.438	0.467	0.305	0.305	366,274	Yes	220,317
CD-05.1A-11R (D/S)	0.000	0.627	0.523	0.523	607,654	No	220,317
CD-05.2-01P	0.688	0.637	0.523	0.523	799,915	No	220,317

Sorted By: Remaining Life

====>Grouped by Line: CD-05.1B FWH 35B to HDR

CD-05.1B-05V	0.438	0.223	0.326	0.326	-146,025	No	220,317
CD-05.1B-01N	0.438	0.223	0.305	0.305	-128,278	No	220,317
CD-05.1B-04P	0.438	0.352	0.305	0.305	123,480	Yes	220,317
CD-05.1B-02E	0.438	0.418	0.305	0.305	254,098	Yes	220,317
CD-05.1B-06P	0.438	0.381	0.305	0.305	290,176	Yes	220,317
CD-05.1B-07E	0.575	0.463	0.305	0.305	347,431	Yes	220,317
CD-05.1B-03E	0.438	0.476	0.305	0.305	384,982	Yes	220,317

Sorted By: Remaining Life

====>Grouped by Line: CD-05.1C FWH 35C to HDR

CD-05.1C-05V	0.438	0.223	0.326	0.326	-146,025	No	220,317
CD-05.1C-07E	0.438	0.279	0.305	0.305	-56,757	No	220,317
CD-05.1C-02E	0.438	0.279	0.305	0.305	-56,757	No	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: CD-05.1C FWH 35C to HDR						
CD-05.1C-03E	0.438	0.279	0.305	-56,757	No	220,317
CD-05.1C-04P	0.438	0.300	0.305	-11,618	No	220,317
CD-05.1C-01N	0.438	0.383	0.305	130,049	No	220,317
CD-05.1C-09P	0.498	0.359	0.305	139,148	No	220,317
CD-05.1C-06P	0.438	0.343	0.305	146,209	No	220,317
CD-05.1C-08E	0.438	0.417	0.305	252,006	Yes	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:16:02AM

Run Name: CD: S/G BLWDN HX IN
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: CD-02.9 FWH HDR to SGBD HX3							
CD-02.10-06E	0.322	0.270	0.188	0.188	536,931	No	220,317
CD-02.9-17T (BR/SE)	0.000	0.265	0.174	0.174	537,407	No	220,317
CD-02.10-04E	0.322	0.282	0.188	0.188	610,545	Yes	220,317
CD-02.10-10E	0.322	0.286	0.188	0.188	638,059	Yes	220,317
CD-02.10-08E	0.322	0.304	0.188	0.188	755,144	Yes	220,317
CD-02.10-07P	0.322	0.287	0.188	0.188	955,764	No	220,317
CD-02.10-05P	0.322	0.287	0.188	0.188	955,764	No	220,317
CD-02.10-09P	0.322	0.303	0.188	0.188	1,106,068	Yes	220,317
CD-02.10-03P	0.322	0.292	0.188	0.188	1,188,958	No	220,317
CD-02.10-01P	0.322	0.294	0.188	0.188	1,278,615	No	220,317
CD-02.9-04V	0.562	0.545	0.420	0.420	2,425,462	No	220,317
CD-02.10-11N	0.812	0.741	0.188	0.188	2,607,609	No	220,317
CD-02.9-17T	0.562	0.543	0.392	0.392	2,658,625	No	220,317
CD-02.9-08E	0.562	0.549	0.392	0.392	4,115,294	No	220,317
CD-02.9-06E	0.562	0.549	0.392	0.392	4,115,294	No	220,317
CD-02.9-02E	0.562	0.549	0.392	0.392	4,115,294	No	220,317
CD-02.9-13E	0.562	0.549	0.392	0.392	4,115,294	No	220,317
CD-02.9-11E	0.562	0.549	0.392	0.392	4,115,294	No	220,317
CD-02.9-16E	0.562	0.549	0.392	0.392	4,115,294	No	220,317
CD-02.9-03P	0.562	0.551	0.392	0.392	4,810,752	No	220,317
CD-02.9-09P	0.562	0.551	0.392	0.392	4,810,752	No	220,317
CD-02.9-07P	0.562	0.553	0.392	0.392	6,251,741	No	220,317
CD-02.9-14P	0.562	0.553	0.392	0.392	6,251,741	No	220,317
CD-02.9-12P	0.562	0.553	0.392	0.392	6,251,741	No	220,317
CD-02.9-05P	0.562	0.554	0.392	0.392	7,150,020	No	220,317
CD-02.9-01P	0.562	0.555	0.392	0.392	7,898,586	No	220,317
CD-02.9-15P	0.562	0.558	0.392	0.392	14,635,677	No	220,317

Sorted By: Remaining Life

Component Name	Init.	Thickness (in) Pred.[1]	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs) Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: CD-02.9 FWH HDR to SGBD HX3						
CD-02.9-10P	0.562	0.558	0.392	0.392	14,635,677	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:16:16AM

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Run Name: CD: S/G BLWDN HX OUT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: CD-02.11 SGBD HX3 to FWH HDR							
CD-02.11-13T (BR/SE)	0.000	0.276	0.174	0.174	523,835	No	220,317
CD-02.11-03E	0.322	0.291	0.188	0.188	669,721	Yes	220,317
CD-02.11-12E	0.322	0.299	0.188	0.188	722,545	No	220,317
CD-02.11-10E	0.322	0.306	0.188	0.188	768,079	Yes	220,317
CD-02.11-07E	0.322	0.309	0.188	0.188	789,513	Yes	220,317
CD-02.11-02P	0.322	0.284	0.188	0.188	860,104	No	220,317
CD-02.11-05E	0.322	0.310	0.188	0.188	890,165	Yes	220,317
CD-02.11-04P	0.322	0.291	0.188	0.188	997,748	Yes	220,317
CD-02.11-08P	0.322	0.294	0.188	0.188	1,019,189	Yes	220,317
CD-02.11-11P	0.322	0.304	0.188	0.188	1,119,783	Yes	220,317
CD-02.11-06P	0.322	0.301	0.188	0.188	1,233,360	Yes	220,317
CD-02.11-01N	0.812	0.723	0.188	0.188	2,018,960	No	220,317
CD-02.12-04V	0.562	0.545	0.420	0.420	2,425,462	No	220,317
CD-02.11-09P	0.322	0.307	0.188	0.188	2,599,367	No	220,317
CD-02.11-13T (D/S)	0.000	0.548	0.392	0.392	3,014,913	Yes	220,317
CD-02.12-02E	0.562	0.549	0.392	0.392	4,115,294	No	220,317
CD-02.12-08E	0.562	0.549	0.392	0.392	4,115,294	No	220,317
CD-02.12-10E	0.562	0.549	0.392	0.392	4,115,294	No	220,317
CD-02.12-01P	0.562	0.552	0.392	0.392	5,153,845	No	220,317
CD-02.12-11P	0.562	0.553	0.392	0.392	6,251,741	No	220,317
CD-02.12-07P	0.562	0.553	0.392	0.392	6,251,741	No	220,317
CD-02.12-03P	0.562	0.553	0.392	0.392	6,251,741	No	220,317
CD-02.12-09P	0.562	0.553	0.392	0.392	6,251,741	No	220,317
CD-02.12-05P	0.562	0.544	0.392	0.392	6,693,046	Yes	220,317
CD-02.12-06E	0.562	0.691	0.392	0.392	7,828,370	Yes	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:16:21AM

Run Name: ES: BFPT DRN TO COND
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: EX-07.1 BFPT 31 Drain to Cond						
EX-07.1-01N	0.000	0.618	0.080	16,192,661	No	220,317
EX-07.1-10EJ	0.000	0.618	0.080	17,233,458	No	220,317
EX-07.1-08EJ	0.000	0.618	0.080	17,233,458	No	220,317
EX-07.1-03EJ	0.000	0.618	0.080	17,233,458	No	220,317
EX-07.1-06P	0.000	0.620	0.080	25,489,944	No	220,317
EX-07.1-02E	0.000	0.621	0.080	26,233,440	No	220,317
EX-07.1-05E	0.000	0.621	0.080	28,830,762	No	220,317
EX-07.1-07E	0.000	0.621	0.080	30,591,206	No	220,317
EX-07.1-11R	0.000	0.622	0.080	38,993,804	No	220,317
EX-07.1-12N	0.000	0.622	0.090	46,054,212	No	220,317
EX-07.1-09P	0.000	0.623	0.080	66,364,080	No	220,317
EX-07.1-04P	0.000	0.623	0.080	66,364,080	No	220,317
EX-07.1-11R (D/S)	0.000	0.623	0.090	69,036,992	No	220,317
Sorted By: Remaining Life						
====>Grouped by Line: EX-07.2 BFPT 32 Drain to Cond						
EX-07.2-01N	0.000	0.618	0.080	16,192,661	No	220,317
EX-07.2-10EJ	0.000	0.618	0.080	17,233,458	No	220,317
EX-07.2-08EJ	0.000	0.618	0.080	17,233,458	No	220,317
EX-07.2-03EJ	0.000	0.618	0.080	17,233,458	No	220,317
EX-07.2-06P	0.000	0.620	0.080	25,489,944	No	220,317
EX-07.2-02E	0.000	0.621	0.080	26,233,440	No	220,317
EX-07.2-05E	0.000	0.621	0.080	28,830,762	No	220,317
EX-07.2-07E	0.000	0.621	0.080	30,591,206	No	220,317
EX-07.2-11R	0.000	0.622	0.080	38,993,804	No	220,317
EX-07.2-12N	0.000	0.622	0.090	46,054,212	No	220,317
EX-07.2-09P	0.000	0.623	0.080	66,364,080	No	220,317
EX-07.2-04P	0.000	0.623	0.080	66,364,080	No	220,317
Sorted By: Remaining Life						

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1] Thoop			
====>Grouped by Line: EX-07.2 BFPT 32 Drain to Cond					
EX-07.2-11R (D/S)	0.000	0.623	0.090	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:16:29AM

Pass 1 Analysis Exclude Measured Wear

Run Name: ES: HDR TO 35 HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Ihoop				
====>Grouped by Line: EX-02.16 HDR 35 to FWH 35A							
EX-02.16-05V	0.312	-0.276	0.160	0.160	No	-154,636	220,317
EX-02.16-09N	0.293	-0.243	0.149	0.149	No	-152,235	220,317
EX-02.16-08E	0.924	0.640	0.149	0.149	Yes	160,602	181,524
EX-02.16-02P	0.284	0.283	0.149	0.149	No	15,804,885	99,292
EX-02.16-06E	0.000	0.374	0.149	0.149	No	21,383,286	99,292
EX-02.16-07P	0.380	0.403	0.149	0.149	No	23,109,196	99,292
EX-02.16-04P	0.346	0.345	0.149	0.149	No	27,729,780	99,292
EX-02.16-03E	0.455	0.454	0.149	0.149	No	28,736,132	99,292
EX-02.16-01R (D/S)	0.000	0.513	0.149	0.149	No	38,507,948	141,668
EX-02.19-01P	0.375	0.375	0.232	0.232	No	40,898,904	141,668
EX-02.16-01R	0.000	0.603	0.232	0.232	No	49,528,892	141,668
Sorted By: Remaining Life							
====>Grouped by Line: EX-02.17 HDR 35 to FWH 35B							
EX-02.17-02V	0.312	-0.276	0.160	0.160	No	-154,636	220,317
EX-02.17-05E	0.968	0.106	0.149	0.149	Yes	-14,070	181,524
EX-02.17-06N	0.293	0.438	0.149	0.149	Yes	100,567	220,317
EX-02.17-04P	0.378	0.393	0.149	0.149	No	22,219,774	99,292
EX-02.17-03E	0.375	0.466	0.149	0.149	No	30,112,788	99,292
EX-02.17-01P	0.375	0.374	0.149	0.149	No	55,297,812	141,668
Sorted By: Remaining Life							
====>Grouped by Line: EX-02.18 HDR 35 to FWH 35C							
EX-02.18-02V	0.312	-0.276	0.160	0.160	No	-154,636	220,317
EX-02.18-06N	0.293	0.432	0.149	0.149	No	98,493	220,317
EX-02.18-05E	0.312	0.674	0.149	0.149	Yes	184,036	181,524
EX-02.18-04P	0.375	0.383	0.149	0.149	No	23,748,002	141,668
EX-02.18-03E	0.375	0.558	0.149	0.149	No	38,841,212	141,668
EX-02.18-01P	0.375	0.374	0.149	0.149	No	55,297,812	141,668
Sorted By: Remaining Life							

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:16:49AM

Run Name: ES: HDR TO 36 HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: EX-01.5A HP EX HDR to FWH 36A						
EX-01.5A-11V	0.330	-0.005	0.202	0.202	No	220,317
EX-01.5A-06P	0.000	0.375	0.195	0.195	No	128,112
EX-01.5A-05E	0.419	0.419	0.195	0.195	No	128,112
EX-01.5A-04P	0.411	0.411	0.195	0.195	No	128,112
EX-01.5A-02P	0.374	0.374	0.195	0.195	No	128,112
EX-01.5A-03E	0.000	0.375	0.195	0.195	No	128,112
EX-01.5A-01R (D/S)	0.293	0.293	0.195	0.195	No	128,112
EX-01.5A-08P	0.000	0.375	0.195	0.195	No	128,112
EX-01.5A-09E	0.000	0.375	0.195	0.195	No	128,112
EX-01.5A-10P	0.330	0.330	0.195	0.195	No	128,112
EX-01.5A-12P	0.387	0.387	0.195	0.195	No	128,112
EX-01.5A-13E	0.426	0.426	0.195	0.195	No	128,112
EX-01.5A-17P	0.335	0.335	0.195	0.195	No	128,112
EX-01.5A-14E	0.470	0.470	0.195	0.195	No	128,112
EX-01.5A-15N	0.309	1.170	0.195	0.195	No	128,112
EX-01.7-01P	0.438	0.438	0.275	0.275	No	128,112
EX-01.5A-01R	0.000	0.438	0.275	0.275	No	128,112
EX-01.5A-07L (D/S)	0.000	0.375	0.195	0.195	No	128,112
EX-01.5A-07L	0.000	0.375	0.195	0.195	No	128,112
EX-01.5A-16L	0.000	0.375	0.195	0.195	No	128,112
EX-01.5A-16L (D/S)	0.000	0.375	0.195	0.195	No	128,112
====>Grouped by Line: EX-01.5B HP EX HDR to FWH 36B						
EX-01.5B-09V	0.330	-0.005	0.202	0.202	No	220,317
EX-01.5B-01P	0.363	0.363	0.195	0.195	No	128,112
EX-01.5B-02E	0.477	0.477	0.195	0.195	No	128,112
EX-01.5B-03P	0.330	0.330	0.195	0.195	No	128,112

Sorted By: Remaining Life

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: EX-01.5B HP EX HDR to FWH 36B						
EX-01.5B-05P	0.330	0.330	0.195	100,000,000	No	128,112
EX-01.5B-06E	0.330	0.330	0.195	100,000,000	No	128,112
EX-01.5B-07E	0.330	0.330	0.195	100,000,000	No	128,112
EX-01.5B-08P	0.330	0.330	0.195	100,000,000	No	128,112
EX-01.5B-10P	0.374	0.374	0.195	100,000,000	No	128,112
EX-01.5B-11E	0.452	0.452	0.195	100,000,000	No	128,112
EX-01.5B-15P	0.386	0.386	0.195	100,000,000	No	128,112
EX-01.5B-12E	0.543	0.543	0.195	100,000,000	No	128,112
EX-01.5B-13N	0.309	0.377	0.195	100,000,000	No	128,112
EX-01.5B-14L	0.330	0.330	0.195	130,138,064	No	128,112
EX-01.5B-14L (D/S)	0.000	0.330	0.195	130,138,064	No	128,112
EX-01.5B-04L	0.330	0.330	0.195	130,138,064	No	128,112
EX-01.5B-04L (D/S)	0.000	0.330	0.195	130,138,064	No	128,112
====> Grouped by Line: EX-01.5C HP EX HDR to FWH 36C						
EX-01.5C-09V	0.330	-0.005	0.202	-171,764	No	220,317
EX-01.5C-01P	0.450	0.450	0.195	100,000,000	No	128,112
EX-01.5C-02E	0.423	0.423	0.195	100,000,000	No	128,112
EX-01.5C-03P	0.377	0.377	0.195	100,000,000	No	128,112
EX-01.5C-05P	0.373	0.373	0.195	100,000,000	No	128,112
EX-01.5C-06E	0.431	0.431	0.195	100,000,000	No	128,112
EX-01.5C-07E	0.416	0.416	0.195	100,000,000	No	128,112
EX-01.5C-08P	0.356	0.356	0.195	100,000,000	No	128,112
EX-01.5C-10P	0.358	0.358	0.195	100,000,000	No	128,112
EX-01.5C-11E	0.448	0.448	0.195	100,000,000	No	128,112
EX-01.5C-15P	0.337	0.337	0.195	100,000,000	No	128,112
EX-01.5C-12E	0.485	0.485	0.195	100,000,000	No	128,112
EX-01.5C-13N	0.309	1.166	0.195	100,000,000	No	128,112
EX-01.5C-04L (D/S)	0.000	0.330	0.195	100,000,000	No	128,112
EX-01.5C-04L	0.364	0.364	0.195	130,138,064	No	128,112
EX-01.5C-14L	0.373	0.373	0.195	161,880,000	No	128,112
EX-01.5C-14L (D/S)	0.373	0.373	0.195	170,210,432	No	128,112

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:17:07AM

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Run Name: ES: HTR 36 HEADER
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				

====>Grouped by Line: EX-01.1 HP EXT to FWH 36 HDR

Sorted By: Remaining Life

EX-01.1-01N	0.330	0.307	0.189	0.189	No	97,553	220,317
EX-01.1-06E	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.1-07P	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.1-05P	0.368	0.368	0.195	0.195	No	100,000,000	128,112
EX-01.1-03P	0.352	0.352	0.195	0.195	No	100,000,000	128,112
EX-01.1-04E	0.450	0.450	0.195	0.195	No	100,000,000	128,112
EX-01.1-02E	0.446	0.446	0.195	0.195	No	100,000,000	128,112
EX-01.6-01P	0.378	0.378	0.275	0.275	No	100,000,000	128,112
EX-01.1-08R	0.000	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.1-08R (D/S)	0.000	0.438	0.275	0.275	No	100,000,000	128,112

====>Grouped by Line: EX-01.2 HP EXT to FWH 36 HDR

Sorted By: Remaining Life

EX-01.2-01N	0.330	-0.241	0.189	0.189	No	-191,521	220,317
EX-01.2-02E	0.000	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.2-03P	0.385	0.385	0.195	0.195	No	100,000,000	128,112
EX-01.2-04E	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.2-05P	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.2-06E	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.2-07P	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.2-08E	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.2-09P	0.357	0.357	0.195	0.195	No	100,000,000	128,112

====>Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER

Sorted By: Remaining Life

EX-01.3-07V	0.438	0.001	0.286	0.286	No	-176,720	220,317
EX-01.3-08V	0.438	0.001	0.286	0.286	No	-176,720	220,317
EX-01.3-06V	0.438	0.037	0.286	0.286	No	-172,002	220,317
EX-01.3-17T (D/S)	0.501	0.501	0.275	0.275	No	100,000,000	128,112

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1] Thoop			
====>Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER					
EX-01.3-19E	0.000	0.438	0.275	No	128,112
EX-01.3-20P	0.438	0.438	0.275	No	128,112
EX-01.3-21E	0.438	0.438	0.275	No	128,112
EX-01.3-22P	0.528	0.528	0.275	No	128,112
EX-01.3-23T (BR/SE)	0.566	0.566	0.195	No	128,112
EX-01.2-10L	0.482	0.543	0.275	No	128,112
EX-01.2-10L (BR/SE)	0.391	0.422	0.195	No	128,112
EX-01.3-01P	0.456	0.456	0.275	No	128,112
EX-01.3-02E	0.438	0.438	0.275	No	128,112
EX-01.3-03P	0.438	0.438	0.275	No	128,112
EX-01.3-04T	0.468	0.468	0.275	No	128,112
EX-01.3-04T (D/S)	0.468	0.468	0.275	No	128,112
EX-01.3-05P	0.464	0.464	0.275	No	128,112
EX-01.3-09E	0.438	0.438	0.275	No	128,112
EX-01.3-10P	0.438	0.438	0.275	No	128,112
EX-01.3-11T	0.438	0.438	0.275	No	128,112
EX-01.3-11T (D/S)	0.438	0.438	0.275	No	128,112
EX-01.3-12P	0.438	0.438	0.275	No	128,112
EX-01.3-13E	0.438	0.438	0.275	No	128,112
EX-01.3-14P	0.438	0.438	0.275	No	128,112
EX-01.3-15E	0.438	0.438	0.275	No	128,112
EX-01.3-16P	0.460	0.460	0.275	No	128,112
EX-01.3-17T	0.501	0.501	0.275	No	128,112
EX-01.3-23T	0.539	0.539	0.275	No	128,112
EX-01.2-10L (D/S)	0.482	0.543	0.275	No	128,112
EX-01.3-23T (D/S)	0.539	0.539	0.275	No	128,112

Sorted By: Remaining Life

Sorted By: Remaining Life

====>Grouped by Line: EX-01.4 HP EXT FWH 36 HEADER					
EX-01.4-01P	0.528	0.528	0.275	No	128,112
EX-01.4-02T (D/S)	0.439	0.551	0.275	No	128,112
EX-01.4-02T (BR/SE)	0.363	0.421	0.195	No	128,112
EX-01.4-02T	0.439	0.551	0.275	No	128,112

Note:
[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:17:19AM

Run Name: ES: LP TO 31 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====> Grouped by Line: EX-06.1A LP EXT 19 to FWH 31A							
EX-06.1A-01N	0.400	0.206	0.043	0.043	212,028	No	220,317
EX-06.1A-03E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.1A-02E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.1A-04N	0.375	0.247	0.043	0.043	402,495	No	220,317
====> Grouped by Line: EX-06.1B LP EXT 19 to FWH 31B							
EX-06.1B-01N	0.400	0.206	0.043	0.043	212,028	No	220,317
EX-06.1B-02E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.1B-03E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.1B-04N	0.375	0.247	0.043	0.043	402,495	No	220,317
====> Grouped by Line: EX-06.1C LP EXT 19 to FWH 31C							
EX-06.1C-01N	0.400	0.206	0.043	0.043	212,028	No	220,317
EX-06.1C-03E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.1C-02E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.1C-04N	0.375	0.247	0.043	0.043	402,495	No	220,317
====> Grouped by Line: EX-06.2A LP EXT 17 to FWH 31A							
EX-06.2A-01N	0.400	0.206	0.043	0.043	212,028	No	220,317
EX-06.2A-02E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.2A-03E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.2A-04N	0.375	0.313	0.043	0.043	534,365	Yes	220,317
====> Grouped by Line: EX-06.2B LP EXT 17 to FWH 31B							
EX-06.2B-01N	0.400	0.206	0.043	0.043	212,028	No	220,317
EX-06.2B-03E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.2B-02E	0.313	0.198	0.043	0.043	341,985	No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====> Grouped by Line: EX-06.2B LP EXT 17 to FWH 31B							
EX-06.2B-04N	0.375	0.247	0.043	0.043	402,495	No	220,317
====> Grouped by Line: EX-06.2C LP EXT 17 to FWH 31C							
EX-06.2C-01N	0.400	0.206	0.043	0.043	212,028	No	220,317
EX-06.2C-02E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.2C-03E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.2C-04N	0.375	0.247	0.043	0.043	402,495	No	220,317
====> Grouped by Line: EX-06.3A LP EXT 20 to FWH 31A							
EX-06.3A-01N	0.400	0.206	0.043	0.043	212,028	No	220,317
EX-06.3A-03P	0.313	0.193	0.058	0.058	286,719	No	220,317
EX-06.3A-02E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.3A-04E	0.313	0.214	0.043	0.043	441,992	No	220,317
EX-06.3A-05N	0.375	0.307	0.043	0.043	522,485	Yes	220,317
====> Grouped by Line: EX-06.3B LP EXT 20 to FWH 31B							
EX-06.3B-01N	0.400	0.206	0.043	0.043	212,028	No	220,317
EX-06.3B-03P	0.313	0.193	0.058	0.058	286,719	No	220,317
EX-06.3B-02E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.3B-04E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.3B-05N	0.375	0.247	0.043	0.043	402,495	No	220,317
====> Grouped by Line: EX-06.3C LP EXT 20 to FWH 31C							
EX-06.3C-01N	0.400	0.206	0.043	0.043	212,028	No	220,317
EX-06.3C-03P	0.313	0.193	0.058	0.058	286,719	No	220,317
EX-06.3C-02E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.3C-04E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.3C-05N	0.375	0.247	0.043	0.043	402,495	No	220,317
====> Grouped by Line: EX-06.4A LP EXT 18 to FWH 31A							
EX-06.4A-01N	0.400	0.206	0.043	0.043	212,028	No	220,317
EX-06.4A-04E	0.313	0.198	0.043	0.043	341,985	No	220,317
EX-06.4A-02E	0.313	0.208	0.043	0.043	402,132	No	220,317
EX-06.4A-05N	0.375	0.247	0.043	0.043	402,495	No	220,317
EX-06.4A-03P	0.313	0.277	0.058	0.058	1,831,959	No	220,317
====> Grouped by Line: EX-06.4B LP EXT 18 to FWH 31B							

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs) Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====>Grouped by Line: EX-06.4B LP EXT 18 to FWH 31B					
EX-06.4B-01N	0.400	0.206	0.043	212,028	220,317
EX-06.4B-04E	0.313	0.198	0.043	341,985	220,317
EX-06.4B-02E	0.313	0.208	0.043	402,132	220,317
EX-06.4B-05N	0.375	0.247	0.043	402,495	220,317
EX-06.4B-03P	0.313	0.277	0.058	1,831,959	220,317
Sorted By: Remaining Life					
====>Grouped by Line: EX-06.4C LP EXT 18 to FWH 31C					
EX-06.4C-01N	0.400	0.206	0.043	212,028	220,317
EX-06.4C-04E	0.313	0.198	0.043	341,985	220,317
EX-06.4C-02E	0.313	0.208	0.043	402,132	220,317
EX-06.4C-05N	0.375	0.247	0.043	402,495	220,317
EX-06.4C-03P	0.313	0.277	0.058	1,831,959	220,317
Sorted By: Remaining Life					

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:17:25AM

Run Name: ES: LP TO 32 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Ihoop				
====> Grouped by Line: EX-05.1A LP EXT 16 to FWH 32A							
EX-05.1A-01N	0.400	-0.211	0.037	0.037	No		220,317
EX-05.1A-03E	0.250	-0.099	0.037	0.037	No	-128,553	220,317
EX-05.1A-04N	0.375	-0.034	0.037	0.037	No	-70,703	220,317
EX-05.1A-02P	0.250	0.141	0.037	0.037	No	299,184	220,317
====> Grouped by Line: EX-05.1B LP EXT 16 to FWH 32B							
EX-05.1B-01N	0.400	0.267	0.037	0.037	No	157,343	220,317
EX-05.1B-03E	0.250	0.212	0.037	0.037	Yes	206,229	220,317
EX-05.1B-04N	0.375	0.279	0.037	0.037	Yes	246,174	220,317
EX-05.1B-02P	0.250	0.268	0.037	0.037	No	661,362	220,317
====> Grouped by Line: EX-05.1C LP EXT 16 to FWH 32C							
EX-05.1C-01N	0.400	-0.211	0.037	0.037	No	-128,553	220,317
EX-05.1C-03E	0.250	-0.099	0.037	0.037	No	-125,090	220,317
EX-05.1C-04N	0.375	0.239	0.037	0.037	Yes	205,995	220,317
EX-05.1C-02P	0.250	0.141	0.037	0.037	No	299,184	220,317
====> Grouped by Line: EX-05.2A LP EXT 15 to FWH 32A							
EX-05.2A-02E	0.250	-0.135	0.037	0.037	No	-135,827	220,317
EX-05.2A-01N	0.400	-0.211	0.037	0.037	No	-128,553	220,317
EX-05.2A-03E	0.250	-0.099	0.037	0.037	No	-125,090	220,317
EX-05.2A-05E	0.250	-0.079	0.037	0.037	No	-117,468	220,317
EX-05.2A-04P	0.250	-0.063	0.037	0.037	No	-110,332	220,317
EX-05.2A-06N	0.375	-0.034	0.037	0.037	No	-70,703	220,317
====> Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B							
EX-05.2B-01N	0.400	0.211	0.037	0.037	Yes	119,104	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B						
EX-05.2B-02E	0.250	0.213	0.037	188,611	Yes	220,317
EX-05.2B-03E	0.250	0.202	0.037	194,447	Yes	220,317
EX-05.2B-06N	0.375	0.244	0.037	210,765	Yes	220,317
EX-05.2B-05E	0.250	0.210	0.037	216,575	Yes	220,317
EX-05.2B-04P	0.250	0.209	0.037	225,972	Yes	220,317
====>Grouped by Line: EX-05.2C LP EXT 15 to FWH 32C						
EX-05.2C-02E	0.250	-0.135	0.037	-135,827	No	220,317
EX-05.2C-01N	0.400	-0.211	0.037	-128,553	No	220,317
EX-05.2C-03E	0.250	-0.099	0.037	-125,090	No	220,317
EX-05.2C-05E	0.250	-0.079	0.037	-117,468	No	220,317
EX-05.2C-04P	0.250	-0.063	0.037	-110,332	No	220,317
EX-05.2C-06N	0.375	-0.034	0.037	-70,703	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:18:08AM

Run Name: ES: LP TO 33 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: EX-04.1 LPEX14 to FWH33A HDR							
EX-04.1-06T (BR/SE)	0.250	0.156	0.045	0.045	No	214,079	220,317
EX-04.1-05E	0.250	0.157	0.033	0.033	No	240,150	220,317
EX-04.1-01N	0.400	0.261	0.033	0.033	No	298,115	220,317
EX-04.1-02E	0.250	0.171	0.033	0.033	No	317,964	220,317
EX-04.1-03E	0.250	0.171	0.033	0.033	No	317,964	220,317
EX-04.1-04P	0.250	0.179	0.033	0.033	No	375,467	220,317
EX-04.1-06T (D/S)	0.000	0.226	0.063	0.063	No	394,615	220,317
EX-04.1-08X	0.000	0.195	0.033	0.033	No	698,010	220,317
EX-04.1-07P	0.250	0.210	0.033	0.033	No	1,044,192	220,317
EX-04.3-01P	0.313	0.282	0.063	0.063	No	1,458,012	220,317
Sorted By: Remaining Life							
====>Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR							
EX-04.9-09T (D/S)	0.000	0.136	0.063	0.063	No	79,354	220,317
EX-04.11-19T	0.313	0.253	0.063	0.063	No	175,118	220,317
EX-04.9-09T (BR/SE)	0.250	0.147	0.045	0.045	No	182,141	220,317
EX-04.11-06V	0.313	0.183	0.050	0.050	No	196,950	220,317
EX-04.9-09T	0.313	0.200	0.063	0.063	No	253,898	220,317
EX-04.11-13E	0.313	0.206	0.047	0.047	No	284,960	220,317
EX-04.11-15E	0.313	0.206	0.047	0.047	No	284,960	220,317
EX-04.11-04V	0.313	0.216	0.050	0.050	No	322,504	220,317
EX-04.11-19T (D/S)	0.000	0.277	0.063	0.063	No	337,009	220,317
EX-04.11-19T (BR/SE)	0.259	0.175	0.045	0.045	Yes	360,017	220,317
EX-04.11-09E	0.313	0.222	0.047	0.047	No	372,703	220,317
EX-04.11-11E	0.313	0.222	0.047	0.047	No	372,703	220,317
EX-04.11-12P	0.313	0.232	0.063	0.063	No	399,766	220,317
EX-04.11-02T	0.313	0.232	0.063	0.063	No	400,838	220,317
EX-04.11-17T	0.313	0.232	0.063	0.063	No	400,838	220,317
Sorted By: Remaining Life							

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR						
EX-04.11-03P	0.313	0.233	0.063	0.063	No	220,317
EX-04.11-18P	0.313	0.233	0.063	0.063	No	220,317
EX-04.11-02T (D/S)	0.000	0.241	0.063	0.063	No	220,317
EX-04.11-17T (D/S)	0.000	0.241	0.063	0.063	No	220,317
EX-04.11-16P	0.313	0.245	0.063	0.063	No	220,317
EX-04.11-08E	0.313	0.381	0.047	0.047	Yes	220,317
EX-04.11-07P	0.313	0.265	0.063	0.063	No	220,317
EX-04.11-05P	0.313	0.274	0.063	0.063	No	220,317
EX-04.11-10P	0.313	0.266	0.063	0.063	No	220,317
EX-04.11-01P	0.313	0.281	0.063	0.063	No	220,317
EX-04.11-14P	0.313	0.274	0.063	0.063	No	220,317
EX-04.11-20P	0.313	0.332	0.063	0.063	No	220,317
Sorted By: Remaining Life						
====> Grouped by Line: EX-04.13 LP EXT 32 to FWH 33B						
EX-04.13-06N	0.250	0.156	0.033	0.033	No	220,317
EX-04.13-03E	0.250	0.157	0.033	0.033	No	220,317
EX-04.13-05E	0.250	0.157	0.033	0.033	No	220,317
EX-04.13-01R (D/S)	0.000	0.167	0.033	0.033	No	220,317
EX-04.13-02P	0.255	0.175	0.033	0.033	Yes	220,317
EX-04.13-07T	0.250	0.202	0.033	0.033	No	220,317
EX-04.13-07T (D/S)	0.000	0.188	0.033	0.033	No	220,317
EX-04.13-04P	0.250	0.192	0.033	0.033	No	220,317
EX-04.13-01R	0.000	0.358	0.047	0.047	No	220,317
EX-04.12-01P	0.313	0.285	0.063	0.063	No	220,317
Sorted By: Remaining Life						
====> Grouped by Line: EX-04.14 LP EXT 32 to FWH 33B						
EX-04.14-03N	0.250	0.156	0.033	0.033	No	220,317
EX-04.14-02E	0.250	0.379	0.033	0.033	Yes	220,317
EX-04.14-01P	0.276	0.211	0.033	0.033	Yes	220,317
Sorted By: Remaining Life						
====> Grouped by Line: EX-04.15 LPEX14 to FWH33C HDR						
EX-04.15-06T (BR/SE)	0.250	0.156	0.045	0.045	No	220,317
EX-04.15-05E	0.250	0.163	0.033	0.033	No	220,317
EX-04.15-01N	0.400	0.261	0.033	0.033	No	220,317
EX-04.15-02E	0.250	0.171	0.033	0.033	No	220,317
EX-04.15-03E	0.250	0.171	0.033	0.033	No	220,317
EX-04.15-04P	0.250	0.179	0.033	0.033	No	220,317
Sorted By: Remaining Life						

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: EX-04.15 LPEX14 to FWH33C HDR						
EX-04.15-06T (D/S)	0.000	0.226	0.063	0.063	No	220,317
EX-04.15-07P	0.250	0.191	0.033	0.033	No	220,317
EX-04.15-08X	0.000	0.195	0.033	0.033	No	220,317
EX-04.17-01P	0.313	0.282	0.063	0.063	No	220,317
====> Grouped by Line: EX-04.16 LPEX13 to FWH33C HDR						
EX-04.16-07E	0.250	0.163	0.033	0.033	No	220,317
EX-04.16-01N	0.400	0.261	0.033	0.033	No	220,317
EX-04.16-02E	0.250	0.171	0.033	0.033	No	220,317
EX-04.16-03E	0.250	0.171	0.033	0.033	No	220,317
EX-04.16-05E	0.250	0.171	0.033	0.033	No	220,317
EX-04.16-04P	0.250	0.179	0.033	0.033	No	220,317
EX-04.16-06P	0.250	0.179	0.033	0.033	No	220,317
EX-04.16-10X	0.000	0.195	0.033	0.033	No	220,317
EX-04.16-08P	0.250	0.210	0.033	0.033	No	220,317
====> Grouped by Line: EX-04.18 LPEX FWH 33C IN HDR						
EX-04.16-09T (D/S)	0.000	0.136	0.063	0.063	No	220,317
EX-04.20-16T	0.384	0.242	0.063	0.063	No	220,317
EX-04.16-09T (BR/SE)	0.250	0.147	0.045	0.045	No	220,317
EX-04.18-06V	0.313	0.183	0.050	0.050	No	220,317
EX-04.16-09T	0.313	0.200	0.063	0.063	No	220,317
EX-04.20-07P	0.313	0.209	0.063	0.063	No	220,317
EX-04.20-12E	0.313	0.206	0.047	0.047	No	220,317
EX-04.20-02E	0.313	0.206	0.047	0.047	No	220,317
EX-04.20-04E	0.313	0.206	0.047	0.047	No	220,317
EX-04.20-06E	0.313	0.206	0.047	0.047	No	220,317
EX-04.20-08E	0.313	0.206	0.047	0.047	No	220,317
EX-04.20-10E	0.313	0.206	0.047	0.047	No	220,317
EX-04.18-04V	0.313	0.216	0.050	0.050	No	220,317
EX-04.20-16T (D/S)	0.384	0.281	0.063	0.063	No	220,317
EX-04.19-01R (D/S)	0.000	0.177	0.040	0.040	No	220,317
EX-04.20-16T (BR/SE)	0.000	0.176	0.045	0.045	No	220,317
EX-04.20-14T	0.313	0.232	0.063	0.063	No	220,317
EX-04.18-02T	0.313	0.232	0.063	0.063	No	220,317
EX-04.20-15P	0.313	0.233	0.063	0.063	No	220,317
EX-04.18-03P	0.313	0.233	0.063	0.063	No	220,317

Sorted By: Remaining Life

Sorted By: Remaining Life

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: EX-04.18 LPEX FWH 33C IN HDR						
EX-04.19-01R	0.000	0.230	0.047	0.047	No	220,317
EX-04.20-14T (D/S)	0.000	0.241	0.063	0.063	No	220,317
EX-04.18-02T (D/S)	0.000	0.241	0.063	0.063	No	220,317
EX-04.20-13P	0.313	0.245	0.063	0.063	No	220,317
EX-04.20-05P	0.313	0.245	0.063	0.063	No	220,317
EX-04.20-09P	0.313	0.245	0.063	0.063	No	220,317
EX-04.19-03R (D/S)	0.000	0.241	0.047	0.047	No	220,317
EX-04.19-03R	0.000	0.196	0.040	0.040	No	220,317
EX-04.19-02V	0.313	0.248	0.043	0.043	No	220,317
EX-04.20-01P	0.313	0.259	0.063	0.063	No	220,317
EX-04.18-05P	0.313	0.274	0.063	0.063	No	220,317
EX-04.18-01P	0.313	0.281	0.063	0.063	No	220,317
EX-04.20-03P	0.313	0.274	0.063	0.063	No	220,317
EX-04.20-11P	0.313	0.274	0.063	0.063	No	220,317
Sorted By: Remaining Life						
====> Grouped by Line: EX-04.2 LPEX13 to FWH33A HDR						
EX-04.2-07E	0.250	0.163	0.033	0.033	No	220,317
EX-04.2-01N	0.400	0.261	0.033	0.033	No	220,317
EX-04.2-02E	0.250	0.171	0.033	0.033	No	220,317
EX-04.2-03E	0.250	0.171	0.033	0.033	No	220,317
EX-04.2-05E	0.250	0.171	0.033	0.033	No	220,317
EX-04.2-04P	0.250	0.179	0.033	0.033	No	220,317
EX-04.2-06P	0.250	0.179	0.033	0.033	No	220,317
EX-04.2-10X	0.000	0.195	0.033	0.033	No	220,317
EX-04.2-08P	0.250	0.210	0.033	0.033	No	220,317
Sorted By: Remaining Life						
====> Grouped by Line: EX-04.21 LP EXT 31 to FWH 33C						
EX-04.21-06N	0.250	0.156	0.033	0.033	No	220,317
EX-04.21-02P	0.267	0.143	0.033	0.033	Yes	220,317
EX-04.21-01R (D/S)	0.000	0.183	0.033	0.033	No	220,317
EX-04.21-07T	0.250	0.175	0.033	0.033	Yes	220,317
EX-04.21-03E	0.250	0.260	0.033	0.033	Yes	220,317
EX-04.21-04P	0.250	0.178	0.033	0.033	Yes	220,317
EX-04.21-07T (D/S)	0.000	0.194	0.033	0.033	Yes	220,317
EX-04.21-05E	0.250	0.366	0.033	0.033	Yes	220,317
EX-04.21-01R	0.000	0.333	0.047	0.047	Yes	220,317
EX-04.20-17P	0.313	0.285	0.063	0.063	No	220,317
Sorted By: Remaining Life						

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: EX-04.22 LP EXT 31 to FWH 33C						
EX-04.22-02E	0.250	0.157	0.033	240,150	No	220,317
EX-04.22-03N	0.250	0.226	0.033	370,561	No	220,317
EX-04.22-01P	0.271	0.234	0.033	978,950	Yes	220,317
====>Grouped by Line: EX-04.4 LPEX FWH 33A IN HDR						
EX-04.2-09T (D/S)	0.000	0.136	0.063	79,354	No	220,317
EX-04.4-22T	0.352	0.243	0.063	166,375	No	220,317
EX-04.4-06V	0.313	0.183	0.050	196,950	No	220,317
EX-04.4-13P	0.313	0.210	0.063	271,518	No	220,317
EX-04.4-10E	0.313	0.206	0.047	284,960	No	220,317
EX-04.4-12E	0.313	0.206	0.047	284,960	No	220,317
EX-04.4-14E	0.313	0.206	0.047	284,960	No	220,317
EX-04.4-16E	0.313	0.206	0.047	284,960	No	220,317
EX-04.4-18E	0.313	0.206	0.047	284,960	No	220,317
EX-04.4-04V	0.313	0.216	0.050	322,504	No	220,317
EX-04.4-22T (D/S)	0.352	0.272	0.063	324,893	No	220,317
EX-04.4-22T (BR/SE)	0.259	0.186	0.045	390,327	No	220,317
EX-04.4-02T	0.313	0.232	0.063	400,838	No	220,317
EX-04.4-20T	0.313	0.232	0.063	400,838	No	220,317
EX-04.4-03P	0.313	0.233	0.063	409,069	No	220,317
EX-04.4-21P	0.313	0.233	0.063	409,069	No	220,317
EX-04.2-09T (BR/SE)	0.250	0.282	0.045	421,139	Yes	220,317
EX-04.4-02T (D/S)	0.000	0.241	0.063	480,047	No	220,317
EX-04.4-20T (D/S)	0.000	0.241	0.063	480,047	No	220,317
EX-04.2-09T	0.313	0.340	0.063	512,483	No	220,317
EX-04.4-11P	0.313	0.246	0.063	519,159	No	220,317
EX-04.4-15P	0.313	0.246	0.063	519,159	No	220,317
EX-04.4-19P	0.313	0.246	0.063	519,159	No	220,317
EX-04.4-08E	0.313	0.405	0.047	640,551	Yes	220,317
EX-04.4-07P	0.313	0.266	0.063	817,337	No	220,317
EX-04.4-05P	0.313	0.274	0.063	1,028,613	No	220,317
EX-04.4-01P	0.313	0.281	0.063	1,287,014	No	220,317
EX-04.4-09P	0.313	0.275	0.063	1,304,980	No	220,317
EX-04.4-17P	0.313	0.275	0.063	1,304,980	No	220,317
EX-04.4-23P	0.313	0.289	0.063	1,827,009	No	220,317

Sorted By: Remaining Life

Sorted By: Remaining Life

Sorted By: Remaining Life

====>Grouped by Line: EX-04.6 LP EXT to FWH 33A

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: EX-04.6 LP EXT to FWH 33A						
EX-04.6-02P	0.264	0.182	0.033	382,058	Yes	220,317
EX-04.6-07T	0.262	0.197	0.033	420,582	Yes	220,317
EX-04.6-01R (D/S)	0.000	0.217	0.033	426,725	No	220,317
EX-04.6-03E	0.461	0.259	0.033	453,444	Yes	220,317
EX-04.6-05E	0.250	0.296	0.033	511,345	Yes	220,317
EX-04.6-07T (D/S)	0.262	0.209	0.033	514,584	No	220,317
EX-04.6-04P	0.279	0.203	0.033	532,745	Yes	220,317
EX-04.6-06N	0.250	0.423	0.033	750,640	Yes	220,317
EX-04.6-01R	0.000	0.317	0.047	1,060,806	Yes	220,317
EX-04.5-01P	0.313	0.285	0.063	1,675,885	No	220,317
====> Grouped by Line: EX-04.7 LP EXT to FWH 33A						
EX-04.7-03N	0.250	0.156	0.033	236,121	No	220,317
EX-04.7-02E	0.250	0.157	0.033	240,150	No	220,317
EX-04.7-01P	0.264	0.225	0.033	937,634	Yes	220,317
====> Grouped by Line: EX-04.8 LPEX14 to FWH33B HDR						
EX-04.8-06T (BR/SE)	0.250	0.156	0.045	214,079	No	220,317
EX-04.8-05E	0.250	0.157	0.033	240,150	No	220,317
EX-04.8-01N	0.400	0.261	0.033	298,115	No	220,317
EX-04.8-02E	0.250	0.171	0.033	317,964	No	220,317
EX-04.8-03E	0.250	0.171	0.033	317,964	No	220,317
EX-04.8-04P	0.250	0.179	0.033	375,467	No	220,317
EX-04.8-06T (D/S)	0.000	0.226	0.063	394,615	No	220,317
EX-04.8-08X	0.000	0.195	0.033	698,010	No	220,317
EX-04.8-07P	0.250	0.210	0.033	1,044,192	No	220,317
EX-04.10-01P	0.313	0.282	0.063	1,458,012	No	220,317
====> Grouped by Line: EX-04.9 LPEX13 to FWH33B HDR						
EX-04.9-07E	0.250	0.163	0.033	272,129	No	220,317
EX-04.9-01N	0.400	0.261	0.033	298,115	No	220,317
EX-04.9-02E	0.250	0.171	0.033	317,964	No	220,317
EX-04.9-03E	0.250	0.171	0.033	317,964	No	220,317
EX-04.9-05E	0.250	0.171	0.033	317,964	No	220,317
EX-04.9-04P	0.250	0.179	0.033	375,467	No	220,317
EX-04.9-06P	0.250	0.179	0.033	375,467	No	220,317
EX-04.9-10X	0.000	0.195	0.033	698,010	No	220,317

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: EX-04.9 LPEX13 to FWH33B HDR							
EX-04.9-08P	0.250	0.210	0.033	0.033	1,044,192	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:18:42AM

Run Name: ES: PRESEP TO 35 HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			
====>Grouped by Line: EX-02.1 PSEP 2A 10" to 35 HDR						
EX-02.5-01P	0.500	0.500	0.152	100,000,000	No	66,848
EX-02.1-06T (D/S)	0.500	0.500	0.152	100,000,000	No	66,848
EX-02.1-05O	0.365	0.365	0.091	100,000,000	No	66,848
EX-02.1-06T (BR/SE)	0.365	0.365	0.091	100,000,000	No	66,848
EX-02.1-03E	0.425	0.425	0.091	100,000,000	No	66,848
EX-02.1-04P	0.365	0.365	0.091	100,000,000	No	66,848
EX-02.1-02P	0.378	0.378	0.091	100,000,000	No	66,848
EX-02.1-01N	0.365	0.365	0.072	261,018,528	No	171,511
====>Grouped by Line: EX-02.11 PSEP1B 14" to 35 HDR						
EX-02.11-07P	0.000	0.375	0.118	100,000,000	No	66,848
EX-02.11-06O	0.375	0.375	0.118	100,000,000	No	66,848
EX-02.11-04P	0.375	0.375	0.118	100,000,000	No	66,848
EX-02.11-02P	0.375	0.375	0.118	100,000,000	No	66,848
EX-02.11-03E	0.375	0.375	0.118	100,000,000	No	66,848
====>Grouped by Line: EX-02.12 PSEP 1B&2B to 35 HDR						
EX-02.12-01P	0.500	0.500	0.152	100,000,000	No	66,848
EX-02.9-10T	0.500	0.500	0.152	100,000,000	No	66,848
EX-02.9-10T (BR/SE)	0.365	0.365	0.091	100,000,000	No	66,848
EX-02.9-10T (D/S)	0.500	0.500	0.152	232,175,504	No	66,848
====>Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR						
EX-02.13-06R	0.000	0.312	0.149	73,205,992	No	171,511
EX-02.13-06R (D/S)	0.000	0.375	0.232	87,321,008	No	171,511
EX-02.13-01P	0.500	0.500	0.152	100,000,000	No	66,848
EX-02.13-02B	0.500	0.500	0.152	100,000,000	No	66,848

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR						
EX-02.13-03E	0.375	0.375	0.152	100,000,000	No	66,848
EX-02.13-03P	0.000	0.500	0.152	100,000,000	No	66,848
EX-02.13-04E	0.375	0.375	0.152	100,000,000	No	66,848
EX-02.13-05P	0.375	0.375	0.152	100,000,000	No	66,848
EX-02.11-05T	0.500	0.500	0.152	232,175,504	No	66,848
EX-02.11-05T (D/S)	0.500	0.500	0.152	232,175,504	No	66,848
EX-02.11-05T (BR/SE)	0.375	0.375	0.118	242,273,200	No	66,848
Sorted By: Remaining Life						
====> Grouped by Line: EX-02.14 FWH 35 HEADER						
EX-02.14-05P	0.375	0.252	0.311	-103,513	No	220,317
EX-02.14-10V	0.375	0.156	0.248	-84,821	No	220,317
EX-02.14-03P	0.375	0.271	0.311	-78,136	No	220,317
EX-02.14-09P	0.375	0.271	0.311	-78,136	No	220,317
EX-02.14-11V	0.375	0.176	0.248	-74,732	No	220,317
EX-02.14-13V	0.375	0.176	0.248	-74,732	No	220,317
EX-02.14-27E	0.000	0.271	0.232	50,238	Yes	220,317
EX-02.14-04T	0.375	0.348	0.311	63,263	No	220,317
EX-02.14-19P	0.375	0.350	0.311	79,518	No	220,317
EX-02.14-21P	0.375	0.373	0.311	82,080	No	220,317
EX-02.14-32T	0.375	0.360	0.311	84,223	No	220,317
EX-02.14-16E	0.375	0.300	0.232	87,384	Yes	220,317
EX-02.14-32T (D/S)	0.000	0.357	0.311	90,039	No	220,317
EX-02.14-07P	0.375	0.356	0.311	93,154	No	220,317
EX-02.14-26P	0.375	0.381	0.311	93,412	No	220,317
EX-02.14-24E	0.375	0.313	0.232	104,314	Yes	220,317
EX-02.14-18E	0.375	0.342	0.232	142,076	Yes	220,317
EX-02.14-04T (D/S)	0.375	0.388	0.311	148,758	No	220,317
EX-02.14-02E	0.375	0.346	0.232	158,645	No	171,511
EX-02.14-06E	0.000	0.351	0.232	164,647	No	33,725
EX-02.14-08E	0.000	0.351	0.232	164,647	No	33,725
EX-02.14-25E	0.000	0.361	0.232	166,871	No	17,520
EX-02.14-12P	0.375	0.372	0.311	175,865	Yes	220,317
EX-02.14-20E	0.375	0.372	0.232	180,279	Yes	220,317
EX-02.14-31P	0.375	0.391	0.311	233,342	No	220,317
EX-02.14-17P	0.375	0.412	0.311	348,101	No	220,317
EX-02.14-01P	0.375	0.398	0.311	370,587	No	220,317
EX-02.14-14E	0.375	0.528	0.232	452,044	Yes	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: EX-02.14 FWH 35 HEADER						
EX-02.14-29T	0.375	0.374	0.232	26,700,004	No	141,668
EX-02.7-02T (D/S)	0.375	0.374	0.232	31,365,290	No	141,668
EX-02.14-29T (D/S)	0.000	0.374	0.232	31,532,800	No	141,668
EX-02.7-02T	0.375	0.375	0.232	39,136,304	No	141,668
EX-02.7-02T (BR/SE)	0.375	0.375	0.149	63,577,144	No	141,668
EX-02.14-22T	0.375	0.375	0.232	68,721,904	No	141,668
EX-02.14-23P	0.375	0.375	0.232	69,670,760	No	141,668
EX-02.14-22T (D/S)	0.000	0.375	0.232	78,102,504	No	141,668
EX-02.14-28P	0.375	0.375	0.232	82,492,824	No	141,668
EX-02.14-29T (BR/SE)	0.312	0.312	0.149	85,381,576	No	141,668
EX-02.14-33P	0.375	0.375	0.232	100,000,000	No	141,668
====> Grouped by Line: EX-02.15 FWH 35 HEADER						
EX-02.15-02T (BR/SE)	0.312	0.312	0.149	85,381,576	No	141,668
EX-02.15-02T	0.656	0.655	0.232	92,158,488	No	141,668
EX-02.15-02T (D/S)	0.656	0.655	0.232	95,010,688	No	141,668
EX-02.15-01P	0.625	0.625	0.232	100,000,000	No	141,668
====> Grouped by Line: EX-02.2 PSEP 1A 10" to 35 HDR						
EX-02.2-02P	0.365	0.365	0.091	100,000,000	No	66,848
EX-02.2-03E	0.365	0.365	0.091	100,000,000	No	66,848
EX-02.2-04P	0.365	0.365	0.091	100,000,000	No	66,848
EX-02.2-05E	0.365	0.365	0.091	100,000,000	No	66,848
EX-02.2-06P	0.365	0.365	0.091	100,000,000	No	66,848
EX-02.2-08O	0.365	0.365	0.091	100,000,000	No	66,848
====> Grouped by Line: EX-02.4 PSEP2A 14" to 35 HDR						
EX-02.4-02P	0.375	0.375	0.118	100,000,000	No	66,848
EX-02.4-03E	0.375	0.375	0.118	100,000,000	No	66,848
EX-02.4-04P	0.375	0.375	0.118	100,000,000	No	66,848
EX-02.4-06O	0.375	0.375	0.118	100,000,000	No	66,848
EX-02.4-07P	0.000	0.375	0.118	100,000,000	No	66,848
====> Grouped by Line: EX-02.6 PSEP 1A&2A to 35 HDR						
EX-02.2-07T	0.500	0.500	0.152	100,000,000	No	66,848
EX-02.2-07T (BR/SE)	0.365	0.365	0.091	100,000,000	No	66,848
EX-02.6-01P	0.500	0.500	0.152	100,000,000	No	66,848

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: EX-02.6 PSEP 1A&2A to 35 HDR					Sorted By: Remaining Life	
EX-02.2-07T (D/S)	0.500	0.500	0.152	0.152	232,175,504	No 66,848
====> Grouped by Line: EX-02.7 PSEP 1A&2A to 35 HDR					Sorted By: Remaining Life	
EX-02.7-01P	0.500	0.500	0.152	0.152	100,000,000	No 66,848
EX-02.4-05T	0.500	0.500	0.152	0.152	232,175,504	No 66,848
EX-02.4-05T (D/S)	0.500	0.500	0.152	0.152	232,175,504	No 66,848
EX-02.4-05T (BR/SE)	0.375	0.375	0.118	0.118	242,273,200	No 66,848
====> Grouped by Line: EX-02.8 PSEP 2B 10" to 35 HDR					Sorted By: Remaining Life	
EX-02.8-02E	0.365	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.8-03P	0.365	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.8-04E	0.365	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.8-05P	0.365	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.8-07O	0.365	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.8-06E	0.365	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.8-09P	0.000	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.8-08T (BR/SE)	0.365	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.8-08T (D/S)	0.500	0.500	0.152	0.152	100,000,000	No 66,848
EX-02.8-01N	0.365	0.365	0.072	0.072	261,018,528	No 171,511
====> Grouped by Line: EX-02.9 PSEP 1B 10" to 35 HDR					Sorted By: Remaining Life	
EX-02.9-02P	0.365	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.9-03E	0.365	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.9-04P	0.365	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.9-05E	0.365	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.9-06P	0.365	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.9-11O	0.365	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.9-07E	0.365	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.9-08P	0.365	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.9-09E	0.365	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.9-10P	0.000	0.365	0.091	0.091	100,000,000	No 66,848
EX-02.9-01N	0.365	0.365	0.072	0.072	261,018,528	No 171,511

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:18:51AM

Run Name: FW: 36 HTR TO SG HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			
====>Grouped by Line: FW-02.1A FWH 36A to SG HDR						
FW-02.1A-05V	0.938	0.828	0.889	0.889	No	220,317
FW-02.1A-01N	0.938	0.860	0.717	0.717	No	220,317
FW-02.1A-09E	0.938	0.853	0.717	0.717	Yes	220,317
FW-02.1A-07E	0.938	0.881	0.717	0.717	No	220,317
FW-02.1A-11E	0.938	0.888	0.717	0.717	Yes	220,317
FW-02.1A-03P	0.938	0.909	0.717	0.717	Yes	220,317
FW-02.1A-13R	0.000	0.898	0.717	0.717	Yes	220,317
FW-02.1A-04E	0.938	0.960	0.717	0.717	Yes	220,317
FW-02.1A-10P	0.938	0.881	0.717	0.717	Yes	220,317
FW-02.1A-08P	0.938	0.899	0.717	0.717	Yes	220,317
FW-02.1A-02E	0.938	0.999	0.717	0.717	No	220,317
FW-02.1A-12P	0.938	0.909	0.717	0.717	Yes	220,317
FW-02.1A-06P	0.938	0.904	0.717	0.717	No	220,317
FW-02.1A-13R (D/S)	0.000	1.352	1.195	1.195	No	220,317
Sorted By: Remaining Life						
						-161,859
						682,364
						872,352
						1,051,581
						1,097,221
						1,427,084
						1,536,905
						1,561,375
						1,564,006
						1,733,212
						1,811,944
						1,830,251
						2,019,806
						2,589,299
Sorted By: Remaining Life						
						-161,859
						1,051,581
						1,051,581
						1,386,840
						1,461,070
						1,676,275
						1,733,212
						1,746,948
						1,752,908
						8,364,357

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1] Thoop			
====> Grouped by Line: FW-02.1C FWH 36C to SG HDR					
FW-02.1C-05V	0.938	0.828	0.889	0.889	220,317
FW-02.1C-04E	0.938	0.881	0.717	0.717	220,317
FW-02.1C-07E	0.938	0.881	0.717	0.717	220,317
FW-02.1C-09E	0.938	0.881	0.717	0.717	220,317
FW-02.1C-02E	0.938	0.892	0.717	0.717	220,317
FW-02.1C-03P	0.938	0.906	0.717	0.717	220,317
FW-02.1C-08P	0.938	0.899	0.717	0.717	220,317
FW-02.1C-10P	0.998	0.929	0.717	0.717	220,317
FW-02.1C-06P	0.938	0.904	0.717	0.717	220,317
FW-02.1C-01N	0.938	1.166	0.717	0.717	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:19:13AM

Run Name: FW: BFP TO 36 HTR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			

=====> **Grouped by Line: FW-01.1A BFP 31 to RCIRC T**

FW-01.1A-03R (D/S)	1.095	0.954	0.924	0.924	Yes	220,317
FW-01.2A-03T (BR/SE)	0.000	0.802	0.264	0.264	No	4,406
FW-01.2A-01E	1.031	0.969	0.797	0.797	Yes	220,317
FW-01.2A-02P	1.043	0.963	0.797	0.797	Yes	220,317
FW-01.1A-02P	1.075	0.960	0.740	0.740	Yes	220,317
FW-01.2A-03T (D/S)	1.039	0.999	0.797	0.797	Yes	220,317
FW-01.2A-03T	1.039	1.001	0.797	0.797	No	220,317
FW-01.1A-03R	1.095	1.034	0.740	0.740	Yes	220,317
FW-01.1A-01N	1.031	1.001	0.620	0.620	No	220,317

Sorted By: Remaining Life

=====> **Grouped by Line: FW-01.1B BFP 32 to RCIRC T**

FW-01.2B-05T (BR/SE)	0.000	0.844	0.264	0.264	No	4,406
FW-01.2B-01E	1.031	0.898	0.797	0.797	Yes	220,317
FW-01.2B-02P	1.031	0.888	0.797	0.797	No	220,317
FW-01.1B-03R (D/S)	1.095	1.021	0.924	0.924	Yes	220,317
FW-01.2B-05T	1.036	0.967	0.797	0.797	No	220,317
FW-01.1B-02P	1.176	0.974	0.740	0.740	No	220,317
FW-01.2B-05T (D/S)	1.036	0.982	0.797	0.797	No	220,317
FW-01.1B-03R	1.095	1.005	0.740	0.740	Yes	220,317
FW-01.2B-03E	1.251	1.032	0.797	0.797	Yes	220,317
FW-01.2B-04P	1.032	0.980	0.797	0.797	Yes	220,317
FW-01.1B-01N	1.031	0.990	0.620	0.620	No	220,317

Sorted By: Remaining Life

=====> **Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR**

FW-01.2A-06V	1.031	0.719	0.988	0.988	No	220,317
FW-01.2A-05V	1.031	0.781	0.988	0.988	No	220,317
FW-01.2A-22E	1.031	0.866	0.797	0.797	No	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR						
FW-01.2A-14E	1.031	0.866	0.797	161,728	No	220,317
FW-01.2A-12E	1.031	0.866	0.797	161,728	No	220,317
FW-01.2A-07E	1.031	0.866	0.797	161,728	No	220,317
FW-01.2A-16E	1.031	0.866	0.797	161,728	No	220,317
FW-01.2A-18E	1.031	0.866	0.797	161,728	No	220,317
FW-01.2A-20E	1.031	0.866	0.797	161,728	No	220,317
FW-01.2A-08T (D/S)	0.000	0.897	0.797	289,214	No	220,317
FW-01.2A-08T	1.031	0.897	0.797	289,214	No	220,317
FW-01.2A-21P	1.031	0.920	0.797	423,985	No	220,317
FW-01.2A-15P_1	1.031	0.920	0.797	423,985	No	220,317
FW-01.2A-13P	1.031	0.920	0.797	423,985	No	220,317
FW-01.2A-11P	1.031	0.920	0.797	423,985	No	220,317
FW-01.2A-17P	1.031	0.920	0.797	423,985	No	220,317
FW-01.2A-19P	1.031	0.920	0.797	423,985	No	220,317
FW-01.2A-10E	1.031	1.018	0.797	517,192	Yes	220,317
FW-01.2A-23P	1.053	0.978	0.797	623,508	Yes	220,317
FW-01.2A-09P	1.031	0.942	0.797	626,141	No	220,317
FW-01.2A-04P	1.039	0.994	0.797	850,990	Yes	220,317
FW-01.2A-15P_2	1.031	0.965	0.797	973,561	No	220,317
Sorted By: Remaining Life						
====> Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR						
FW-01.2B-08V	1.031	0.719	0.988	-204,514	No	220,317
FW-01.2B-07V	1.031	0.781	0.988	-201,183	No	220,317
FW-01.2B-09E	1.031	0.866	0.797	161,728	No	220,317
FW-01.2B-13E	1.031	0.866	0.797	161,728	No	220,317
FW-01.2B-15E	1.031	0.866	0.797	161,728	No	220,317
FW-01.2B-17E	1.031	0.866	0.797	161,728	No	220,317
FW-01.2B-19E	1.031	0.866	0.797	161,728	No	220,317
FW-01.2B-21E	1.031	0.866	0.797	161,728	No	220,317
FW-01.2B-23E	1.031	0.866	0.797	161,728	No	220,317
FW-01.2B-25E	1.031	0.866	0.797	161,728	No	220,317
FW-01.2B-10P	1.031	0.888	0.797	247,098	No	220,317
FW-01.2B-11T	1.031	0.897	0.797	289,214	No	220,317
FW-01.2B-11T (D/S)	0.000	0.897	0.797	289,214	No	220,317
FW-01.2B-14P	1.031	0.920	0.797	423,985	No	220,317
FW-01.2B-16P	1.031	0.920	0.797	423,985	No	220,317
FW-01.2B-18P	1.031	0.920	0.797	423,985	No	220,317
Sorted By: Remaining Life						

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR						
FW-01.2B-20P	1.031	0.920	0.797	423,985	No	220,317
FW-01.2B-22P	1.031	0.920	0.797	423,985	No	220,317
FW-01.2B-24P	1.031	0.920	0.797	423,985	No	220,317
FW-01.2B-26P	1.031	0.920	0.797	423,985	No	220,317
FW-01.2B-27R (D/S)	0.000	1.284	1.195	439,996	Yes	220,317
FW-01.2B-12P	1.031	0.942	0.797	626,141	No	220,317
FW-01.2B-06P	1.057	0.967	0.797	734,183	No	220,317
FW-01.2B-27R	0.000	1.537	0.797	2,281,750	Yes	220,317
Sorted By: Remaining Life						
====> Grouped by Line: FW-01.3 BFP DISCHARGE HDR						
FW-01.4-01T	1.351	1.332	1.195	247,993	No	220,317
FW-01.3-01T	1.375	1.267	1.195	256,331	No	220,317
FW-01.3-12E	1.260	1.293	1.195	266,578	Yes	220,317
FW-01.4-01T (BR/SE)	1.019	0.832	0.717	308,212	Yes	220,317
FW-01.3-10E	1.260	1.309	1.195	309,724	Yes	220,317
FW-01.4-01T (D/S)	1.351	1.336	1.195	319,563	No	220,317
FW-01.3-16P	1.260	1.301	1.195	330,666	Yes	220,317
FW-01.3-01T (D/S)	1.375	1.338	1.195	346,536	Yes	220,317
FW-01.3-15E	1.260	1.328	1.195	358,761	Yes	220,317
FW-01.3-01T (BR/SE)	1.042	0.945	0.797	374,685	Yes	220,317
FW-01.3-06E	1.260	1.347	1.195	410,210	Yes	220,317
FW-01.3-03E	1.514	1.352	1.195	415,771	Yes	220,317
FW-01.3-17T (D/S)	1.260	1.324	1.195	431,684	Yes	220,317
FW-01.3-14E	1.260	1.366	1.195	435,766	Yes	220,317
FW-01.3-17T	1.260	1.330	1.195	451,709	Yes	220,317
FW-01.3-08E	1.260	1.370	1.195	472,452	Yes	220,317
FW-01.3-04E	1.638	1.382	1.195	488,963	Yes	220,317
FW-01.3-09P	1.260	1.353	1.195	495,220	Yes	220,317
FW-01.3-05P	1.260	1.354	1.195	498,349	Yes	220,317
FW-01.3-07P	1.260	1.334	1.195	557,569	Yes	220,317
FW-01.3-11P	1.260	1.338	1.195	571,524	No	220,317
FW-01.3-13P	1.260	1.358	1.195	653,618	No	220,317
FW-01.3-18P	1.348	1.337	1.195	705,829	Yes	220,317
FW-01.3-02P	1.371	1.358	1.195	806,845	Yes	220,317
Sorted By: Remaining Life						
====> Grouped by Line: FW-01.4 BFP DISCHARGE HDR						
FW-01.5-01T	1.385	1.329	1.195	302,657	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: FW-01.4 BFP DISCHARGE HDR						
FW-01.5-01T (BR/SE)	1.015	0.836	0.717	0.717	Yes	220,317
FW-01.5-01T (D/S)	1.385	1.342	1.195	1.195	Yes	220,317
FW-01.4-02P	1.341	1.279	1.195	1.195	No	220,317
====> Grouped by Line: FW-01.6A BFP HDR to FWH 36A						
FW-01.6A-07V	0.938	0.651	0.889	0.889	No	220,317
FW-01.6A-03E	0.938	0.788	0.717	0.717	No	220,317
FW-01.6A-05E	0.938	0.788	0.717	0.717	No	220,317
FW-01.6A-08E	0.938	0.788	0.717	0.717	No	220,317
FW-01.6A-10E	0.938	0.796	0.717	0.717	No	220,317
FW-01.6A-09P	0.938	0.808	0.717	0.717	No	220,317
FW-01.6A-04P	0.938	0.836	0.717	0.717	No	220,317
FW-01.6A-06P	0.938	0.836	0.717	0.717	No	220,317
FW-01.6A-11P	0.938	0.836	0.717	0.717	No	220,317
FW-01.6A-02P	1.009	0.871	0.717	0.717	Yes	220,317
FW-01.6A-01R	0.000	1.299	1.195	1.195	No	220,317
FW-01.6A-01R (D/S)	0.000	1.428	0.717	0.717	No	220,317
FW-01.6A-12N	0.938	2.596	0.717	0.717	Yes	220,317
====> Grouped by Line: FW-01.6B BFP HDR to FWH 36B						
FW-01.6B-05V	0.938	0.651	0.889	0.889	No	220,317
FW-01.6B-03E	0.938	0.788	0.717	0.717	No	220,317
FW-01.6B-07P	0.938	0.824	0.717	0.717	Yes	220,317
FW-01.6B-04P	0.938	0.836	0.717	0.717	No	220,317
FW-01.6B-08E	0.938	0.954	0.717	0.717	Yes	220,317
FW-01.6B-02P	0.930	0.874	0.717	0.717	Yes	220,317
FW-01.6B-06E	0.938	1.047	0.717	0.717	Yes	220,317
FW-01.6B-10N	0.938	2.705	0.717	0.717	Yes	220,317
====> Grouped by Line: FW-01.6C BFP HDR to FWH 36C						
FW-01.6C-05V	0.938	0.651	0.889	0.889	No	220,317
FW-01.6C-03E	0.938	0.788	0.717	0.717	No	220,317
FW-01.6C-06E	0.938	0.788	0.717	0.717	No	220,317
FW-01.6C-08E	0.938	0.796	0.717	0.717	No	220,317
FW-01.6C-04P	0.938	0.836	0.717	0.717	No	220,317
FW-01.6C-02P	0.938	0.877	0.717	0.717	Yes	220,317
FW-01.6C-10N	0.938	2.769	0.717	0.717	No	220,317

Sorted By: Remaining Life

Sorted By: Remaining Life

Sorted By: Remaining Life

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:19:30AM

Run Name: FW: FW RECIRC
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :0.020

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
=====>Grouped by Line: FW-04.1A BFP 31 RECIRC						
FW-04.2A-09P_2	0.674	0.674	0.208	15,858,906	No	4,406
FW-04.2A-07P_2	0.674	0.674	0.208	15,858,906	No	4,406
FW-05.1A-01V	0.864	0.864	0.327	16,342,465	No	4,406
FW-05.1A-03V	0.864	0.864	0.327	16,342,465	No	4,406
FW-04.2A-22B	0.782	0.610	0.208	17,753,050	No	4,406
FW-04.2A-10B	0.674	0.674	0.208	22,497,454	No	4,406
FW-04.2A-08B	0.674	0.674	0.208	22,497,454	No	4,406
FW-04.2A-12B	0.674	0.674	0.208	22,497,454	No	4,406
FW-04.2A-03B	0.674	0.674	0.208	22,497,454	No	4,406
FW-04.2A-16B	0.674	0.674	0.208	22,497,454	No	4,406
FW-04.2A-18B	0.674	0.674	0.208	22,497,454	No	4,406
FW-04.2A-20B	0.674	0.674	0.208	22,497,454	No	4,406
FW-04.2A-14B	0.674	0.674	0.208	22,497,454	No	4,406
FW-04.2A-04E	0.674	0.674	0.176	25,401,824	No	4,406
FW-04.2A-06E	0.674	0.674	0.176	26,941,862	No	4,406
FW-04.2A-24R	0.000	0.674	0.176	31,754,480	No	4,406
FW-04.2A-11P	0.674	0.674	0.208	33,300,458	No	4,406
FW-04.2A-09P_1	0.674	0.674	0.208	33,300,458	No	4,406
FW-04.2A-05P	0.674	0.674	0.208	33,300,458	No	4,406
FW-04.2A-17P	0.674	0.674	0.208	33,300,458	No	4,406
FW-04.2A-19P	0.674	0.674	0.208	33,300,458	No	4,406
FW-04.2A-13P	0.674	0.674	0.208	33,300,458	No	4,406
FW-04.2A-15P	0.674	0.674	0.208	33,300,458	No	4,406
FW-04.2A-21P	0.700	0.700	0.208	34,430,652	No	4,406
FW-04.2A-23P	0.724	0.724	0.208	35,408,516	No	4,406
FW-04.2A-07P_1	0.674	0.674	0.208	37,842,628	No	4,406
FW-04.1A-01E	0.954	0.779	0.260	41,657,756	No	4,406

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: FW-04.1A BFP 31 RECIRC						
FW-04.1A-06P_2	0.864	0.864	0.306	43,091,844	No	4,406
FW-04.1A-04P_2	0.864	0.864	0.306	43,091,844	No	4,406
FW-04.2A-02P	0.709	0.709	0.208	43,508,052	No	4,406
FW-04.2A-01R (D/S)	0.000	0.674	0.176	49,400,748	No	4,406
FW-04.1A-03E	0.864	0.864	0.260	50,804,780	No	4,406
FW-04.1A-07E	0.864	0.864	0.260	50,804,780	No	4,406
FW-04.1A-08E	0.864	0.864	0.260	50,804,780	No	4,406
FW-04.1A-05E	0.864	0.864	0.260	50,804,780	No	4,406
FW-04.1A-02P	0.864	0.864	0.306	54,208,532	No	4,406
FW-04.1A-09P	0.896	0.896	0.306	56,378,176	No	4,406
FW-05.2A-01N	0.875	0.875	0.399	56,749,260	No	4,406
FW-05.1A-04R	0.000	0.864	0.306	61,953,872	No	4,406
FW-04.2A-24R (D/S)	0.000	0.864	0.260	62,661,288	No	4,406
FW-04.1A-04P_1	0.864	0.864	0.306	69,389,392	No	4,406
FW-04.1A-06P_1	0.864	0.864	0.306	69,389,392	No	4,406
FW-05.1A-02P	0.886	0.811	0.306	70,561,488	No	4,406
FW-04.2A-01R	0.000	0.864	0.260	75,195,304	No	4,406
FW-05.1A-04R (D/S)	0.000	0.875	0.399	75,668,616	No	4,406
FW-04.1A-10P	0.864	0.864	0.306	86,738,936	No	4,406
====> Grouped by Line: FW-04.1B BFP 32 RECIRC						
FW-04.2B-08P_2	0.674	0.674	0.208	15,858,906	No	4,406
FW-04.2B-10P_2	0.674	0.674	0.208	15,858,906	No	4,406
FW-05.1B-01V	0.864	0.864	0.327	16,342,465	No	4,406
FW-05.1B-03V	0.864	0.864	0.327	16,342,465	No	4,406
FW-04.2B-15B	0.674	0.674	0.208	22,497,454	No	4,406
FW-04.2B-17B	0.674	0.674	0.208	22,497,454	No	4,406
FW-04.2B-19B	0.674	0.674	0.208	22,497,454	No	4,406
FW-04.2B-21B	0.674	0.674	0.208	22,497,454	No	4,406
FW-04.2B-03B	0.674	0.674	0.208	22,497,454	No	4,406
FW-04.2B-09B	0.674	0.674	0.208	22,497,454	No	4,406
FW-04.2B-11B	0.674	0.674	0.208	22,497,454	No	4,406
FW-04.2B-13B	0.674	0.674	0.208	22,497,454	No	4,406
FW-04.2B-05E	0.674	0.674	0.176	26,941,862	No	4,406
FW-04.2B-07E	0.674	0.674	0.176	26,941,862	No	4,406
FW-04.2B-14P	0.674	0.674	0.208	33,300,458	No	4,406
FW-04.2B-16P	0.674	0.674	0.208	33,300,458	No	4,406

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: FW-04.1B BFP 32 RECIRC						
FW-04.2B-18P	0.674	0.674	0.208	33,300,458	No	4,406
FW-04.2B-20P	0.674	0.674	0.208	33,300,458	No	4,406
FW-04.2B-04P	0.674	0.674	0.208	33,300,458	No	4,406
FW-04.2B-10P_1	0.674	0.674	0.208	33,300,458	No	4,406
FW-04.2B-12P	0.674	0.674	0.208	33,300,458	No	4,406
FW-04.2B-22P	0.716	0.716	0.208	35,089,508	No	4,406
FW-04.2B-06P	0.674	0.674	0.208	37,842,628	No	4,406
FW-04.2B-08P_1	0.674	0.674	0.208	37,842,628	No	4,406
FW-04.2B-23R	0.000	0.778	0.176	38,397,360	No	4,406
FW-04.1B-01E	0.979	0.753	0.260	39,042,476	No	4,406
FW-04.1B-03E	1.083	0.800	0.260	40,379,424	No	4,406
FW-04.2B-02P	0.674	0.674	0.208	41,627,772	No	4,406
FW-04.1B-04P_2	0.864	0.864	0.306	43,091,844	No	4,406
FW-04.1B-06P_2	0.864	0.864	0.306	43,091,844	No	4,406
FW-04.2B-01R (D/S)	0.000	0.674	0.176	49,400,748	No	4,406
FW-04.1B-05E	0.864	0.864	0.260	50,804,780	No	4,406
FW-04.1B-07E	0.864	0.864	0.260	50,804,780	No	4,406
FW-04.1B-08E	0.864	0.864	0.260	50,804,780	No	4,406
FW-04.1B-04P_1	0.864	0.864	0.306	54,208,532	No	4,406
FW-04.1B-09P	0.864	0.864	0.306	54,208,532	No	4,406
FW-05.2B-01N	0.875	0.875	0.399	56,749,260	No	4,406
FW-04.2B-23R (D/S)	0.962	0.839	0.260	57,065,304	No	4,406
FW-04.1B-02P	0.912	0.912	0.306	57,425,944	No	4,406
FW-05.1B-04R	0.000	0.864	0.306	61,953,872	No	4,406
FW-04.1B-06P_1	0.864	0.864	0.306	69,389,392	No	4,406
FW-04.2B-01R	0.000	0.864	0.260	75,195,304	No	4,406
FW-05.1B-04R (D/S)	0.000	0.875	0.399	75,668,616	No	4,406
FW-05.1B-02P	0.864	0.864	0.306	78,852,776	No	4,406
FW-04.1B-10P	0.864	0.864	0.306	86,738,936	No	4,406

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:20:10AM

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Run Name: FW: SG HEADERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Ihoop				

====>Grouped by Line: FW-02.3 SG INLET HEADER

FW-02.1B-11T (D/S)	1.398	1.353	1.195	1.195	1,203,536	No	220,317
FW-02.1B-11T (BR/SE)	0.974	0.909	0.717	0.717	1,335,926	Yes	220,317
FW-02.1B-11T	1.398	1.367	1.195	1.195	2,029,294	Yes	220,317
FW-02.3-01P	1.380	1.363	1.195	1.195	2,618,814	No	220,317

Sorted By: Remaining Life

====>Grouped by Line: FW-02.4 SG INLET HEADER

FW-02.4-13E	1.260	1.206	1.195	1.195	73,501	No	220,317
FW-02.4-14P	1.260	1.223	1.195	1.195	285,654	No	220,317
FW-02.4-12P_1	1.260	1.223	1.195	1.195	285,654	No	220,317
FW-02.4-03P	1.260	1.231	1.195	1.195	449,188	No	220,317
FW-02.1C-11T (D/S)	1.375	1.281	1.195	1.195	522,771	No	220,317
FW-02.4-17E	1.260	1.295	1.195	1.195	678,720	Yes	220,317
FW-02.4-19T	1.368	1.350	1.195	1.195	702,326	No	220,317
FW-02.4-12P_2	1.260	1.239	1.195	1.195	770,426	No	220,317
FW-02.4-19T (D/S)	1.368	1.347	1.195	1.195	806,652	No	220,317
FW-02.4-15E	1.260	1.318	1.195	1.195	833,330	Yes	220,317
FW-02.4-09E	1.260	1.342	1.195	1.195	999,426	Yes	220,317
FW-02.4-11E	1.260	1.349	1.195	1.195	1,049,668	Yes	220,317
FW-02.4-05E	1.260	1.355	1.195	1.195	1,090,377	Yes	220,317
FW-02.1C-11T	1.375	1.340	1.195	1.195	1,101,355	No	220,317
FW-02.4-19T (BR/SE)	0.974	0.862	0.717	0.717	1,148,072	Yes	220,317
FW-02.1C-11T (BR/SE)	0.975	0.885	0.717	0.717	1,171,357	No	220,317
FW-02.4-02T	1.260	1.338	1.195	1.195	1,196,799	Yes	220,317
FW-02.4-02T (D/S)	0.000	1.350	1.195	1.195	1,297,366	Yes	220,317
FW-02.4-08P	1.260	1.325	1.195	1.195	1,310,412	No	220,317
FW-02.4-07E	1.260	1.404	1.195	1.195	1,423,332	Yes	220,317
FW-02.4-10P	1.260	1.342	1.195	1.195	1,475,226	Yes	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: FW-02.4 SG INLET HEADER						
FW-02.4-16P	1.260	1.344	1.195	1.195	No	220,317
FW-02.4-06P	1.260	1.390	1.195	1.195	Yes	220,317
FW-02.4-18P	1.365	1.355	1.195	1.195	Yes	220,317
FW-02.4-04E	1.260	1.451	1.195	1.195	Yes	220,317
====> Grouped by Line: FW-02.5 SG INLET HEADER						
FW-02.5-03T (D/S)	0.000	1.223	1.195	1.195	No	220,317
FW-02.5-02P	1.260	1.235	1.195	1.195	No	220,317
FW-02.5-04T	1.368	1.345	1.195	1.195	No	220,317
FW-02.5-04T (D/S)	1.368	1.354	1.195	1.195	No	220,317
FW-02.5-03T	1.260	1.341	1.195	1.195	No	220,317
FW-02.5-01T	1.372	1.348	1.195	1.195	No	220,317
FW-02.5-01T (D/S)	1.372	1.355	1.195	1.195	No	220,317
FW-02.5-04T (BR/SE)	1.002	0.925	0.717	0.717	Yes	220,317
FW-02.5-06P	1.365	1.340	1.195	1.195	No	220,317
====> Grouped by Line: FW-02.6 SG INLET HEADER						
FW-02.6-03T	1.361	1.357	1.195	1.195	No	220,317
FW-02.6-03T (BR/SE)	1.006	0.856	0.717	0.717	Yes	220,317
FW-02.6-03T (D/S)	1.361	1.340	1.195	1.195	Yes	220,317
FW-02.6-01P	1.361	1.341	1.195	1.195	No	220,317
====> Grouped by Line: FW-02.8A SG HDR to SG 31						
FW-02.8A-04V	0.938	0.845	0.889	0.889	No	220,317
FW-02.8A-26R	0.000	0.648	0.589	0.589	Yes	220,317
FW-02.8A-19V	0.938	0.840	0.717	0.717	No	220,317
FW-02.8A-18V	0.938	0.851	0.717	0.717	No	220,317
FW-02.8A-12F	0.938	0.863	0.717	0.717	No	220,317
FW-02.8A-25R	0.000	0.934	0.832	0.832	No	33,725
FW-02.8A-22E	0.750	0.703	0.544	0.544	No	220,317
FW-02.8A-23E	0.750	0.703	0.544	0.544	No	220,317
FW-03.1A-02E	0.750	0.703	0.544	0.544	No	220,317
FW-02.8A-03T	0.938	0.854	0.717	0.717	Yes	220,317
FW-02.8A-10E	0.938	0.889	0.717	0.717	No	220,317
FW-02.8A-16E	0.938	0.889	0.717	0.717	No	220,317
FW-03.1A-05B	0.750	0.705	0.544	0.544	No	220,317
FW-02.8A-25R (D/S)	0.000	0.838	0.589	0.589	No	33,725

Component Name	Thickness (in)		Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]		Time to Tcrit (hrs)	Inspected	
====> Grouped by Line: FW-02.8A SG HDR to SG 31						
FW-02.8A-20P	0.750	0.707	0.544	0.544	No	220,317
FW-02.8A-06E	0.938	0.901	0.717	0.717	Yes	220,317
FW-03.1A-04B	0.750	0.708	0.544	0.544	No	220,317
FW-03.1A-07B	0.750	0.708	0.544	0.544	No	220,317
FW-02.8A-24P	0.750	0.709	0.544	0.544	No	220,317
FW-02.8A-14E	0.938	0.894	0.717	0.717	No	220,317
FW-02.8A-07P	0.938	0.893	0.717	0.717	Yes	220,317
FW-02.8A-11P_1	0.938	0.896	0.717	0.717	No	220,317
FW-02.8A-03T (D/S)	0.000	0.887	0.717	0.717	Yes	220,317
FW-02.8A-21T	0.750	0.712	0.544	0.544	No	220,317
FW-02.8A-21T (D/S)	0.000	0.712	0.544	0.544	No	220,317
FW-02.8A-08T	0.938	0.898	0.717	0.717	No	220,317
FW-02.8A-08T (D/S)	0.000	0.898	0.717	0.717	No	220,317
FW-02.8A-02E	0.938	0.945	0.717	0.717	Yes	220,317
FW-02.8A-05V	1.312	1.193	0.630	0.630	No	220,317
FW-03.1A-01P	0.750	0.718	0.544	0.544	No	220,317
FW-03.1A-03P	0.750	0.718	0.544	0.544	No	220,317
FW-03.1A-06P_1	0.750	0.718	0.544	0.544	No	220,317
FW-02.8A-17P	0.938	0.905	0.717	0.717	No	220,317
FW-02.8A-15P	0.938	0.909	0.717	0.717	No	220,317
FW-02.8A-09P	0.938	0.912	0.717	0.717	No	220,317
FW-02.8A-01P	0.968	0.941	0.717	0.717	Yes	220,317
FW-03.1A-08B	0.750	0.976	0.544	0.544	Yes	220,317
FW-03.1A-06P_2	0.750	0.734	0.544	0.544	No	220,317
FW-02.8A-11P_2	0.938	0.921	0.717	0.717	No	220,317
FW-02.8A-13P	0.938	0.904	0.717	0.717	Yes	220,317
FW-02.8A-26R (D/S)	0.000	1.338	0.832	0.832	Yes	220,317
FW-03.1A-09N	0.750	0.746	0.478	0.478	No	220,317
Sorted By: Remaining Life						
						131,339,016
====> Grouped by Line: FW-02.8B SG HDR to SG 32						
FW-02.8B-05V	0.938	0.845	0.889	0.889	No	220,317
FW-02.8B-13F	0.938	0.797	0.717	0.717	Yes	220,317
FW-02.8B-20V	0.938	0.840	0.717	0.717	No	220,317
FW-02.8B-19V	0.938	0.851	0.717	0.717	No	220,317
FW-02.8B-07E	0.938	0.824	0.717	0.717	Yes	220,317
FW-03.1B-08E	0.750	0.663	0.544	0.544	Yes	220,317
FW-02.8B-26R (D/S)	0.000	0.934	0.832	0.832	No	33,725
Sorted By: Remaining Life						
						-150,121
						393,058
						459,925
						572,274
						803,591
						920,826
						951,747

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: FW-02.8B SG HDR to SG 32						
FW-02.8B-23E	0.924	0.689	0.544	0.544	Yes	220,317
FW-03.1B-02E	0.750	0.703	0.544	0.544	No	220,317
FW-02.8B-02E	0.938	0.889	0.717	0.717	No	220,317
FW-02.8B-11E	0.938	0.889	0.717	0.717	No	220,317
FW-02.8B-17E	0.938	0.889	0.717	0.717	No	220,317
FW-03.1B-05B	0.750	0.705	0.544	0.544	No	220,317
FW-03.1B-11E	0.750	0.705	0.544	0.544	No	220,317
FW-02.8B-08P	0.938	0.870	0.717	0.717	Yes	220,317
FW-02.8B-25R (D/S)	1.312	0.871	0.589	0.589	No	220,317
FW-02.8B-21P	0.750	0.707	0.544	0.544	No	220,317
FW-02.8B-22T (D/S)	0.000	0.690	0.544	0.544	Yes	220,317
FW-03.1B-04B	0.750	0.708	0.544	0.544	No	220,317
FW-03.1B-07B	0.750	0.708	0.544	0.544	No	220,317
FW-03.1B-10E	0.750	0.708	0.544	0.544	No	220,317
FW-02.8B-09T	0.938	0.875	0.717	0.717	Yes	220,317
FW-02.8B-24P	0.750	0.709	0.544	0.544	No	220,317
FW-02.8B-15E	0.938	0.894	0.717	0.717	No	220,317
FW-02.8B-26R	0.000	0.839	0.589	0.589	No	33,725
FW-02.8B-09T (D/S)	0.000	0.888	0.717	0.717	Yes	220,317
FW-02.8B-04T	0.938	0.898	0.717	0.717	No	220,317
FW-02.8B-04T (D/S)	0.000	0.898	0.717	0.717	No	220,317
FW-02.8B-06V	1.312	1.193	0.630	0.630	No	220,317
FW-02.8B-22T	0.000	0.737	0.544	0.544	Yes	220,317
FW-03.1B-01P	0.750	0.718	0.544	0.544	No	220,317
FW-03.1B-03P	0.750	0.718	0.544	0.544	No	220,317
FW-03.1B-06P	0.750	0.718	0.544	0.544	No	220,317
FW-02.8B-12P_1	0.998	0.955	0.717	0.717	No	220,317
FW-02.8B-03P	0.938	0.905	0.717	0.717	No	220,317
FW-02.8B-18P	0.938	0.905	0.717	0.717	No	220,317
FW-02.8B-16P	0.938	0.909	0.717	0.717	No	220,317
FW-02.8B-01P	0.938	0.903	0.717	0.717	Yes	220,317
FW-02.8B-10P	0.938	0.912	0.717	0.717	No	220,317
FW-02.8B-14P	0.990	0.864	0.717	0.717	Yes	220,317
FW-03.1B-09P	0.750	0.870	0.544	0.544	Yes	220,317
FW-02.8B-12P_2	0.938	0.921	0.717	0.717	No	220,317
FW-02.8B-25R	0.000	1.893	0.832	0.832	No	220,317
FW-03.1B-12N	0.750	0.749	0.478	0.478	No	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: FW-02.8C SG HDR to SG 34						
FW-02.8C-19V	0.938	0.840	0.717	459,925	No	220,317
FW-02.8C-18V	0.938	0.851	0.717	572,274	No	220,317
FW-02.8C-25R	0.000	0.683	0.589	581,947	No	220,317
FW-02.8C-13F	0.938	0.863	0.717	710,805	No	220,317
FW-03.1C-13P	0.750	0.635	0.544	1,182,469	Yes	220,317
FW-02.8C-22E	0.750	0.703	0.544	1,226,930	No	220,317
FW-03.1C-02E	0.750	0.703	0.544	1,226,930	No	220,317
FW-03.1C-05B	0.750	0.703	0.544	1,226,930	No	220,317
FW-02.8C-11E	0.938	0.889	0.717	1,298,402	No	220,317
FW-02.8C-16E	0.938	0.889	0.717	1,298,402	No	220,317
FW-02.8C-02E	0.938	0.889	0.717	1,298,402	No	220,317
FW-03.1C-11P	0.750	0.698	0.544	1,374,403	Yes	220,317
FW-02.8C-05V	0.938	1.246	0.889	1,410,007	No	220,317
FW-03.1C-04B	0.750	0.708	0.544	1,420,314	No	220,317
FW-03.1C-07B	0.750	0.708	0.544	1,420,314	No	220,317
FW-02.8C-20P	0.750	0.715	0.544	1,451,893	No	220,317
FW-02.8C-24R (D/S)	0.000	0.859	0.589	1,463,054	Yes	220,317
FW-02.8C-23P	0.750	0.709	0.544	1,476,214	No	220,317
FW-02.8C-08P	0.938	0.887	0.717	1,480,280	Yes	220,317
FW-02.8C-15E	0.938	0.894	0.717	1,500,449	No	220,317
FW-02.8C-12P_1	0.938	0.896	0.717	1,558,853	No	220,317
FW-02.8C-21T	0.750	0.712	0.544	1,599,193	No	220,317
FW-02.8C-21T (D/S)	0.000	0.712	0.544	1,599,193	No	220,317
FW-03.1C-14E	0.750	0.730	0.544	1,614,597	No	220,317
FW-02.8C-04T (D/S)	0.000	0.898	0.717	1,687,342	No	220,317
FW-02.8C-09T	0.938	0.898	0.717	1,687,342	No	220,317
FW-02.8C-09T (D/S)	0.000	0.898	0.717	1,687,342	No	220,317
FW-02.8C-04T	0.938	0.898	0.717	1,687,342	No	220,317
FW-02.8C-07E	0.938	0.949	0.717	1,749,622	Yes	220,317
FW-03.1C-10E	0.750	0.776	0.544	1,798,355	Yes	220,317
FW-03.1C-01P	0.750	0.718	0.544	1,992,729	No	220,317
FW-03.1C-03P	0.750	0.718	0.544	1,992,729	No	220,317
FW-03.1C-06P_1	0.750	0.718	0.544	1,992,729	No	220,317
FW-03.1C-12E	0.750	0.774	0.544	1,998,797	Yes	220,317
FW-02.8C-17P	0.938	0.905	0.717	2,098,508	No	220,317
FW-02.8C-03P	0.938	0.905	0.717	2,098,508	No	220,317
FW-03.1C-16P_1	0.750	0.722	0.544	2,314,712	No	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: FW-02.8C SG HDR to SG 34						
FW-03.1C-09P	0.750	0.722	0.544	2,314,712	No	220,317
FW-02.8C-10P	0.938	0.912	0.717	2,715,255	No	220,317
FW-02.8C-01P	0.946	0.920	0.717	2,822,881	Yes	220,317
FW-02.8C-06V	1.312	1.783	0.630	3,585,765	No	220,317
FW-03.1C-16P_2	0.750	0.734	0.544	4,205,638	No	220,317
FW-03.1C-06P_2	0.750	0.734	0.544	4,205,638	No	220,317
FW-02.8C-12P_2	0.938	0.921	0.717	4,344,532	No	220,317
FW-02.8C-14P	0.938	0.902	0.717	4,508,183	Yes	220,317
FW-02.8C-24R	0.000	1.606	0.832	6,167,720	No	220,317
FW-02.8C-25R (D/S)	0.000	1.695	0.832	8,027,588	No	220,317
FW-03.1C-15N	0.750	0.704	0.478	110,791,800	No	220,317
====> Grouped by Line: FW-02.8D SG HDR to SG 33						
FW-02.8D-05V	0.938	0.845	0.889	-150,121	No	220,317
FW-02.8D-25R (D/S)	0.000	0.861	0.832	272,757	Yes	220,317
FW-02.8D-18V	0.938	0.840	0.717	459,925	No	220,317
FW-02.8D-17V	0.938	0.851	0.717	572,274	No	220,317
FW-02.8D-25R	1.312	0.706	0.589	646,961	Yes	220,317
FW-02.8D-13F	0.938	0.863	0.717	710,805	No	220,317
FW-02.6-02T	1.260	1.243	1.195	1,006,154	No	220,317
FW-02.6-02T (D/S)	0.000	1.243	1.195	1,006,154	No	220,317
FW-02.7-02T	1.260	1.243	1.195	1,006,154	No	220,317
FW-02.7-02T (D/S)	0.000	1.243	1.195	1,006,154	No	220,317
FW-02.7-04T (BR/SE)	1.013	0.872	0.717	1,219,744	Yes	220,317
FW-02.8D-21E	0.750	0.703	0.544	1,226,930	No	220,317
FW-02.8D-22E	0.750	0.703	0.544	1,226,930	No	220,317
FW-03.1D-02E	0.750	0.703	0.544	1,226,930	No	220,317
FW-02.8D-24R (D/S)	1.312	0.844	0.589	1,238,607	No	220,317
FW-02.8D-02E	0.938	0.889	0.717	1,298,402	No	220,317
FW-02.8D-11E	0.938	0.889	0.717	1,298,402	No	220,317
FW-02.8D-15E	0.938	0.889	0.717	1,298,402	No	220,317
FW-03.1D-05B	0.750	0.705	0.544	1,318,097	No	220,317
FW-02.8D-07E	0.938	0.896	0.717	1,347,704	Yes	220,317
FW-02.8D-19P	0.750	0.704	0.544	1,358,193	Yes	220,317
FW-02.8D-08P	0.938	0.874	0.717	1,369,182	Yes	220,317
FW-03.1D-04B	0.750	0.708	0.544	1,420,314	No	220,317
FW-03.1D-07B	0.750	0.708	0.544	1,420,314	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====> Grouped by Line: FW-02.8D SG HDR to SG 33					
FW-03.1D-08B	0.750	0.718	0.544	1,423,057	220,317
FW-02.8D-23P	0.750	0.709	0.544	1,476,214	220,317
FW-02.8D-12P_1	0.938	0.896	0.717	1,558,853	220,317
FW-02.8D-20T	0.750	0.712	0.544	1,599,193	220,317
FW-02.8D-20T (D/S)	0.000	0.712	0.544	1,599,193	220,317
FW-02.8D-04T	0.938	0.898	0.717	1,687,342	220,317
FW-02.8D-04T (D/S)	0.000	0.898	0.717	1,687,342	220,317
FW-02.8D-09T	0.938	0.898	0.717	1,687,342	220,317
FW-02.8D-09T (D/S)	0.000	0.898	0.717	1,687,342	220,317
FW-02.8D-06V	1.312	1.193	0.630	1,752,035	220,317
FW-02.7-04T	1.395	1.355	1.195	1,809,453	220,317
FW-03.1D-01P	0.750	0.718	0.544	1,992,729	220,317
FW-03.1D-03P	0.750	0.718	0.544	1,992,729	220,317
FW-03.1D-06P_1	0.750	0.718	0.544	1,992,729	220,317
FW-03.1D-09P	0.750	0.718	0.544	1,992,729	220,317
FW-02.8D-03P	0.938	0.905	0.717	2,098,508	220,317
FW-02.8D-16P	0.938	0.905	0.717	2,098,508	220,317
FW-02.8D-10P	0.938	0.912	0.717	2,715,255	220,317
FW-02.8D-01P	0.964	0.937	0.717	3,064,026	220,317
FW-03.1D-06P_2	0.750	0.734	0.544	4,205,638	220,317
FW-02.8D-12P_2	0.938	0.921	0.717	4,344,532	220,317
FW-02.8D-14P	0.938	0.904	0.717	4,557,013	220,317
FW-02.7-01P	1.372	1.360	1.195	5,143,277	220,317
FW-02.7-03P	1.372	1.360	1.195	5,143,277	220,317
FW-02.8D-24R	0.000	1.514	0.832	5,435,267	220,317
FW-03.1D-10N	0.750	0.749	0.478	133,063,352	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:20:22AM

Run Name: HD: HD PMP TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				

====>Grouped by Line: HD-11.1A HD PMP 31 to HDR

HD-12.1A-01V	0.500	0.219	0.220	0.220	-1,054	No	220,317
HD-11.1A-02V	0.500	0.337	0.326	0.326	22,963	No	220,317
HD-12.2A-01V	0.500	0.337	0.326	0.326	22,963	No	220,317
HD-12.1A-02R	0.000	0.253	0.206	0.206	108,379	Yes	220,317
HD-12.2A-06O	0.500	0.462	0.304	0.304	183,406	No	220,317
HD-11.2A-01R (D/S)	0.000	0.324	0.206	0.206	236,900	No	220,317
HD-11.1A-01N	0.500	0.462	0.304	0.304	328,560	No	220,317
HD-12.2A-04T	0.500	0.402	0.304	0.304	339,120	No	220,317
HD-12.2A-04T (D/S)	0.000	0.402	0.304	0.304	339,120	No	220,317
HD-12.2A-03E	0.500	0.451	0.304	0.304	412,341	Yes	220,317
HD-12.1A-02R (D/S)	0.000	0.461	0.304	0.304	545,052	Yes	220,317
HD-12.2A-02P	0.500	0.428	0.304	0.304	586,203	No	220,317
HD-11.2A-01R	0.000	0.510	0.304	0.304	612,514	Yes	220,317
HD-12.2A-07P	0.569	0.442	0.304	0.304	802,940	Yes	220,317
HD-12.2A-05P	0.664	0.596	0.304	0.304	1,467,544	No	220,317

====>Grouped by Line: HD-11.1B HD PMP 32 to HDR

HD-12.2B-06O	0.500	0.208	0.304	0.304	-115,198	No	220,317
HD-12.2B-01V	0.500	0.337	0.326	0.326	22,963	No	220,317
HD-11.1B-02V	0.500	0.337	0.326	0.326	22,963	No	220,317
HD-12.1B-01V	0.322	0.257	0.220	0.220	46,704	No	220,317
HD-11.1B-01N	0.500	0.337	0.304	0.304	67,328	No	220,317
HD-11.2B-01R (D/S)	0.000	0.311	0.206	0.206	210,884	Yes	220,317
HD-12.1B-02R	0.000	0.310	0.206	0.206	238,098	No	220,317
HD-12.2B-08T (BR/SE)	0.000	0.442	0.304	0.304	359,266	Yes	220,317
HD-12.2B-03E	0.535	0.435	0.304	0.304	364,972	Yes	220,317
HD-12.1B-02R (D/S)	0.000	0.461	0.304	0.304	544,824	Yes	220,317

Sorted By: Remaining Life

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====> Grouped by Line: HD-11.1B HD PMP 32 to HDR					
HD-11.2B-01R	0.000	0.503	0.304	591,679	220,317
HD-12.2B-08T (D/S)	0.000	0.633	0.382	691,778	220,317
HD-12.2B-02P	0.539	0.461	0.304	735,022	220,317
HD-12.2B-04T (D/S)	0.000	0.529	0.304	781,182	220,317
HD-12.2B-07P	0.527	0.450	0.304	848,657	220,317
HD-12.2B-05P	0.516	0.471	0.304	862,612	220,317
HD-12.2B-04T	0.500	0.559	0.304	885,357	220,317
HD-12.3-01P	0.654	0.627	0.382	1,128,252	220,317
Sorted By: Remaining Life					
====> Grouped by Line: HD-12.2A HD PMP HDR to CD SYS					
HD-12.2A-08T (D/S)	0.000	0.475	0.382	213,467	220,317
HD-12.4-03E	0.656	0.493	0.382	281,138	220,317
HD-12.4-07E	0.656	0.493	0.382	281,138	220,317
HD-12.4-09E	0.656	0.493	0.382	281,138	220,317
HD-12.4-11E	0.656	0.493	0.382	281,138	220,317
HD-12.4-13E	0.656	0.493	0.382	281,138	220,317
HD-12.4-17E	0.656	0.493	0.382	281,138	220,317
HD-12.4-05E	0.656	0.511	0.382	365,214	220,317
HD-12.4-02P	0.656	0.515	0.382	389,518	220,317
HD-12.4-15T	0.656	0.524	0.382	442,985	220,317
HD-12.4-15T (D/S)	0.000	0.524	0.382	442,985	220,317
HD-12.2A-08T (BR/SE)	0.000	0.452	0.304	453,225	220,317
HD-12.4-01E	0.789	0.606	0.382	555,110	220,317
HD-12.4-04P	0.656	0.546	0.382	614,081	220,317
HD-12.4-08P	0.656	0.546	0.382	614,081	220,317
HD-12.4-10P_1	0.656	0.546	0.382	614,081	220,317
HD-12.4-12P	0.656	0.546	0.382	614,081	220,317
HD-12.4-14P	0.656	0.546	0.382	614,081	220,317
HD-12.4-18P	0.656	0.546	0.382	614,081	220,317
HD-12.4-06P	0.656	0.559	0.382	614,081	220,317
HD-12.2A-08T	0.700	0.613	0.382	754,068	220,317
HD-12.4-16P	0.656	0.568	0.382	770,421	220,317
HD-12.4-10P_2	0.656	0.595	0.382	870,724	220,317
				1,401,048	220,317
Sorted By: Remaining Life					

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:20:36AM

Run Name: HD: HTR 31 TO COND
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: HD-13.1 FWH 31A to Cond 33						
HD-13.1-19V	0.000	0.188	0.015	989,301	No	220,317
HD-13.1-01N	0.000	0.219	0.025	2,220,907	No	220,317
HD-13.1-21V	0.000	0.219	0.023	2,245,279	No	220,317
HD-13.1-09V	0.000	0.219	0.023	2,245,279	No	220,317
HD-13.1-23N	0.000	0.225	0.025	2,865,487	No	220,317
HD-13.1-16E	0.000	0.227	0.021	3,183,163	No	220,317
HD-13.1-14E	0.000	0.227	0.021	3,183,163	No	220,317
HD-13.1-11E	0.000	0.227	0.021	3,183,163	No	220,317
HD-13.1-10E	0.000	0.227	0.021	3,183,163	No	220,317
HD-13.1-08E	0.000	0.227	0.021	3,183,163	No	220,317
HD-13.1-05E	0.000	0.227	0.021	3,183,163	No	220,317
HD-13.1-03E	0.000	0.227	0.021	3,183,163	No	220,317
HD-13.1-12E	0.000	0.228	0.021	3,385,482	No	220,317
HD-13.1-04P	0.000	0.230	0.025	3,671,211	No	220,317
HD-13.1-20R (D/S)	0.000	0.231	0.021	4,009,297	No	220,317
HD-13.1-07T (D/S)	0.000	0.231	0.021	4,009,297	No	220,317
HD-13.1-07T	0.000	0.231	0.021	4,009,297	No	220,317
HD-13.1-02P	0.000	0.233	0.025	4,417,253	No	220,317
HD-13.1-17P	0.000	0.234	0.025	4,799,226	No	220,317
HD-13.1-15P	0.000	0.234	0.025	4,799,226	No	220,317
HD-13.1-13P	0.000	0.234	0.025	4,799,226	No	220,317
HD-13.1-06P	0.000	0.234	0.025	4,799,226	No	220,317
HD-13.1-18E	0.000	0.234	0.021	4,882,639	No	220,317
HD-13.1-22P	0.000	0.236	0.025	5,502,404	No	220,317
HD-13.1-18E (D/S)	0.000	2.393	0.014	7,986,195	No	220,317
HD-13.1-20R	0.000	2.403	0.014	8,880,289	No	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: HD-13.2 FWH 31B to Cond 32						
HD-13.2-17V	0.000	0.188	0.015	995,971	No	220,317
HD-13.2-16E (D/S)	0.000	0.211	0.014	1,835,965	No	220,317
HD-13.2-18R	0.000	0.215	0.014	2,071,138	No	220,317
HD-13.2-01N	0.000	0.219	0.025	2,240,979	No	220,317
HD-13.2-08V	0.000	0.219	0.023	2,265,545	No	220,317
HD-13.2-19V	0.000	0.219	0.023	2,265,545	No	220,317
HD-13.2-07T	0.000	0.225	0.021	2,862,724	No	220,317
HD-13.2-21N	0.000	0.225	0.025	2,890,690	No	220,317
HD-13.2-09E	0.000	0.227	0.021	3,210,895	No	220,317
HD-13.2-10E	0.000	0.227	0.021	3,210,895	No	220,317
HD-13.2-12E	0.000	0.227	0.021	3,210,895	No	220,317
HD-13.2-14E	0.000	0.227	0.021	3,210,895	No	220,317
HD-13.2-03E	0.000	0.227	0.021	3,210,895	No	220,317
HD-13.2-07T (BR/SE)	0.000	0.229	0.021	3,525,786	No	220,317
HD-13.2-05E	0.000	0.230	0.021	3,643,473	No	220,317
HD-13.2-11P	0.000	0.230	0.025	3,702,829	No	220,317
HD-13.2-04P	0.000	0.230	0.025	3,702,829	No	220,317
HD-13.2-18R (D/S)	0.000	0.231	0.021	4,043,606	No	220,317
HD-13.2-02P	0.000	0.233	0.025	4,454,809	No	220,317
HD-13.2-13P	0.000	0.234	0.025	4,839,823	No	220,317
HD-13.2-15P	0.000	0.234	0.025	4,839,823	No	220,317
HD-13.2-16E	0.000	0.234	0.021	4,923,901	No	220,317
HD-13.2-06P	0.000	0.236	0.025	5,548,599	No	220,317
HD-13.2-20P	0.000	0.236	0.025	5,548,599	No	220,317
====>Grouped by Line: HD-13.3 FWH 31C to Cond 31						
HD-13.3-17V	0.000	0.188	0.015	992,099	No	220,317
HD-13.3-16E (D/S)	0.000	0.211	0.014	1,829,273	No	220,317
HD-13.3-18R	0.000	0.215	0.014	2,063,656	No	220,317
HD-13.3-01N	0.000	0.219	0.025	2,228,603	No	220,317
HD-13.3-08V	0.000	0.219	0.023	2,253,042	No	220,317
HD-13.3-19V	0.000	0.219	0.023	2,253,042	No	220,317
HD-13.3-07T	0.000	0.225	0.021	2,847,138	No	220,317
HD-13.3-21N	0.000	0.225	0.025	2,874,960	No	220,317
HD-13.3-03E	0.000	0.227	0.021	3,193,513	No	220,317
HD-13.3-09E	0.000	0.227	0.021	3,193,513	No	220,317
HD-13.3-10E	0.000	0.227	0.021	3,193,513	No	220,317

Sorted By: Remaining Life

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: HD-13.3 FWH 31C to Cond 31						
HD-13.3-12E	0.000	0.227	0.021	3,193,513	No	220,317
HD-13.3-14E	0.000	0.227	0.021	3,193,513	No	220,317
HD-13.3-07T (BR/SE)	0.000	0.229	0.021	3,506,778	No	220,317
HD-13.3-05E	0.000	0.229	0.021	3,623,857	No	220,317
HD-13.3-04P	0.000	0.230	0.025	3,682,907	No	220,317
HD-13.3-11P	0.000	0.230	0.025	3,682,907	No	220,317
HD-13.3-18R (D/S)	0.000	0.231	0.021	4,021,926	No	220,317
HD-13.3-02P	0.000	0.233	0.025	4,431,006	No	220,317
HD-13.3-13P	0.000	0.234	0.025	4,814,032	No	220,317
HD-13.3-15P	0.000	0.234	0.025	4,814,032	No	220,317
HD-13.3-16E	0.000	0.234	0.021	4,897,676	No	220,317
HD-13.3-06P	0.000	0.236	0.025	5,519,150	No	220,317
HD-13.3-20P	0.000	0.236	0.025	5,519,150	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:20:52AM

Run Name: HD: HTR 32 TO HTR 31
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				

=====>Grouped by Line: HD-08.1A FWH 32A to FWH 31A

Sorted By:Remaining Life

HD-09.1A-01V	0.250	0.136	0.019	0.019	937,053	No	220,317
HD-09.2A-01V	0.250	0.168	0.023	0.023	1,633,185	No	220,317
HD-8.1A-10V	0.250	0.168	0.023	0.023	1,633,185	No	220,317
HD-8.1A-07T (D/S)	0.000	0.168	0.021	0.021	1,650,167	No	220,317
HD-8.2A-01R (D/S)	0.000	0.177	0.018	0.018	1,998,727	No	220,317
HD-8.1A-07T (BR/SE)	0.000	0.185	0.021	0.021	2,291,815	No	220,317
HD-8.1A-09E	0.250	0.190	0.021	0.021	2,551,942	No	220,317
HD-8.1A-05E	0.250	0.190	0.021	0.021	2,551,942	No	220,317
HD-8.1A-03E	0.250	0.190	0.021	0.021	2,551,942	No	220,317
HD-8.2A-01R	0.000	0.193	0.021	0.021	2,750,135	No	220,317
HD-8.1A-01N	0.375	0.290	0.021	0.021	2,902,394	No	220,317
HD-8.1A-04P	0.250	0.198	0.021	0.021	3,093,875	No	220,317
HD-8.1A-08P	0.250	0.200	0.021	0.021	3,333,424	No	220,317
HD-8.1A-02P	0.250	0.201	0.021	0.021	3,743,095	No	220,317
HD-09.1A-02R	0.000	0.284	0.018	0.018	3,823,294	No	220,317
HD-8.1A-06P	0.250	0.209	0.021	0.021	4,216,759	No	220,317
HD-09.1A-02R (D/S)	0.000	0.260	0.021	0.021	4,464,232	Yes	220,317
HD-09.2A-04T	0.406	0.406	0.020	0.020	100,000,000	No	220,317
HD-09.2A-04T (BR/SE)	0.000	0.406	0.020	0.020	100,000,000	No	220,317
HD-09.2A-04T (D/S)	0.000	0.406	0.020	0.020	100,000,000	No	220,317
HD-09.2A-02P	0.406	0.406	0.020	0.020	100,000,000	No	220,317
HD-09.2A-03E	0.406	0.406	0.020	0.020	100,000,000	No	220,317

=====>Grouped by Line: HD-08.1B FWH 32B to FWH 31B

Sorted By:Remaining Life

HD-09.1B-01V	0.250	0.136	0.019	0.019	937,053	No	220,317
HD-8.1B-10V	0.250	0.168	0.023	0.023	1,633,185	No	220,317
HD-09.2B-01V	0.250	0.168	0.023	0.023	1,633,185	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====> Grouped by Line: HD-08.1B FWH 32B to FWH 31B					
HD-8.1B-07T (D/S)	0.000	0.168	0.021	No	220,317
HD-8.2B-01R (D/S)	0.000	0.177	0.018	No	220,317
HD-8.1B-07T (BR/SE)	0.000	0.185	0.021	No	220,317
HD-8.1B-09E	0.250	0.190	0.021	No	220,317
HD-8.1B-05E	0.250	0.190	0.021	No	220,317
HD-8.1B-03E	0.250	0.190	0.021	No	220,317
HD-8.2B-01R	0.000	0.193	0.021	No	220,317
HD-8.1B-01N	0.375	0.290	0.021	No	220,317
HD-8.1B-04P	0.250	0.198	0.021	No	220,317
HD-09.1B-02R	0.000	0.239	0.018	Yes	220,317
HD-8.1B-08P	0.250	0.200	0.021	No	220,317
HD-8.1B-02P	0.250	0.201	0.021	No	220,317
HD-8.1B-06P	0.250	0.209	0.021	No	220,317
HD-09.1B-02R (D/S)	0.000	0.329	0.021	Yes	220,317
HD-09.2B-02P	0.406	0.406	0.020	No	220,317
HD-09.2B-03E	0.406	0.406	0.020	No	220,317
HD-09.2B-04T	0.406	0.406	0.020	No	220,317
HD-09.2B-04T (BR/SE)	0.000	0.406	0.020	No	220,317
HD-09.2B-04T (D/S)	0.000	0.406	0.020	No	220,317
Sorted By: Remaining Life					
				1,650,167	220,317
				1,998,727	220,317
				2,291,815	220,317
				2,551,942	220,317
				2,551,942	220,317
				2,551,942	220,317
				2,750,135	220,317
				2,902,394	220,317
				3,093,875	220,317
				3,176,182	220,317
				3,333,424	220,317
				3,743,095	220,317
				4,216,759	220,317
				5,754,381	220,317
				100,000,000	220,317
				100,000,000	220,317
				100,000,000	220,317
				100,000,000	220,317
				100,000,000	220,317
				100,000,000	220,317
Sorted By: Remaining Life					
				937,053	220,317
				1,633,185	220,317
				1,633,185	220,317
				1,650,167	220,317
				1,998,727	220,317
				2,291,815	220,317
				2,551,942	220,317
				2,551,942	220,317
				2,551,942	220,317
				2,750,135	220,317
				2,902,394	220,317
				3,059,577	220,317
				3,093,875	220,317
				3,333,424	220,317
				3,743,095	220,317
				4,216,759	220,317
====> Grouped by Line: HD-08.1C FWH 32C to FWH 31C					
HD-09.1C-01V	0.250	0.136	0.019	No	220,317
HD-8.1C-10V	0.250	0.168	0.023	No	220,317
HD-09.2C-01V	0.250	0.168	0.023	No	220,317
HD-8.1C-07T (D/S)	0.000	0.168	0.021	No	220,317
HD-8.2C-01R (D/S)	0.000	0.177	0.018	No	220,317
HD-8.1C-03E	0.000	0.185	0.021	No	220,317
HD-8.1C-05E	0.250	0.190	0.021	No	220,317
HD-8.1C-09E	0.250	0.190	0.021	No	220,317
HD-8.2C-01R	0.250	0.190	0.021	No	220,317
HD-8.1C-01N	0.000	0.193	0.021	No	220,317
HD-09.1C-02R	0.375	0.290	0.021	No	220,317
HD-8.1C-04P	0.000	0.231	0.018	No	220,317
HD-8.1C-08P	0.250	0.198	0.021	No	220,317
HD-8.1C-02P	0.250	0.200	0.021	No	220,317
HD-8.1C-06P	0.250	0.201	0.021	No	220,317
HD-8.1C-06P	0.250	0.209	0.021	No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====> Grouped by Line: HD-08.1C FWH 32C to FWH 31C							
HD-09.1C-02R (D/S)	0.000	0.261	0.021	0.021	No	4,487,002	220,317
HD-09.2C-02P	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.2C-03E	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.2C-04T	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.2C-04T (BR/SE)	0.000	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.2C-04T (D/S)	0.000	0.406	0.020	0.020	No	100,000,000	220,317
====> Grouped by Line: HD-09.3A FWH 32A to FWH 31A							
HD-09.3A-01P	0.409	0.409	0.020	0.020	No	100,000,000	220,317
HD-09.3A-02N	0.406	0.363	0.020	0.020	No	100,000,000	220,317
====> Grouped by Line: HD-09.3B FWH 32B to FWH 31B							
HD-09.3B-01P	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.3B-02N	0.406	0.406	0.020	0.020	No	100,000,000	220,317
====> Grouped by Line: HD-09.3C FWH 32C to FWH 31C							
HD-09.3C-01P	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.3C-02N	0.406	0.406	0.020	0.020	No	100,000,000	220,317
====> Grouped by Line: HD-09.4A FWH 32A to FWH 31A							
HD-09.4A-01P	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.4A-02E	0.462	0.462	0.020	0.020	No	100,000,000	220,317
HD-09.4A-03P	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.4A-04N	0.375	0.354	0.020	0.020	No	100,000,000	220,317
====> Grouped by Line: HD-09.4B FWH 32B to FWH 31B							
HD-09.4B-01P	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.4B-02E	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.4B-03P	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.4B-04N	0.375	0.375	0.020	0.020	No	100,000,000	220,317
====> Grouped by Line: HD-09.4C FWH 32C to FWH 31C							
HD-09.4C-01P	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.4C-02E	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.4C-03P	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.4C-04N	0.375	0.375	0.020	0.020	No	100,000,000	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:21:24AM

Run Name: HD: HTR 33 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
=====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A							
HD-07.1A-01V	0.280	0.033	0.012	0.012	No	65,065	220,317
HD-07.2A-01V	0.250	0.112	0.015	0.015	No	504,812	220,317
HD-6.1A-01N	0.250	0.112	0.014	0.014	No	510,168	220,317
HD-6.1A-09E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-07E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-05E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-11E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-13E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-14E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-16E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-18E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-20E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-22E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-24E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-03E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-26E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-30E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-32E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-34E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-37E	0.250	0.153	0.014	0.014	No	1,038,390	220,317
HD-6.1A-15P	0.250	0.150	0.014	0.014	No	1,111,305	220,317
HD-6.1A-39E	0.250	0.159	0.014	0.014	No	1,145,101	220,317
HD-6.1A-10P	0.250	0.162	0.014	0.014	No	1,203,459	220,317
HD-6.1A-28T	0.250	0.167	0.014	0.014	No	1,331,847	220,317
HD-6.1A-28T (D/S)	0.000	0.167	0.014	0.014	No	1,331,847	220,317
HD-6.1A-44T	0.250	0.167	0.014	0.014	No	1,331,847	220,317
HD-6.1A-44T (D/S)	0.000	0.167	0.014	0.014	No	1,331,847	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A						
HD-07.2A-05R	0.000	0.170	0.014	0.014	No	220,317
HD-6.1A-02P	0.250	0.166	0.014	0.014	No	220,317
HD-6.2A-01E (D/S)	0.000	0.331	0.011	0.011	Yes	220,317
HD-6.1A-08P	0.250	0.172	0.014	0.014	No	220,317
HD-6.1A-19P	0.250	0.172	0.014	0.014	No	220,317
HD-6.1A-31P	0.250	0.178	0.014	0.014	No	220,317
HD-6.1A-41E	0.250	0.257	0.014	0.014	Yes	220,317
HD-6.1A-38P	0.250	0.179	0.014	0.014	No	220,317
HD-6.1A-06P_1	0.250	0.181	0.014	0.014	No	220,317
HD-6.1A-12P_1	0.250	0.181	0.014	0.014	No	220,317
HD-6.1A-43P	0.250	0.181	0.014	0.014	No	220,317
HD-6.1A-17P_1	0.250	0.181	0.014	0.014	No	220,317
HD-6.1A-21P_1	0.250	0.181	0.014	0.014	No	220,317
HD-6.1A-23P	0.250	0.181	0.014	0.014	No	220,317
HD-6.1A-25P_1	0.250	0.181	0.014	0.014	No	220,317
HD-6.1A-04P	0.250	0.181	0.014	0.014	No	220,317
HD-6.1A-27P	0.250	0.181	0.014	0.014	No	220,317
HD-6.1A-33P	0.250	0.181	0.014	0.014	No	220,317
HD-6.1A-42P	0.250	0.233	0.014	0.014	Yes	220,317
HD-07.1A 02R	0.000	0.339	0.011	0.011	Yes	220,317
HD-07.2A-03T (BR/SE)	0.000	0.376	0.014	0.014	Yes	220,317
HD-6.1A-40P	0.250	0.189	0.014	0.014	No	220,317
HD-07.1A 02R (D/S)	0.000	0.257	0.014	0.014	Yes	220,317
HD-07.2A-02P	0.250	0.208	0.014	0.014	Yes	220,317
HD-07.2A-04P	0.250	0.193	0.014	0.014	No	220,317
HD-6.1A-29P	0.250	0.195	0.014	0.014	No	220,317
HD-07.2A-05R (D/S)	0.000	0.195	0.018	0.018	No	220,317
HD-07.2A-03T	0.250	0.471	0.014	0.014	Yes	220,317
HD-07.3A-01N	0.365	0.291	0.018	0.018	No	220,317
HD-6.2A-01E	0.000	0.423	0.014	0.014	Yes	220,317
HD-6.1A-06P_2	0.250	0.220	0.014	0.014	No	220,317
HD-6.1A-12P_2	0.250	0.220	0.014	0.014	No	220,317
HD-6.1A-17P_2	0.250	0.220	0.014	0.014	No	220,317
HD-6.1A-21P_2	0.250	0.220	0.014	0.014	No	220,317
HD-6.1A-25P_2	0.250	0.220	0.014	0.014	No	220,317

Sorted By: Remaining Life

Sorted By: Remaining Life

====>Grouped by Line: HD-06.1B FWH 33B to FWH 32B

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: HD-06.1B FWH 33B to FWH 32B						
HD-07.1B-01V	0.280	0.044	0.012	98,761	No	220,317
HD-07.2B-01V	0.250	0.112	0.015	504,812	No	220,317
HD-6.1B-01N	0.250	0.112	0.014	510,168	No	220,317
HD-6.2B-01E (D/S)	0.000	0.133	0.011	613,879	No	220,317
HD-6.1B-03E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1B-04E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1B-06E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1B-08E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1B-12E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1B-13E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1B-15E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1B-17E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1B-19E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1B-21E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1B-25E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1B-27E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1B-29E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1B-36E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1B-10E	0.250	0.153	0.014	1,038,390	No	220,317
HD-6.1B-32E	0.250	0.153	0.014	1,038,390	No	220,317
HD-6.1B-14P	0.250	0.150	0.014	1,111,305	No	220,317
HD-6.1B-34E	0.250	0.159	0.014	1,145,101	No	220,317
HD-6.1B-05P_1	0.250	0.162	0.014	1,203,459	No	220,317
HD-6.1B-09P	0.250	0.162	0.014	1,203,459	No	220,317
HD-6.1B-16P_1	0.250	0.162	0.014	1,203,459	No	220,317
HD-6.1B-37P	0.250	0.162	0.014	1,203,459	No	220,317
HD-6.1B-23T	0.250	0.167	0.014	1,331,847	No	220,317
HD-6.1B-23T (D/S)	0.000	0.167	0.014	1,331,847	No	220,317
HD-6.1B-38T	0.250	0.167	0.014	1,331,847	No	220,317
HD-6.1B-38T (D/S)	0.000	0.167	0.014	1,331,847	No	220,317
HD-07.1B-02R	0.000	0.261	0.011	1,390,810	Yes	220,317
HD-07.2B-05R	0.000	0.170	0.014	1,454,892	No	220,317
HD-6.1B-02P	0.250	0.166	0.014	1,467,937	No	220,317
HD-6.1B-07P	0.250	0.172	0.014	1,650,532	No	220,317
HD-6.1B-20P	0.250	0.172	0.014	1,650,532	No	220,317
HD-6.1B-26P	0.250	0.178	0.014	1,707,919	No	220,317
HD-6.1B-33P	0.250	0.179	0.014	1,726,053	No	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: HD-06.1B FWH 33B to FWH 32B						
HD-6.1B-11P_1	0.250	0.181	0.014	1,742,686	No	220,317
HD-6.1B-18P	0.250	0.181	0.014	1,742,686	No	220,317
HD-6.1B-22P_1	0.250	0.181	0.014	1,742,686	No	220,317
HD-6.1B-28P	0.250	0.181	0.014	1,742,686	No	220,317
HD-6.2B-01E	0.000	0.181	0.014	1,742,686	No	220,317
HD-07.2B-03T (BR/SE)	0.000	0.355	0.014	1,783,882	Yes	220,317
HD-07.1B-02R (D/S)	0.000	0.238	0.014	1,949,772	Yes	220,317
HD-6.1B-35P	0.250	0.189	0.014	2,078,827	No	220,317
HD-07.2B-02P	0.250	0.189	0.014	2,078,827	No	220,317
HD-07.2B-03T	0.250	0.446	0.014	2,259,851	Yes	220,317
HD-07.2B-04P	0.250	0.193	0.014	2,335,262	No	220,317
HD-6.1B-24P	0.250	0.195	0.014	2,358,945	No	220,317
HD-07.2B-05R (D/S)	0.000	0.195	0.018	2,372,586	No	220,317
HD-07.3B-01N	0.365	0.291	0.018	2,634,714	No	220,317
HD-6.1B-05P_2	0.250	0.220	0.014	4,880,006	No	220,317
HD-6.1B-11P_2	0.250	0.220	0.014	4,880,006	No	220,317
HD-6.1B-16P_2	0.250	0.220	0.014	4,880,006	No	220,317
HD-6.1B-22P_2	0.250	0.220	0.014	4,880,006	No	220,317

Sorted By: Remaining Life

====> Grouped by Line: HD-06.1C FWH 33C to FWH 32C						
HD-6.1C-01N	0.250	0.112	0.014	510,168	No	220,317
HD-6.1C-03E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1C-05E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1C-07E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1C-09E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1C-11E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1C-13E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1C-15E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1C-17E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1C-21E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1C-23E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1C-25E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1C-32E	0.250	0.148	0.014	943,215	No	220,317
HD-6.1C-28E	0.250	0.153	0.014	1,038,390	No	220,317
HD-6.1C-30E	0.250	0.159	0.014	1,145,101	No	220,317
HD-6.1C-33P	0.250	0.157	0.014	1,168,692	No	220,317
HD-6.1C-08P_1	0.250	0.162	0.014	1,203,459	No	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====>Grouped by Line: HD-06.1C FWH 33C to FWH 32C					
HD-6.1C-19T	0.250	0.167	0.014	No	220,317
HD-6.1C-19T (D/S)	0.000	0.167	0.014	No	220,317
HD-6.1C-34T	0.250	0.167	0.014	No	220,317
HD-6.1C-34T (D/S)	0.000	0.167	0.014	No	220,317
HD-07.2C-03T	0.250	0.278	0.014	Yes	220,317
HD-07.2C-05R	0.000	0.170	0.014	No	220,317
HD-6.1C-02P	0.250	0.166	0.014	No	220,317
HD-07.1C-02R	0.000	0.283	0.011	Yes	220,317
HD-07.1C-01V	0.280	0.508	0.012	No	220,317
HD-6.1C-06P	0.250	0.172	0.014	No	220,317
HD-6.1C-12P	0.250	0.172	0.014	No	220,317
HD-6.1C-22P	0.250	0.178	0.014	No	220,317
HD-6.1C-29P	0.250	0.179	0.014	No	220,317
HD-6.1C-04P	0.250	0.181	0.014	No	220,317
HD-6.1C-10P	0.250	0.181	0.014	No	220,317
HD-6.1C-14P	0.250	0.181	0.014	No	220,317
HD-6.1C-16P	0.250	0.181	0.014	No	220,317
HD-6.1C-18P	0.250	0.181	0.014	No	220,317
HD-6.1C-24P	0.250	0.181	0.014	No	220,317
HD-07.1C-02R (D/S)	0.000	0.237	0.014	Yes	220,317
HD-6.2C-01E (D/S)	0.000	0.407	0.011	Yes	220,317
HD-6.1C-31P	0.250	0.189	0.014	No	220,317
HD-07.2C-03T (BR/SE)	0.000	0.431	0.014	Yes	220,317
HD-07.2C-04P	0.250	0.193	0.014	No	220,317
HD-6.1C-20P	0.250	0.195	0.014	No	220,317
HD-6.1C-35P	0.250	0.195	0.014	No	220,317
HD-07.2C-05R (D/S)	0.000	0.195	0.018	No	220,317
HD-07.2C-02P	0.250	0.219	0.014	Yes	220,317
HD-07.3C-01N	0.365	0.291	0.018	No	220,317
HD-07.2C-01V	0.250	0.634	0.015	No	220,317
HD-6.2C-01E	0.000	0.392	0.014	Yes	220,317
HD-6.1C-08P_2	0.250	0.220	0.014	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:21:45AM

Run Name: HD: HTR 34 TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			
====>Grouped by Line: HD-04.1A FWH 34A to FWH 33A						
HD-4.2A-02V	0.237	-0.027	0.016	0.016	No	220,317
HD-05.1A-02R	0.000	0.008	0.012	0.012	Yes	220,317
HD-05.1A-01V	0.216	0.165	0.012	0.012	No	220,317
HD-4.3A-01R (D/S)	0.000	0.171	0.012	0.012	No	220,317
HD-4.1A-01N	0.280	0.149	0.022	0.022	No	220,317
HD-4.3A-01R	0.000	0.190	0.015	0.015	No	220,317
HD-4.2A-01E (D/S)	0.000	0.222	0.015	0.015	No	220,317
HD-05.2A-06N	0.280	0.175	0.022	0.022	No	220,317
HD-05.2A-01T	0.280	0.222	0.022	0.022	Yes	220,317
HD-05.2A-04E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1A-14E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1A-12E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1A-10E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1A-08E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1A-05E	0.280	0.183	0.022	0.022	No	220,317
HD-05.2A-01T (BR/SE)	0.000	0.246	0.022	0.022	Yes	220,317
HD-4.1A-06E	0.280	0.188	0.022	0.022	No	220,317
HD-05.2A-03E	0.280	0.193	0.022	0.022	No	220,317
HD-05.2A-05P	0.280	0.196	0.022	0.022	No	220,317
HD-4.1A-03T	0.280	0.188	0.022	0.022	No	220,317
HD-4.1A-03T (D/S)	0.000	0.188	0.022	0.022	No	220,317
HD-4.1A-02P	0.280	0.197	0.022	0.022	No	220,317
HD-4.1A-15P	0.280	0.210	0.022	0.022	No	220,317
HD-4.1A-11P	0.280	0.210	0.022	0.022	No	220,317
HD-4.1A-13P	0.280	0.214	0.022	0.022	No	220,317
HD-4.1A-09P_1	0.280	0.214	0.022	0.022	No	220,317
HD-4.1A-07P	0.280	0.214	0.022	0.022	No	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: HD-04.1A FWH 34A to FWH 33A						
HD-05.1A-02R (D/S)	0.000	0.260	0.022	0.022	Yes	220,317
HD-4.1A-04P	0.280	0.218	0.022	0.022	No	220,317
HD-05.2A-02P	0.280	0.229	0.022	0.022	Yes	220,317
HD-4.2A-01E	0.000	0.299	0.022	0.022	No	220,317
HD-4.1A-09P_2	0.280	0.251	0.022	0.022	No	220,317
====> Grouped by Line: HD-04.1B FWH 34B to FWH 33B						
HD-4.2B-02V	0.237	-0.027	0.016	0.016	No	220,317
HD-05.1B-01V	0.216	0.206	0.012	0.012	No	220,317
HD-4.3B-01R (D/S)	0.000	0.173	0.012	0.012	No	220,317
HD-05.1B-02R	0.000	0.191	0.012	0.012	No	220,317
HD-4.1B-01N	0.280	0.149	0.022	0.022	No	220,317
HD-4.1B-05T (D/S)	0.000	0.149	0.022	0.022	No	220,317
HD-4.3B-01R	0.000	0.200	0.015	0.015	Yes	220,317
HD-05.2B-06N	0.280	0.175	0.022	0.022	No	220,317
HD-4.1B-05T (BR/SE)	0.000	0.175	0.022	0.022	No	220,317
HD-4.2B-01E (D/S)	0.000	0.248	0.015	0.015	Yes	220,317
HD-05.1B-02R (D/S)	0.000	0.140	0.022	0.022	No	220,317
HD-4.1B-07E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1B-09E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1B-12E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1B-14E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1B-16E	0.280	0.183	0.022	0.022	No	220,317
HD-05.2B-04E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1B-10E	0.280	0.188	0.022	0.022	No	220,317
HD-05.2B-01T	0.280	0.274	0.022	0.022	Yes	220,317
HD-05.2B-03E	0.280	0.193	0.022	0.022	No	220,317
HD-4.1B-03E	0.280	0.193	0.022	0.022	No	220,317
HD-05.2B-05P	0.280	0.196	0.022	0.022	No	220,317
HD-05.2B-01T (BR/SE)	0.000	0.306	0.022	0.022	Yes	220,317
HD-4.1B-06P	0.280	0.201	0.022	0.022	No	220,317
HD-4.1B-02P	0.280	0.197	0.022	0.022	No	220,317
HD-4.1B-08P	0.280	0.203	0.022	0.022	No	220,317
HD-4.1B-13P	0.280	0.210	0.022	0.022	No	220,317
HD-4.1B-17P	0.280	0.210	0.022	0.022	No	220,317
HD-4.1B-11P_1	0.280	0.214	0.022	0.022	No	220,317
HD-4.1B-15P	0.280	0.214	0.022	0.022	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: HD-04.1B FWH 34B to FWH 33B						
HD-4.2B-01E	0.000	0.229	0.022	0.022	Yes	220,317
HD-4.1B-04P	0.280	0.212	0.022	0.022	No	220,317
HD-05.2B-02P	0.280	0.224	0.022	0.022	No	220,317
HD-4.1B-11P_2	0.280	0.251	0.022	0.022	No	220,317
====> Grouped by Line: HD-04.1C FWH 34C to FWH 33C						
HD-4.2C-02V	0.237	-0.027	0.016	0.016	No	220,317
HD-05.1C-01V	0.216	0.141	0.012	0.012	No	220,317
HD-4.3C-01R (D/S)	0.000	0.198	0.012	0.012	No	220,317
HD-05.1C-02R	0.000	0.199	0.012	0.012	No	220,317
HD-4.3C-01R	0.000	0.182	0.015	0.015	No	220,317
HD-4.1C-01N	0.280	0.149	0.022	0.022	No	220,317
HD-4.2C-01E (D/S)	0.000	0.215	0.015	0.015	Yes	220,317
HD-05.1C-02R (D/S)	0.000	0.121	0.022	0.022	No	220,317
HD-05.2C-06N	0.280	0.175	0.022	0.022	No	220,317
HD-4.1C-03E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1C-05E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1C-08E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1C-10E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1C-12E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1C-14E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1C-16E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1C-18E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1C-20E	0.280	0.183	0.022	0.022	No	220,317
HD-4.1C-22E	0.280	0.183	0.022	0.022	No	220,317
HD-05.2C-04E	0.280	0.183	0.022	0.022	No	220,317
HD-05.2C-03E	0.280	0.193	0.022	0.022	No	220,317
HD-4.1C-09P	0.280	0.196	0.022	0.022	No	220,317
HD-05.2C-05P	0.280	0.196	0.022	0.022	No	220,317
HD-05.2C-01T	0.280	0.296	0.022	0.022	Yes	220,317
HD-4.1C-06T	0.280	0.188	0.022	0.022	No	220,317
HD-4.1C-06T (D/S)	0.000	0.188	0.022	0.022	No	220,317
HD-05.2C-01T (BR/SE)	0.000	0.325	0.022	0.022	Yes	220,317
HD-4.1C-02P	0.280	0.197	0.022	0.022	No	220,317
HD-4.1C-11P	0.280	0.203	0.022	0.022	No	220,317
HD-4.1C-19P	0.280	0.210	0.022	0.022	No	220,317
HD-4.1C-23P	0.280	0.210	0.022	0.022	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1] Thoop			
=====>Grouped by Line: HD-04.1C FWH 34C to FWH 33C					
HD-4.1C-04P	0.280	0.214	0.022	0.022	220,317
HD-4.1C-13P_1	0.280	0.214	0.022	0.022	220,317
HD-4.1C-15P	0.280	0.214	0.022	0.022	220,317
HD-4.1C-17P_1	0.280	0.214	0.022	0.022	220,317
HD-4.1C-21P	0.280	0.214	0.022	0.022	220,317
HD-4.2C-01E	0.000	0.224	0.022	0.022	220,317
HD-4.1C-07P	0.280	0.218	0.022	0.022	220,317
HD-05.2C-02P	0.280	0.224	0.022	0.022	220,317
HD-4.1C-13P_2	0.280	0.251	0.022	0.022	220,317
HD-4.1C-17P_2	0.280	0.251	0.022	0.022	220,317

Sorted By: Remaining Life

Note:
 [1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:21:55AM

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Run Name: HD: HTR 35 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			
====>Grouped by Line: HD-03.1A FWH 35A to HD TK						
HD-03.1A-01N	0.240	0.180	0.089	536,897	No	220,317
HD-03.1A-15V	0.250	0.189	0.095	555,450	No	220,317
HD-03.1A-03E	0.250	0.205	0.089	926,986	No	220,317
HD-03.1A-09E	0.250	0.205	0.089	926,986	No	220,317
HD-03.1A-07E	0.250	0.205	0.089	926,986	No	220,317
HD-03.1A-05E	0.250	0.205	0.089	926,986	No	220,317
HD-03.1A-11E	0.250	0.224	0.089	1,077,728	Yes	220,317
HD-03.1A-06P	0.250	0.211	0.089	1,127,854	No	220,317
HD-03.1A-14E	0.250	0.237	0.089	1,181,524	Yes	220,317
HD-03.1A-13P	0.250	0.225	0.089	1,252,647	Yes	220,317
HD-03.1A-12E	0.250	0.256	0.089	1,333,226	Yes	220,317
HD-03.1A-02P	0.250	0.217	0.089	1,403,118	No	220,317
HD-03.1A-04P	0.250	0.220	0.089	1,544,053	No	220,317
HD-03.1A-10P	0.250	0.220	0.089	1,544,053	No	220,317
HD-03.1A-08P	0.250	0.220	0.089	1,544,053	No	220,317
HD-03.1A-16N	0.250	0.313	0.089	1,656,986	No	220,317
====>Grouped by Line: HD-03.1B FWH 35B to HD TK						
HD-03.1B-01N	0.240	0.180	0.089	536,897	No	220,317
HD-03.1B-13V	0.250	0.189	0.095	555,450	No	220,317
HD-03.1B-14N	0.250	0.201	0.089	830,569	No	220,317
HD-03.1B-10E	0.250	0.205	0.089	926,986	No	220,317
HD-03.1B-07E	0.250	0.205	0.089	926,986	No	220,317
HD-03.1B-05E	0.250	0.205	0.089	926,986	No	220,317
HD-03.1B-12E	0.250	0.205	0.089	926,986	No	220,317
HD-03.1B-03E	0.250	0.205	0.089	926,986	No	220,317
HD-03.1B-11P	0.250	0.211	0.089	1,127,854	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1] Thoop			
====> Grouped by Line: HD-03.1B FWH 35B to HD TK					
HD-03.1B-09E	0.250	0.236	0.089	Yes	220,317
HD-03.1B-02P	0.250	0.217	0.089	No	220,317
HD-03.1B-08P	0.250	0.220	0.089	No	220,317
HD-03.1B-06P	0.250	0.220	0.089	No	220,317
HD-03.1B-04P	0.250	0.220	0.089	No	220,317
====> Grouped by Line: HD-03.1C FWH 35C to HD TK					
HD-03.1C-01N	0.240	0.180	0.089	No	220,317
HD-03.1C-17V	0.250	0.189	0.095	No	220,317
HD-03.1C-18N	0.250	0.201	0.089	No	220,317
HD-03.1C-03E	0.250	0.205	0.089	No	220,317
HD-03.1C-05E	0.250	0.205	0.089	No	220,317
HD-03.1C-07E	0.250	0.205	0.089	No	220,317
HD-03.1C-09E	0.250	0.205	0.089	No	220,317
HD-03.1C-11E	0.250	0.205	0.089	No	220,317
HD-03.1C-14E	0.250	0.225	0.089	Yes	220,317
HD-03.1C-13E	0.250	0.245	0.089	Yes	220,317
HD-03.1C-16E	0.250	0.248	0.089	Yes	220,317
HD-03.1C-15P	0.250	0.229	0.089	Yes	220,317
HD-03.1C-02P	0.250	0.217	0.089	Yes	220,317
HD-03.1C-04P	0.250	0.220	0.089	No	220,317
HD-03.1C-06P	0.250	0.220	0.089	No	220,317
HD-03.1C-08P	0.250	0.220	0.089	No	220,317
HD-03.1C-10P	0.250	0.220	0.089	No	220,317
HD-03.1C-12P	0.250	0.220	0.089	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:22:05AM

Run Name: HD: HTR 36 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				

====>Grouped by Line: HD-01.1A FWH 36A to HD TK

Sorted By: Remaining Life

HD-01.1A-01N	0.288	0.201	0.137	0.137	No	283,129	220,317
HD-01.1A-07E	0.307	0.242	0.159	0.159	No	490,750	220,317
HD-01.1A-03E	0.307	0.242	0.159	0.159	No	490,750	220,317
HD-01.1A-05E	0.307	0.242	0.159	0.159	No	490,750	220,317
HD-01.2A-01R (D/S)	0.000	0.298	0.098	0.098	Yes	654,082	220,317
HD-02.1A-02R	0.000	0.289	0.098	0.098	Yes	711,415	220,317
HD-01.1A-02P	0.307	0.260	0.159	0.159	No	815,188	220,317
HD-01.1A-10P	0.307	0.263	0.159	0.159	No	911,222	220,317
HD-01.1A-08P	0.307	0.263	0.159	0.159	No	911,222	220,317
HD-01.1A-06P	0.307	0.263	0.159	0.159	No	911,222	220,317
HD-01.1A-04P	0.307	0.263	0.159	0.159	No	911,222	220,317
HD-01.2A-01R	0.000	0.318	0.159	0.159	Yes	995,773	220,317
HD-01.1A-09E	0.307	0.327	0.159	0.159	Yes	996,566	220,317
HD-02.2A-02N	0.365	0.348	0.137	0.137	Yes	1,133,247	220,317
HD-02.1A-02R (D/S)	0.000	0.353	0.159	0.159	Yes	1,385,819	220,317
HD-02.1A 01V	0.280	0.278	0.105	0.105	No	45,030,464	220,317
HD-02.2A-01V	0.365	0.364	0.171	0.171	No	103,377,392	220,317

====>Grouped by Line: HD-01.1B FWH 36B to HD TK

Sorted By: Remaining Life

HD-01.1B-01N	0.288	0.201	0.137	0.137	No	283,129	220,317
HD-01.1B-05E	0.307	0.242	0.159	0.159	No	490,750	220,317
HD-01.1B-03E	0.307	0.242	0.159	0.159	No	490,750	220,317
HD-01.2B-01R (D/S)	0.000	0.253	0.098	0.098	Yes	507,166	220,317
HD-02.1B-02R	0.000	0.292	0.098	0.098	Yes	723,727	220,317
HD-01.1B-02P	0.307	0.260	0.159	0.159	No	815,188	220,317
HD-02.2B-02N	0.365	0.293	0.137	0.137	No	840,435	220,317
HD-01.1B-04P	0.307	0.263	0.159	0.159	No	911,222	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: HD-01.1B FWH 36B to HD TK						
HD-01.1B-06P	0.307	0.263	0.159	0.159	No	220,317
HD-01.1B-07E	0.307	0.326	0.159	0.159	Yes	220,317
HD-01.2B-01R	0.000	0.342	0.159	0.159	Yes	220,317
HD-02.1B-02R (D/S)	0.000	0.321	0.159	0.159	Yes	220,317
HD-02.1B-01V	0.280	0.440	0.105	0.105	No	220,317
HD-02.2B-01V	0.365	0.364	0.171	0.171	No	220,317
====> Grouped by Line: HD-01.1C FWH 36C to HD TK						
HD-01.1C-01N	0.288	0.201	0.137	0.137	No	220,317
HD-01.1C-03E	0.307	0.242	0.159	0.159	No	220,317
HD-01.1C-05E	0.307	0.242	0.159	0.159	No	220,317
HD-01.1C-07E	0.307	0.242	0.159	0.159	No	220,317
HD-01.1C-09E	0.307	0.242	0.159	0.159	No	220,317
HD-01.2C-01R (D/S)	0.000	0.263	0.098	0.098	Yes	220,317
HD-01.1C-08P	0.307	0.251	0.159	0.159	No	220,317
HD-01.1C-11E	0.421	0.270	0.159	0.159	Yes	220,317
HD-01.1C-02P	0.307	0.260	0.159	0.159	No	220,317
HD-02.1C-02R	0.000	0.323	0.098	0.098	No	220,317
HD-01.1C-04P	0.307	0.263	0.159	0.159	No	220,317
HD-01.1C-06P	0.307	0.263	0.159	0.159	No	220,317
HD-01.1C-10P	0.307	0.263	0.159	0.159	No	220,317
HD-02.1C-02R (D/S)	0.000	0.291	0.159	0.159	Yes	220,317
HD-01.2C-01R	0.000	0.311	0.159	0.159	Yes	220,317
HD-02.2C-02N	0.000	0.378	0.137	0.137	Yes	220,317
HD-02.1C-01V	0.280	0.278	0.105	0.105	No	220,317
HD-02.2C-01V	0.000	0.364	0.171	0.171	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:22:16AM

Run Name: HD: HTR DN TO PUMPS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: HD-10.1A HD TK to HD PMP 31							
HD-10.2A-07X	0.312	0.229	0.149	0.149	255,405	No	220,317
HD-10.2A-04V	0.312	0.243	0.160	0.160	325,860	No	220,317
HD-10.2A-06N	0.312	0.257	0.149	0.149	525,834	No	220,317
HD-10.2A-03P	0.312	0.298	0.149	0.149	1,162,704	Yes	220,317
HD-10.2A-05P	0.312	0.282	0.149	0.149	1,175,437	No	220,317
HD-10.2A-02E	0.312	0.374	0.149	0.149	1,250,677	Yes	220,317
HD-10.2A-01E (D/S)	0.000	0.357	0.149	0.149	1,307,779	Yes	220,317
HD-10.1A-02P	0.375	0.350	0.199	0.199	1,882,804	No	220,317
HD-10.1A-01N	0.562	0.521	0.199	0.199	2,093,187	No	220,317
HD-10.2A-01E	0.000	0.358	0.199	0.199	2,132,697	Yes	220,317
Sorted By: Remaining Life							
====>Grouped by Line: HD-10.1B HD TK to HD PMP 32							
HD-10.2B-06X	0.312	0.229	0.149	0.149	255,405	No	220,317
HD-10.2B-03V	0.312	0.243	0.160	0.160	325,860	No	220,317
HD-10.2B-05N	0.312	0.257	0.149	0.149	525,834	No	220,317
HD-10.2B-02P	0.312	0.268	0.149	0.149	724,323	No	220,317
HD-10.2B-01E (D/S)	0.000	0.269	0.149	0.149	756,338	No	220,317
HD-10.2B-04P	0.312	0.282	0.149	0.149	1,175,437	No	220,317
HD-10.1B-02P	0.375	0.353	0.199	0.199	1,919,018	No	220,317
HD-10.1B-01N	0.562	0.521	0.199	0.199	2,093,187	No	220,317
HD-10.2B-01E	0.000	0.355	0.199	0.199	2,093,990	No	220,317
Sorted By: Remaining Life							

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:22:25AM

Run Name: MSD: MS 31 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: MSD-01.1A_1 MSEP 31A to HDR						
MSD-01.1A-01N	0.250	0.245	0.106	11,900,515	No	220,317
MSD-01.1A-03P	0.250	0.226	0.106	17,153,392	Yes	220,317
MSD-01.1A-02T (D/S)	0.000	0.316	0.106	17,983,622	No	220,317
MSD-01.1A-02T (BR/SE)	0.000	0.347	0.106	25,805,420	No	220,317
====>Grouped by Line: MSD-01.1A_2 MSEP 31A to HDR						
MSD-01.1A-04N	0.250	0.245	0.106	11,900,515	No	220,317
MSD-01.1A-08P	0.250	0.247	0.106	22,435,330	No	220,317
====>Grouped by Line: MSD-01.1A_3 MSEP 31A to HDR						
MSD-01.1A-06T (D/S)	0.000	0.245	0.106	11,900,515	No	220,317
MSD-01.1A-05N	0.250	0.245	0.106	11,900,515	No	220,317
MSD-01.1A-06T (BR/SE)	0.000	0.246	0.106	14,992,254	No	220,317
MSD-01.1A-07P	0.250	0.247	0.106	20,145,154	No	220,317
====>Grouped by Line: MSD-01.1B_1 MSEP 31B to HDR						
MSD-01.1B-01N	0.250	0.245	0.106	11,900,515	No	220,317
MSD-01.1B-02T (D/S)	0.000	0.245	0.106	11,900,515	No	220,317
MSD-01.1B-02T (BR/SE)	0.000	0.246	0.106	14,992,254	No	220,317
MSD-01.1B-03P	0.250	0.247	0.106	20,145,154	No	220,317
====>Grouped by Line: MSD-01.1B_2 MSEP 31B to HDR						
MSD-01.1B-04N	0.250	0.245	0.106	11,900,515	No	220,317
MSD-01.1B-08P	0.250	0.247	0.106	22,435,330	No	220,317
====>Grouped by Line: MSD-01.1B_3 MSEP 31B to HDR						
MSD-01.1B-06T (D/S)	0.000	0.245	0.106	11,900,515	No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: MSD-01.1B_3 MSEP 31B to HDR							
MSD-01.1B-05N	0.250	0.245	0.106	0.106	11,900,515	No	220,317
MSD-01.1B-07P	0.250	0.247	0.106	0.106	20,145,154	No	220,317
MSD-01.1B-06T (BR/SE)	0.000	0.398	0.106	0.106	31,245,812	No	220,317
====>Grouped by Line: MSD-01.2A MSEP 31A DR HDR							
MSD-01.2A-01T (D/S)	0.000	0.242	0.106	0.106	7,907,170	No	220,317
MSD-01.2A-01T	0.250	0.246	0.106	0.106	14,615,214	No	220,317
MSD-01.2A-01T (BR/SE)	0.000	0.246	0.106	0.106	17,720,260	No	220,317
====>Grouped by Line: MSD-01.2B MSEP 31B DR HDR							
MSD-01.2B-01T (D/S)	0.000	0.242	0.106	0.106	7,907,170	No	220,317
MSD-01.2B-01T	0.250	0.246	0.106	0.106	14,615,214	No	220,317
MSD-01.2B-01T (BR/SE)	0.000	0.246	0.106	0.106	17,720,260	No	220,317
====>Grouped by Line: MSD-01.3A HDR to MSEP TK 31A							
MSD-01.3A-04V	0.250	0.236	0.113	0.113	4,115,594	No	220,317
MSD-01.3A-06V	0.250	0.236	0.113	0.113	4,115,594	No	220,317
MSD-01.3A-08N	0.250	0.239	0.106	0.106	5,574,127	No	220,317
MSD-01.3A-02P	0.250	0.223	0.106	0.106	7,270,324	Yes	220,317
MSD-01.3A-05P	0.250	0.244	0.106	0.106	10,516,416	No	220,317
MSD-01.3A-07P	0.250	0.244	0.106	0.106	10,516,416	No	220,317
MSD-01.3A-03E	0.250	0.364	0.106	0.106	11,706,433	Yes	220,317
MSD-01.3A-01T (BR/SE)	0.000	0.550	0.106	0.106	14,867,418	No	220,317
MSD-01.3A-01T	0.250	0.578	0.106	0.106	22,436,874	No	220,317
MSD-01.3A-01T (D/S)	0.000	0.415	0.106	0.106	26,510,582	No	220,317
====>Grouped by Line: MSD-01.3B HDR to MSEP TK 31B							
MSD-01.3B-04V	0.250	0.236	0.113	0.113	4,115,594	No	220,317
MSD-01.3B-06V	0.250	0.236	0.113	0.113	4,115,594	No	220,317
MSD-01.3B-01T (BR/SE)	0.000	0.236	0.106	0.106	4,366,011	No	220,317
MSD-01.3B-08N	0.250	0.233	0.106	0.106	5,312,173	Yes	220,317
MSD-01.3B-01T	0.250	0.240	0.106	0.106	6,399,920	No	220,317
MSD-01.3B-02P	0.250	0.242	0.106	0.106	8,482,552	No	220,317
MSD-01.3B-03E	0.250	0.319	0.106	0.106	9,643,766	Yes	220,317
MSD-01.3B-05P	0.250	0.244	0.106	0.106	10,516,416	No	220,317
MSD-01.3B-07P	0.250	0.244	0.106	0.106	10,516,416	No	220,317
MSD-01.3B-01T (D/S)	0.000	0.245	0.106	0.106	11,900,515	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:22:34AM

Run Name: MSD: MS 32 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: MSD-01.6A_1 MSEP 32A to HDR						
MSD-01.6A-02T (D/S)	0.000	0.245	0.106	0.106	No	220,317
MSD-01.6A-01N	0.250	0.245	0.106	0.106	No	220,317
MSD-01.6A-02T (BR/SE)	0.000	0.246	0.106	0.106	No	220,317
MSD-01.6A-03P	0.250	0.247	0.106	0.106	No	220,317
====>Grouped by Line: MSD-01.6A_2 MSEP 32A to HDR						
MSD-01.6A-08P	0.250	0.247	0.106	0.106	No	220,317
MSD-01.6A-04N	1.125	1.118	0.106	0.106	No	220,317
====>Grouped by Line: MSD-01.6A_3 MSEP 32A to HDR						
MSD-01.6A-05N	0.250	0.245	0.106	0.106	No	220,317
MSD-01.6A-06T (D/S)	0.000	0.245	0.106	0.106	No	220,317
MSD-01.6A-06T (BR/SE)	0.000	0.246	0.106	0.106	No	220,317
MSD-01.6A-07P	0.250	0.247	0.106	0.106	No	220,317
====>Grouped by Line: MSD-01.6B_1 MSEP 32B to HDR						
MSD-01.6B-02T (D/S)	0.000	0.245	0.106	0.106	No	220,317
MSD-01.6B-01N	0.250	0.245	0.106	0.106	No	220,317
MSD-01.6B-02T (BR/SE)	0.000	0.246	0.106	0.106	No	220,317
MSD-01.6B-03P	0.312	0.309	0.106	0.106	No	220,317
====>Grouped by Line: MSD-01.6B_2 MSEP 32B to HDR						
MSD-01.6B-08P	0.312	0.309	0.106	0.106	No	220,317
MSD-01.6B-04N	1.125	1.118	0.106	0.106	No	220,317
====>Grouped by Line: MSD-01.6B_3 MSEP 32B to HDR						
MSD-01.6B-06T (D/S)	0.000	0.245	0.106	0.106	No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: MSD-01.6B_3 MSEP 32B to HDR							
MSD-01.6B-05N	0.250	0.245	0.106	0.106	11,900,515	No	220,317
MSD-01.6B-06T (BR/SE)	0.000	0.246	0.106	0.106	14,992,254	No	220,317
MSD-01.6B-07P	0.264	0.261	0.106	0.106	22,046,740	Yes	220,317
====>Grouped by Line: MSD-01.7A MSEP 32A DR HDR							
MSD-01.7A-02P	0.250	0.219	0.106	0.106	13,533,011	Yes	220,317
MSD-01.7A-01T (D/S)	0.000	0.444	0.106	0.106	19,609,404	Yes	220,317
MSD-01.7A-01T	0.250	0.328	0.106	0.106	23,261,676	No	220,317
MSD-01.7A-01T (BR/SE)	0.000	0.515	0.106	0.106	51,608,120	No	220,317
====>Grouped by Line: MSD-01.7B MSEP 32B DR HDR							
MSD-01.7B-01T (D/S)	0.000	0.352	0.106	0.106	14,276,371	Yes	220,317
MSD-01.7B-01T (BR/SE)	0.000	0.276	0.106	0.106	21,518,040	No	220,317
MSD-01.7B-02P	0.304	0.300	0.106	0.106	22,731,316	No	220,317
MSD-01.7B-01T	0.250	0.328	0.106	0.106	23,261,676	Yes	220,317
====>Grouped by Line: MSD-01.8A HDR to MSEP TK 32A							
MSD-01.8A-08N	0.250	0.180	0.106	0.106	3,121,502	Yes	220,317
MSD-01.8A-04V	0.250	0.236	0.113	0.113	4,115,598	No	220,317
MSD-01.8A-06V	0.250	0.236	0.113	0.113	4,115,598	No	220,317
MSD-01.8A-01T	0.250	0.211	0.106	0.106	5,025,201	Yes	220,317
MSD-01.8A-01T (BR/SE)	0.000	0.312	0.106	0.106	6,891,031	No	220,317
MSD-01.8A-02P	0.250	0.235	0.106	0.106	7,999,248	Yes	220,317
MSD-01.8A-05P	0.250	0.224	0.106	0.106	8,999,662	Yes	220,317
MSD-01.8A-07P	0.250	0.244	0.106	0.106	10,516,427	No	220,317
MSD-01.8A-03E	0.250	0.388	0.106	0.106	12,776,928	Yes	220,317
MSD-01.8A-01T (D/S)	0.000	0.286	0.106	0.106	15,452,146	Yes	220,317
====>Grouped by Line: MSD-01.8B HDR to MSEP TK 32B							
MSD-01.8B-04V	0.250	0.236	0.113	0.113	4,115,598	No	220,317
MSD-01.8B-06V	0.250	0.236	0.113	0.113	4,115,598	No	220,317
MSD-01.8B-03E	0.250	0.249	0.106	0.106	6,496,635	Yes	220,317
MSD-01.8B-08N	0.250	0.275	0.106	0.106	7,068,483	Yes	220,317
MSD-01.8B-02P	0.285	0.230	0.106	0.106	7,657,014	Yes	220,317
MSD-01.8B-01T (BR/SE)	0.000	0.345	0.106	0.106	8,017,074	No	220,317
MSD-01.8B-01T	0.250	0.325	0.106	0.106	10,432,654	Yes	220,317
MSD-01.8B-05P	0.250	0.244	0.106	0.106	10,516,427	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: MSD-01.8B HDR to MSEP TK 32B						
MSD-01.8B-07P	0.250	0.256	0.106	11,470,234	Yes	220,317
MSD-01.8B-01T (D/S)	0.000	0.338	0.106	19,892,594	Yes	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:22:45AM

Run Name: MSD: MS 33 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: MSD-01.11A_1 MSEP 33A to HDR							
MSD-01.11A-01N	0.250	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11A-02T (D/S)	0.000	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11A-02T (BR/SE)	0.000	0.246	0.106	0.106	14,992,161	No	220,317
MSD-01.11A-03P	0.250	0.247	0.106	0.106	20,145,026	No	220,317
====>Grouped by Line: MSD-01.11A_2 MSEP 33A to HDR							
MSD-01.11A-04N	0.250	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11A-08P	0.250	0.247	0.106	0.106	22,435,190	No	220,317
====>Grouped by Line: MSD-01.11A_3 MSEP 33A to HDR							
MSD-01.11A-05N	0.250	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11A-06T (D/S)	0.000	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11A-06T (BR/SE)	0.000	0.246	0.106	0.106	14,992,161	No	220,317
MSD-01.11A-07P	0.250	0.247	0.106	0.106	20,145,026	No	220,317
====>Grouped by Line: MSD-01.11B_1 MSEP 33B to HDR							
MSD-01.11B-02T (D/S)	0.000	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11B-01N	0.250	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11B-02T (BR/SE)	0.000	0.246	0.106	0.106	14,992,161	No	220,317
MSD-01.11B-03P	0.250	0.247	0.106	0.106	20,145,026	No	220,317
====>Grouped by Line: MSD-01.11B_2 MSEP 33B to HDR							
MSD-01.11B-04N	0.250	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11B-08P	0.250	0.247	0.106	0.106	22,435,190	No	220,317
====>Grouped by Line: MSD-01.11B_3 MSEP 33B to HDR							
MSD-01.11B-05N	0.250	0.245	0.106	0.106	11,900,440	No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: MSD-01.11B_3 MSEP 33B to HDR							
MSD-01.11B-06T (D/S)	0.000	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11B-06T (BR/SE)	0.000	0.246	0.106	0.106	14,992,161	No	220,317
MSD-01.11B-07P	0.250	0.247	0.106	0.106	20,145,026	No	220,317
====>Grouped by Line: MSD-01.12A MSEP 33A DR HDR							
MSD-01.12A-01T (D/S)	0.000	0.242	0.106	0.106	7,907,208	No	220,317
MSD-01.12A-01T	0.250	0.246	0.106	0.106	14,615,122	No	220,317
MSD-01.12A-02P	0.250	0.246	0.106	0.106	16,699,543	No	220,317
MSD-01.12A-01T (BR/SE)	0.000	0.246	0.106	0.106	17,720,148	No	220,317
====>Grouped by Line: MSD-01.12B MSEP 33B DR HDR							
MSD-01.12B-01T (D/S)	0.000	0.242	0.106	0.106	7,907,208	No	220,317
MSD-01.12B-01T	0.250	0.246	0.106	0.106	14,615,122	No	220,317
MSD-01.12B-02P	0.250	0.246	0.106	0.106	16,699,543	No	220,317
MSD-01.12B-01T (BR/SE)	0.000	0.246	0.106	0.106	17,720,148	No	220,317
====>Grouped by Line: MSD-01.13A HDR to MSEP TK 33A							
MSD-01.13A-04V	0.250	0.236	0.113	0.113	4,115,598	No	220,317
MSD-01.13A-06V	0.250	0.236	0.113	0.113	4,115,598	No	220,317
MSD-01.13A-10N	0.250	0.239	0.106	0.106	5,574,132	No	220,317
MSD-01.13A-08E	0.437	0.237	0.106	0.106	5,618,585	Yes	220,317
MSD-01.13A-02P	0.250	0.222	0.106	0.106	7,217,406	Yes	220,317
MSD-01.13A-01T (BR/SE)	0.000	0.321	0.106	0.106	7,223,591	No	220,317
MSD-01.13A-09P	0.382	0.230	0.106	0.106	8,026,640	Yes	220,317
MSD-01.13A-05P	0.250	0.244	0.106	0.106	10,516,427	No	220,317
MSD-01.13A-03E	0.250	0.361	0.106	0.106	11,563,105	Yes	220,317
MSD-01.13A-07P	0.268	0.262	0.106	0.106	11,817,547	Yes	220,317
MSD-01.13A-01T	0.250	0.364	0.106	0.106	12,267,702	No	220,317
MSD-01.13A-01T (D/S)	0.000	0.340	0.106	0.106	20,054,386	No	220,317
====>Grouped by Line: MSD-01.13B HDR to MSEP TK 33B							
MSD-01.13B-04V	0.250	0.236	0.113	0.113	4,115,598	No	220,317
MSD-01.13B-06V	0.250	0.236	0.113	0.113	4,115,598	No	220,317
MSD-01.13B-10N	0.250	0.239	0.106	0.106	5,563,079	Yes	220,317
MSD-01.13B-08E	0.250	0.240	0.106	0.106	6,063,909	No	220,317
MSD-01.13B-01T (BR/SE)	0.000	0.290	0.106	0.106	6,155,055	No	220,317
MSD-01.13B-02P	0.250	0.226	0.106	0.106	7,441,691	Yes	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1] Thoop				
====>Grouped by Line: MSD-01.13B HDR to MSEP TK 33B						
MSD-01.13B-09P	0.250	0.243	0.106	9,198,481	No	220,317
MSD-01.13B-03E	0.250	0.330	0.106	10,154,904	Yes	220,317
MSD-01.13B-05P	0.250	0.244	0.106	10,516,427	No	220,317
MSD-01.13B-07P	0.250	0.244	0.106	10,516,427	No	220,317
MSD-01.13B-01T (D/S)	0.000	0.299	0.106	16,564,997	No	220,317
MSD-01.13B-01T	0.250	0.527	0.106	20,045,804	Yes	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:23:11AM

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Run Name: MSD: MSDT 31 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			
====>Grouped by Line: MSD-01.4A TK 31A to HD TK						
MSD-01.5A-27N	0.280	0.294	0.055	2,707,935	Yes	220,317
MSD-01.4A-01N	0.322	0.291	0.071	3,312,024	No	220,317
MSD-01.5A-15P_2	0.280	0.254	0.055	3,608,182	No	220,317
MSD-01.5A-28P_1	0.280	0.269	0.055	8,794,078	No	220,317
MSD-01.5A-08E	0.319	0.319	0.047	100,000,000	No	112,406
MSD-01.5A-09P	0.317	0.317	0.055	100,000,000	No	112,406
MSD-01.5A-05E	0.319	0.319	0.047	100,000,000	No	112,406
MSD-01.5A-06V	0.280	0.280	0.059	100,000,000	No	112,406
MSD-01.5A-03E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5A-04P	0.349	0.349	0.055	100,000,000	No	112,406
MSD-01.5A-28P_2	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5A-15P_1	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5A-14E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5A-13P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5A-12E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5A-11P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5A-10E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5A-07P	0.289	0.289	0.055	100,000,000	No	112,406
MSD-01.4A-02P	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.5A-16E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5A-17P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5A-18E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5A-19P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5A-20E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5A-21P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5A-29P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5A-22E	0.280	0.280	0.047	100,000,000	No	112,406

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: MSD-01.4A TK 31A to HD TK						
MSD-01.5A-23P	0.314	0.314	0.055	100,000,000	No	112,406
MSD-01.5A-24E	0.302	0.302	0.047	100,000,000	No	112,406
MSD-01.5A-25P	0.318	0.318	0.055	100,000,000	No	112,406
MSD-01.5A-26E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5A-01E (D/S)	0.000	0.280	0.047	100,000,000	No	112,406
MSD-01.5A-02P	0.314	0.314	0.055	100,000,000	No	112,406
MSD-01.4A-04P	0.349	0.349	0.071	100,000,000	No	112,406
MSD-01.5A-01E	0.000	0.322	0.061	100,000,000	No	112,406
MSD-01.4A-03T	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.4A-03T (D/S)	0.000	0.322	0.071	100,000,000	No	112,406
====>Grouped by Line: MSD-01.4B TK 31B to HD TK						
MSD-01.5B-28N	0.280	0.239	0.055	2,080,195	No	220,317
MSD-01.5B-14E	0.280	0.242	0.055	2,286,679	No	220,317
MSD-01.5B-12E	0.280	0.279	0.055	2,744,898	Yes	220,317
MSD-01.5B-11P_2	0.280	0.258	0.055	2,868,886	Yes	220,317
MSD-01.5B-15P	0.280	0.254	0.055	3,608,182	No	220,317
MSD-01.4B-01N	0.322	0.315	0.071	3,674,344	No	112,406
MSD-01.5B-13P	0.280	0.262	0.055	3,745,548	Yes	220,317
MSD-01.5B-29P	0.280	0.269	0.055	8,794,078	No	220,317
MSD-01.5B-30P_1	0.280	0.269	0.055	8,794,078	No	220,317
MSD-01.5B-30P_2	0.000	0.280	0.055	100,000,000	No	112,406
MSD-01.4B-02P	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.4B-03E	0.322	0.322	0.061	100,000,000	No	112,406
MSD-01.4B-04P	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.4B-05E	0.322	0.322	0.061	100,000,000	No	112,406
MSD-01.4B-07P	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.4B-06T	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.4B-06T (D/S)	0.000	0.322	0.071	100,000,000	No	112,406
MSD-01.4B-08P	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.5B-01R	0.000	0.322	0.061	100,000,000	No	112,406
MSD-01.5B-01R (D/S)	0.000	0.280	0.047	100,000,000	No	112,406
MSD-01.5B-02P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-03E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5B-04V	0.280	0.280	0.059	100,000,000	No	112,406
MSD-01.5B-05P	0.307	0.307	0.055	100,000,000	No	112,406
MSD-01.5B-06E	0.303	0.303	0.047	100,000,000	No	112,406

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: MSD-01.4B TK 31B to HD TK						
MSD-01.5B-07P	0.313	0.313	0.055	100,000,000	No	112,406
MSD-01.5B-08E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5B-09P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-10E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5B-11P_1	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-16E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5B-17P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-18E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5B-19P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-20E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5B-21P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-22E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5B-23P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-31P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-24E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5B-25P	0.302	0.302	0.055	100,000,000	No	112,406
MSD-01.5B-32P	0.302	0.302	0.055	100,000,000	No	112,406
MSD-01.5B-26E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5B-27P	0.311	0.311	0.055	100,000,000	No	112,406

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:23:36AM

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Run Name: MSD: MSDT 32 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			
====>Grouped by Line: MSD-01.9A TK 32A to HD TK						
MSD-01.10A-25N	0.280	0.249	0.055	0.055	No	220,317
MSD-01.9A-01N	0.322	0.291	0.071	0.071	No	220,317
MSD-01.10A-26P_2	0.280	0.269	0.055	0.055	No	220,317
MSD-01.10A-05E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.10A-04P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.10A-03E	0.309	0.309	0.047	0.047	No	112,406
MSD-01.10A-02P	0.304	0.304	0.055	0.055	No	112,406
MSD-01.10A-06V	0.280	0.280	0.059	0.059	No	112,406
MSD-01.10A-01E	0.000	0.322	0.061	0.061	No	112,406
MSD-01.10A-01E (D/S)	0.000	0.280	0.047	0.047	No	112,406
MSD-01.9A-04P	0.322	0.322	0.071	0.071	No	112,406
MSD-01.9A-02P	0.322	0.322	0.071	0.071	No	112,406
MSD-01.9A-03T (D/S)	0.000	0.322	0.071	0.071	No	112,406
MSD-01.10A-07P	0.293	0.293	0.055	0.055	No	112,406
MSD-01.10A-08E	0.307	0.307	0.047	0.047	No	112,406
MSD-01.10A-09P	0.293	0.293	0.055	0.055	No	112,406
MSD-01.10A-10E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.10A-11P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.10A-12E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.10A-13P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.10A-26P_1	0.280	0.280	0.055	0.055	No	112,406
MSD-01.9A-03T	0.322	0.322	0.071	0.071	No	112,406
MSD-01.10A-26P_3	0.280	0.280	0.055	0.055	No	112,406
MSD-01.10A-14E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.10A-15P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.10A-16E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.10A-17P	0.280	0.280	0.055	0.055	No	112,406

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: MSD-01.9A TK 32A to HD TK						
MSD-01.10A-18E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.10A-19P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.10A-27P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.10A-20E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.10A-21P	0.294	0.294	0.055	100,000,000	No	112,406
MSD-01.10A-22E	0.317	0.317	0.047	100,000,000	No	112,406
MSD-01.10A-23P	0.289	0.289	0.055	100,000,000	No	112,406
MSD-01.10A-24E	0.280	0.280	0.047	100,000,000	No	112,406
Sorted By: Remaining Life						
====>Grouped by Line: MSD-01.9B TK 32B to HD TK						
MSD-01.10B-11E	0.280	0.208	0.055	1,876,739	Yes	220,317
MSD-01.10B-27N	0.280	0.239	0.055	2,080,195	No	220,317
MSD-01.10B-13E	0.280	0.242	0.055	2,286,679	No	220,317
MSD-01.10B-12P	0.280	0.223	0.055	3,039,772	Yes	220,317
MSD-01.9B-01N	0.322	0.291	0.071	3,312,024	No	220,317
MSD-01.10B-14P	0.280	0.254	0.055	3,608,182	No	220,317
MSD-01.10B-28P	0.280	0.269	0.055	8,794,078	No	220,317
MSD-01.10B-29P_1	0.280	0.269	0.055	8,794,078	No	220,317
MSD-01.9B-02P	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.9B-03T	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.9B-03T (D/S)	0.000	0.322	0.071	100,000,000	No	112,406
MSD-01.9B-04P	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.10B-01E	0.000	0.322	0.061	100,000,000	No	112,406
MSD-01.10B-01E (D/S)	0.000	0.280	0.047	100,000,000	No	112,406
MSD-01.10B-02E	0.280	0.252	0.047	100,000,000	No	112,406
MSD-01.10B-03P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.10B-04E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.10B-05V	0.280	0.280	0.059	100,000,000	No	112,406
MSD-01.10B-06P	0.299	0.299	0.055	100,000,000	No	112,406
MSD-01.10B-07E	0.328	0.251	0.047	100,000,000	No	112,406
MSD-01.10B-08P	0.289	0.289	0.055	100,000,000	No	112,406
MSD-01.10B-09E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.10B-10P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.10B-29P_2	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.10B-15E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.10B-16P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.10B-17E	0.280	0.280	0.047	100,000,000	No	112,406

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1] Thoop			
====>Grouped by Line: MSD-01.9B TK 32B to HD TK					
MSD-01.10B-18P	0.280	0.280	0.055	No	112,406
MSD-01.10B-19E	0.280	0.280	0.047	No	112,406
MSD-01.10B-20P	0.280	0.280	0.055	No	112,406
MSD-01.10B-21E	0.280	0.280	0.047	No	112,406
MSD-01.10B-22P	0.280	0.280	0.055	No	112,406
MSD-01.10B-30P	0.280	0.280	0.055	No	112,406
MSD-01.10B-23E	0.280	0.280	0.047	No	112,406
MSD-01.10B-24P	0.285	0.285	0.055	No	112,406
MSD-01.10B-25E	0.316	0.316	0.047	No	112,406
MSD-01.10B-26P	0.290	0.290	0.055	No	112,406

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:23:59AM

Run Name: MSD: MSDT 33 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: MSD-01.14A TK 33A to HD TK						
MSD-01.15A-20N	0.280	0.275	0.055	2,493,035	Yes	220,317
MSD-01.14A-01N	0.322	0.291	0.071	3,312,024	No	220,317
MSD-01.15A-22P	0.281	0.281	0.055	100,000,000	No	112,406
MSD-01.15A-15E	0.331	0.331	0.047	100,000,000	No	112,406
MSD-01.15A-16P	0.284	0.284	0.055	100,000,000	No	112,406
MSD-01.15A-10P	0.306	0.306	0.055	100,000,000	No	112,406
MSD-01.15A-17E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.15A-18P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.15A-09E	0.302	0.302	0.047	100,000,000	No	112,406
MSD-01.15A-11E	0.290	0.290	0.047	100,000,000	No	112,406
MSD-01.15A-12P	0.272	0.272	0.055	100,000,000	No	112,406
MSD-01.15A-19E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.15A-08P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.15A-21P	0.000	0.280	0.055	100,000,000	No	112,406
MSD-01.15A-07E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.15A-05E	0.322	0.322	0.047	100,000,000	No	112,406
MSD-01.15A-06P	0.285	0.285	0.055	100,000,000	No	112,406
MSD-01.15A-04E	0.341	0.341	0.047	100,000,000	No	112,406
MSD-01.15A-03P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.15A-02V	0.280	0.280	0.059	100,000,000	No	112,406
MSD-01.15A-01E (D/S)	0.000	0.280	0.047	100,000,000	No	112,406
MSD-01.15A-01E	0.000	0.322	0.061	100,000,000	No	112,406
MSD-01.14A-04P	0.324	0.324	0.071	100,000,000	No	112,406
MSD-01.14A-03T (D/S)	0.000	0.322	0.071	100,000,000	No	112,406
MSD-01.14A-02P	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.14A-03T	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.15A-13E	0.334	0.334	0.047	100,000,000	No	112,406

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: MSD-01.14A TK 33A to HD TK						
MSD-01.15A-14P	0.281	0.281	0.055	100,000,000	No	112,406
====>Grouped by Line: MSD-01.14B TK 33B to HD TK						
MSD-01.15B-15E	0.280	0.190	0.055	1,656,642	Yes	220,317
MSD-01.15B-13E	0.280	0.230	0.055	2,145,746	Yes	220,317
MSD-01.15B-29N	0.280	0.278	0.055	2,526,967	Yes	220,317
MSD-01.15B-14P	0.280	0.218	0.055	2,949,288	Yes	220,317
MSD-01.14B-01N	0.322	0.291	0.071	3,312,024	No	220,317
MSD-01.15B-12P_2	0.280	0.254	0.055	3,608,182	No	220,317
MSD-01.15B-16P	0.280	0.269	0.055	3,872,226	Yes	220,317
MSD-01.15B-30P	0.280	0.269	0.055	8,794,078	No	220,317
MSD-01.15B-31P_1	0.280	0.269	0.055	8,794,078	No	220,317
MSD-01.14B-02P	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.14B-03T	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.14B-03T (D/S)	0.000	0.322	0.071	100,000,000	No	112,406
MSD-01.14B-04P	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.15B-01E	0.000	0.322	0.061	100,000,000	No	112,406
MSD-01.15B-01E (D/S)	0.000	0.280	0.047	100,000,000	No	112,406
MSD-01.15B-02E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.15B-03P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.15B-04E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.15B-05V	0.280	0.280	0.059	100,000,000	No	112,406
MSD-01.15B-06P	0.265	0.265	0.055	100,000,000	No	112,406
MSD-01.15B-07E	0.309	0.309	0.047	100,000,000	No	112,406
MSD-01.15B-08P	0.299	0.299	0.055	100,000,000	No	112,406
MSD-01.15B-09E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.15B-10P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.15B-11E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.15B-12P_1	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.15B-31P_2	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.15B-17E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.15B-18P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.15B-19E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.15B-20P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.15B-21E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.15B-22P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.15B-23E	0.280	0.280	0.047	100,000,000	No	112,406

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1] Thoop				
====>Grouped by Line: MSD-01.14B TK 33B to HD TK						
MSD-01.15B-24P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.15B-32P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.15B-25E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.15B-26P	0.278	0.278	0.055	100,000,000	No	112,406
MSD-01.15B-27E	0.341	0.341	0.047	100,000,000	No	112,406
MSD-01.15B-28P	0.282	0.282	0.055	100,000,000	No	112,406

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:24:20AM

Pass 1 Analysis Exclude Measured Wear

Run Name: PD: PRESEPRTR DRAINS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: PD-01.1 PRESEP 1B DR to HDR							
PD-01.2-100	0.365	0.341	0.089	0.089	897,785	No	171,511
PD-01.2-09V	0.365	0.336	0.095	0.095	3,530,704	No	171,511
PD-02.1-01T (BR/SE)	0.000	0.338	0.083	0.083	4,052,156	No	171,511
PD-01.2-04E	0.365	0.344	0.089	0.089	5,045,853	No	171,511
PD-01.2-06E	0.365	0.344	0.089	0.089	5,045,853	No	171,511
PD-01.2-02B	0.365	0.345	0.089	0.089	5,358,505	No	171,511
PD-01.2-08E	0.365	0.346	0.089	0.089	5,709,054	No	171,511
PD-01.2-01R (D/S)	0.000	0.346	0.089	0.089	5,900,760	No	171,511
PD-02.1-01T (D/S)	0.000	0.362	0.132	0.132	7,345,406	No	171,511
PD-01.2-07P	0.365	0.350	0.089	0.089	7,672,129	No	171,511
PD-01.2-05P	0.365	0.350	0.089	0.089	7,672,129	No	171,511
PD-01.2-03P	0.365	0.350	0.089	0.089	7,672,129	No	171,511
PD-01.2-01R	0.000	0.363	0.116	0.116	8,704,913	No	171,511
PD-01.1-01N	0.375	0.375	0.094	0.094	100,000,000	No	171,511
Sorted By: Remaining Life							

====>Grouped by Line: PD-01.3 PRESEP 1A DR to HDR

PD-01.4-100	0.380	0.295	0.089	0.089	735,025	No	171,511
PD-01.4-09V	0.365	0.336	0.095	0.095	3,530,704	No	171,511
PD-01.4-06E	0.365	0.344	0.089	0.089	5,045,853	No	171,511
PD-01.4-02B	0.365	0.354	0.089	0.089	5,547,354	Yes	171,511
PD-01.4-08E	0.365	0.346	0.089	0.089	5,709,054	No	171,511
PD-01.4-04E	0.365	0.346	0.089	0.089	5,709,054	No	171,511
PD-01.4-03P	0.365	0.339	0.089	0.089	7,341,269	Yes	171,511
PD-01.4-01R (D/S)	0.000	0.416	0.089	0.089	7,498,899	Yes	171,511
PD-01.4-07P	0.365	0.350	0.089	0.089	7,672,129	No	171,511
PD-01.4-01R	0.000	0.365	0.116	0.116	8,772,829	Yes	171,511
PD-01.4-05P	0.365	0.352	0.089	0.089	8,776,358	No	171,511
Sorted By: Remaining Life							

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
Sorted By: Remaining Life						
====>Grouped by Line: PD-01.3 PRESEP 1A DR to HDR	0.375	0.375	0.094	100,000,000	No	171,511
PD-01.3-01N						
Sorted By: Remaining Life						
====>Grouped by Line: PD-01.5 PRESEP 2B DR to HDR	0.365	0.320	0.089	824,151	No	171,511
PD-01.6-140						
PD-01.6-13V	0.365	0.336	0.095	3,530,704	No	171,511
PD-01.6-04E	0.365	0.344	0.089	5,045,853	No	171,511
PD-01.6-06E	0.365	0.344	0.089	5,045,853	No	171,511
PD-01.6-08E	0.365	0.344	0.089	5,045,853	No	171,511
PD-01.6-10E	0.365	0.344	0.089	5,045,853	No	171,511
PD-01.6-02B	0.365	0.345	0.089	5,358,505	No	171,511
PD-01.6-12E	0.365	0.336	0.089	5,493,471	Yes	171,511
PD-01.6-01R (D/S)	0.000	0.346	0.089	5,900,760	No	171,511
PD-01.6-09P	0.365	0.346	0.089	5,900,760	No	171,511
PD-01.6-11P	0.365	0.346	0.089	5,900,760	No	171,511
PD-01.6-03P	0.365	0.350	0.089	7,672,129	No	171,511
PD-01.6-05P	0.365	0.350	0.089	7,672,129	No	171,511
PD-01.6-07P	0.365	0.350	0.089	7,672,129	No	171,511
PD-01.6-01R	0.000	0.363	0.116	8,704,913	No	171,511
PD-01.5-01N	0.375	0.375	0.094	100,000,000	No	171,511
Sorted By: Remaining Life						
====>Grouped by Line: PD-01.7 PRESEP 2A DR to HDR	0.365	0.294	0.089	731,458	No	171,511
PD-01.8-140						
PD-01.8-13V	0.365	0.336	0.095	3,530,704	No	171,511
PD-01.8-04E	0.365	0.344	0.089	5,045,853	No	171,511
PD-01.8-06E	0.365	0.344	0.089	5,045,853	No	171,511
PD-01.8-08E	0.365	0.344	0.089	5,045,853	No	171,511
PD-01.8-10E	0.365	0.344	0.089	5,045,853	No	171,511
PD-01.8-02B	0.365	0.345	0.089	5,358,505	No	171,511
PD-01.8-12E	0.365	0.346	0.089	5,709,054	No	171,511
PD-01.8-01R (D/S)	0.000	0.346	0.089	5,900,760	No	171,511
PD-01.8-03P	0.365	0.350	0.089	7,672,129	No	171,511
PD-01.8-05P	0.365	0.350	0.089	7,672,129	No	171,511
PD-01.8-07P	0.365	0.350	0.089	7,672,129	No	171,511
PD-01.8-09P	0.365	0.350	0.089	7,672,129	No	171,511
PD-01.8-11P	0.365	0.350	0.089	7,672,129	No	171,511
PD-01.8-01R	0.000	0.363	0.116	8,704,913	No	171,511
PD-01.7-01N	0.375	0.375	0.094	100,000,000	No	171,511

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: PD-02.2 PRESEP HDR to HD TK							
PD-02.2-01T (BR/SE)	0.000	0.305	0.083	0.083	4,151,542	No	171,511
PD-02.4-22T	0.375	0.361	0.132	0.132	6,710,183	No	171,511
PD-02.4-22T (D/S)	0.000	0.361	0.132	0.132	6,710,183	No	171,511
PD-02.2-01T (D/S)	0.000	0.457	0.132	0.132	6,995,784	No	171,511
PD-02.2-01T	0.375	0.441	0.132	0.132	12,060,850	No	171,511
====>Grouped by Line: PD-02.3 PRESEP HDR to HD TK							
PD-02.3-01T (D/S)	0.000	0.440	0.132	0.132	4,669,124	No	171,511
PD-02.3-01T	0.375	0.448	0.132	0.132	6,796,723	No	171,511
PD-02.3-01T (BR/SE)	0.000	0.501	0.083	0.083	7,807,619	No	171,511
====>Grouped by Line: PD-02.4 PRESEP HDR to HD TK							
PD-02.4-200	0.421	0.304	0.132	0.132	297,746	No	171,511
PD-02.4-30V	0.000	0.294	0.076	0.076	672,242	No	83,116
PD-02.4-29R (D/S)	0.000	0.312	0.071	0.071	2,063,548	No	83,116
PD-02.4-25T (BR/SE)	0.000	0.366	0.132	0.132	2,273,385	No	83,116
PD-02.4-01T (D/S)	0.000	0.352	0.132	0.132	2,605,746	No	171,511
PD-02.4-12E	0.375	0.343	0.132	0.132	2,762,109	No	171,511
PD-02.4-18E	0.375	0.343	0.132	0.132	2,762,109	No	171,511
PD-02.4-02E	0.375	0.368	0.132	0.132	3,102,177	No	83,116
PD-02.4-04E	0.375	0.368	0.132	0.132	3,102,177	No	83,116
PD-02.4-22E	0.000	0.368	0.132	0.132	3,102,177	No	83,116
PD-02.4-28E	0.000	0.368	0.132	0.132	3,102,177	No	83,116
PD-02.4-06E	0.375	0.368	0.132	0.132	3,102,177	No	83,116
PD-02.4-10E	0.375	0.346	0.132	0.132	3,148,493	No	171,511
PD-02.4-14E	0.375	0.346	0.132	0.132	3,148,493	No	171,511
PD-02.4-08E	0.375	0.346	0.132	0.132	3,148,493	No	171,511
PD-02.4-16E	0.375	0.374	0.132	0.132	3,169,590	Yes	171,511
PD-02.4-07P	0.375	0.347	0.132	0.132	3,260,181	No	171,511
PD-02.4-03P	0.375	0.369	0.132	0.132	3,600,250	No	83,116
PD-02.4-23R	0.000	0.370	0.132	0.132	4,126,784	No	83,116
PD-02.4-01T	0.375	0.409	0.132	0.132	4,197,241	No	171,511
PD-02.4-13P	0.375	0.353	0.132	0.132	4,292,188	No	171,511
PD-02.4-19P	0.375	0.353	0.132	0.132	4,292,188	No	171,511
PD-02.4-17P	0.375	0.355	0.132	0.132	4,328,530	Yes	171,511
PD-02.4-05P	0.375	0.371	0.132	0.132	4,632,257	No	83,116
PD-02.4-11P	0.375	0.356	0.132	0.132	4,935,517	No	171,511

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1] Thoop			
=====> Grouped by Line: PD-02.4 PRESEP HDR to HD TK					
PD-02.4-15P	0.375	0.356	0.132	No	171,511
PD-02.4-09P	0.375	0.356	0.132	No	171,511
PD-02.4-01T (BR/SE)	0.000	0.349	0.083	No	171,511
PD-02.4-27P	0.000	0.371	0.132	No	83,116
PD-02.4-29R	0.000	0.495	0.132	No	83,116
PD-02.4-21N	0.899	0.805	0.114	Yes	171,511
PD-02.4-25T	0.000	0.622	0.248	No	83,116
PD-02.4-23R (D/S)	0.000	0.623	0.248	No	83,116
PD-02.4-24P	0.000	0.624	0.248	No	83,116
PD-02.4-31R	0.000	0.277	0.071	No	83,116
PD-02.4-31R (D/S)	0.000	0.375	0.132	No	83,116
PD-02.4-32P	0.000	0.375	0.132	No	83,116
PD-02.4-25T (D/S)	0.000	0.625	0.248	No	0
PD-02.4-26P	0.000	0.625	0.248	No	0

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:24:48AM

Run Name: RHD: RH 31 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: RHD-01.1A_1 RH 31A to TK 31A							
RHD01.1A-03N	0.432	0.374	0.233	0.233	1,084,773	Yes	220,317
RHD01.1A-02P	0.432	0.366	0.233	0.233	1,519,475	Yes	220,317
RHD01.1A-01N	0.432	0.538	0.233	0.233	1,882,573	Yes	220,317
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR							
RHD01.1A-35F	0.432	0.352	0.233	0.233	603,678	No	220,317
RHD02.2A-02E	0.473	0.324	0.233	0.233	735,900	Yes	220,317
RHD01.1A-04N	0.432	0.382	0.233	0.233	920,940	No	220,317
RHD02.1A-02R	0.000	0.331	0.158	0.158	972,523	No	33,725
RHD01.2A-01R (D/S)	0.000	0.290	0.158	0.158	1,152,195	No	220,317
RHD01.1A-08E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.1A-10E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.1A-12E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.1A-16E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.1A-18E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.1A-20E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.1A-06E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.1A-29E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.1A-31E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.1A-33E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.1A-43E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.1A-45E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.1A-47E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD02.2A-03P	0.432	0.337	0.233	0.233	1,281,004	Yes	220,317
RHD01.1A-25E	0.432	0.386	0.233	0.233	1,347,921	No	220,317
RHD01.1A-27E	0.432	0.386	0.233	0.233	1,347,921	No	220,317
RHD02.2A-04E	0.432	0.379	0.233	0.233	1,368,743	Yes	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR						
RHD01.1A-14E	0.432	0.389	0.233	1,454,164	No	220,317
RHD01.1A-22E	0.432	0.389	0.233	1,454,164	No	220,317
RHD01.1A-24E	0.432	0.389	0.233	1,454,164	No	220,317
RHD01.1A-39E	0.432	0.389	0.233	1,454,164	No	220,317
RHD01.1A-41E	0.432	0.389	0.233	1,454,164	No	220,317
RHD01.1A-21P_1	0.432	0.390	0.233	1,512,265	No	220,317
RHD01.1A-37T	0.432	0.393	0.233	1,640,088	No	220,317
RHD01.1A-37T (D/S)	0.000	0.393	0.233	1,640,088	No	220,317
RHD01.1A-05P	0.432	0.385	0.233	1,735,051	Yes	220,317
RHD01.1A-34P_1	0.475	0.432	0.233	1,861,971	No	220,317
RHD02.1A-02R (D/S)	0.000	0.429	0.233	2,011,443	No	33,725
RHD02.2A-01P	0.432	0.398	0.233	2,031,288	Yes	151,585
RHD01.1A-07P_1	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-09P_1	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-11P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-13P_1	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-17P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-19P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-26P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-28P_1	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-30P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-32P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-44P_1	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-46P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-48P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.2A-01R	0.000	0.399	0.233	2,049,122	No	220,317
RHD01.1A-15P	0.432	0.403	0.233	2,383,786	No	220,317
RHD01.1A-23P	0.432	0.403	0.233	2,383,786	No	220,317
RHD01.1A-40P	0.432	0.403	0.233	2,383,786	No	220,317
RHD01.1A-42P_1	0.432	0.403	0.233	2,383,786	No	220,317
RHD02.2A-05P	0.432	0.403	0.233	2,383,786	No	220,317
RHD01.1A-38P	0.432	0.406	0.233	2,662,672	No	220,317
RHD01.1A-36P	0.462	0.428	0.233	4,950,281	Yes	220,317
RHD01.1A-07P_2	0.432	0.418	0.233	5,172,651	No	220,317
RHD01.1A-09P_2	0.432	0.418	0.233	5,172,651	No	220,317
RHD01.1A-13P_2	0.432	0.418	0.233	5,172,651	No	220,317
RHD01.1A-21P_2	0.432	0.418	0.233	5,172,651	No	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR						
RHD01.1A-28P_2	0.432	0.418	0.233	0.233	No	220,317
RHD01.1A-42P_2	0.432	0.418	0.233	0.233	No	220,317
RHD01.1A-44P_2	0.432	0.418	0.233	0.233	No	220,317
RHD01.1A-34P_2	0.475	0.460	0.233	0.233	No	220,317
RHD02.1A-01V	0.337	0.501	0.132	0.132	No	220,317
====>Grouped by Line: RHD-01.1B_1 RH 31B to TK 31B						
RHD01.1B-01N	0.432	0.366	0.233	0.233	No	220,317
RHD01.1B-03N	0.432	0.379	0.233	0.233	No	220,317
RHD01.1B-02P	0.432	0.397	0.233	0.233	No	220,317
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR						
RHD01.1B-14F	0.432	0.352	0.233	0.233	No	220,317
RHD01.1B-04N	0.432	0.366	0.233	0.233	No	220,317
RHD02.1B-02R	0.000	0.319	0.158	0.158	No	99,292
RHD01.1B-16E	0.432	0.363	0.233	0.233	Yes	220,317
RHD01.1B-30E	0.473	0.367	0.233	0.233	Yes	220,317
RHD02.2B-02E	0.432	0.371	0.233	0.233	Yes	220,317
RHD01.1B-41E	0.432	0.377	0.233	0.233	Yes	220,317
RHD01.1B-39E	0.432	0.378	0.233	0.233	Yes	220,317
RHD01.1B-43E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-45E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-49E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-06E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-08E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-12E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-18E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-22E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-24E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-26E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-28E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-32E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-35E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-37E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-47E	0.432	0.389	0.233	0.233	No	220,317
RHD02.2B-04E	0.432	0.389	0.233	0.233	No	220,317
RHD01.1B-10E	0.432	0.389	0.233	0.233	No	220,317

Sorted By: Remaining Life

Sorted By: Remaining Life

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR						
RHD01.1B-20E	0.432	0.389	0.233	1,454,164	No	220,317
RHD01.1B-51E	0.432	0.409	0.233	1,468,166	Yes	220,317
RHD01.1B-36P	0.432	0.390	0.233	1,512,265	No	220,317
RHD01.2B-01R (D/S)	0.401	0.348	0.158	1,594,102	Yes	220,317
RHD02.2B-03P	0.432	0.363	0.233	1,599,934	Yes	220,317
RHD01.1B-34T	0.432	0.393	0.233	1,640,088	No	220,317
RHD01.1B-34T (D/S)	0.000	0.393	0.233	1,640,088	No	220,317
RHD01.1B-31P	0.469	0.409	0.233	1,658,375	Yes	220,317
RHD01.1B-05P	0.432	0.397	0.233	1,867,329	No	220,317
RHD02.1B-02R (D/S)	0.000	0.422	0.233	1,942,689	No	99,292
RHD01.1B-44P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1B-46P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1B-50P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1B-07P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1B-09P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1B-13P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1B-19P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1B-23P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1B-25P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1B-27P_1	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1B-33P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1B-38P_1	0.432	0.399	0.233	2,049,122	No	220,317
RHD02.2B-01P	0.432	0.407	0.233	2,142,207	No	151,585
RHD01.1B-52P	0.476	0.412	0.233	2,150,033	Yes	220,317
RHD01.1B-40P	0.432	0.414	0.233	2,228,478	Yes	220,317
RHD01.1B-17P	0.432	0.421	0.233	2,323,165	Yes	220,317
RHD01.1B-48P	0.432	0.403	0.233	2,383,786	No	220,317
RHD02.2B-05P	0.432	0.403	0.233	2,383,786	No	220,317
RHD01.1B-11P	0.432	0.403	0.233	2,383,786	No	220,317
RHD01.1B-21P_1	0.432	0.403	0.233	2,383,786	No	220,317
RHD01.1B-42P_1	0.432	0.429	0.233	2,413,345	Yes	220,317
RHD01.1B-29P	0.473	0.439	0.233	2,476,550	No	220,317
RHD01.2B-01R	0.000	0.461	0.233	2,807,396	Yes	220,317
RHD01.1B-15P	0.432	0.420	0.233	4,746,415	Yes	220,317
RHD01.1B-42P_2	0.432	0.418	0.233	5,172,651	No	220,317
RHD01.1B-21P_2	0.432	0.418	0.233	5,172,651	No	220,317
RHD01.1B-27P_2	0.432	0.418	0.233	5,172,651	No	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR						
RHD01.1B-38P_2	0.432	0.418	0.233	5,172,651	No	220,317
RHD02.1B-01V	0.337	0.596	0.132	100,000,000	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:25:01AM

Run Name: RHD: RH 32A TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: RHD-01.3A_1 RH 32A to TK 32A							
RHD01.3A-01N	0.432	0.366	0.233	0.233	822,021	No	220,317
RHD01.3A-03N	0.432	0.379	0.233	0.233	1,128,796	No	220,317
RHD01.3A-02P	0.432	0.374	0.233	0.233	1,615,923	Yes	220,317
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR							
RHD01.5A-03F	0.432	0.352	0.233	0.233	603,678	No	220,317
RHD01.8A-02P	0.376	0.299	0.158	0.158	866,254	Yes	220,317
RHD01.3A-04N	0.432	0.389	0.233	0.233	963,092	No	220,317
RHD01.8A-01R (D/S)	0.000	0.356	0.158	0.158	972,020	Yes	220,317
RHD02.3A-02R	0.000	0.369	0.158	0.158	1,185,672	Yes	151,585
RHD01.7A-04E	0.458	0.384	0.233	0.233	1,236,986	Yes	220,317
RHD01.3A-06E	0.432	0.382	0.233	0.233	1,241,014	Yes	220,317
RHD01.3A-08E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.3A-10E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.3A-12E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.3A-14E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.7A-02E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD02.4A-02E	0.473	0.398	0.233	0.233	1,342,790	No	220,317
RHD01.8A-01R	0.000	0.397	0.233	0.233	1,444,199	Yes	220,317
RHD02.4A-04E	0.432	0.389	0.233	0.233	1,454,164	No	220,317
RHD01.7A-03P	0.432	0.390	0.233	0.233	1,512,265	No	220,317
RHD02.3A-02R (D/S)	0.000	0.398	0.233	0.233	1,698,997	Yes	151,585
RHD01.3A-15R	0.000	0.395	0.233	0.233	1,786,172	No	220,317
RHD02.4A-01P	0.432	0.385	0.233	0.233	1,872,575	Yes	151,585
RHD01.3A-07P	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD01.3A-09P	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD01.3A-11P	0.432	0.399	0.233	0.233	2,049,122	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR						
RHD01.3A-13P	0.432	0.399	0.233	2,049,122	No	220,317
RHD02.4A-03P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.5A-02P	0.432	0.371	0.233	2,132,633	Yes	220,317
RHD01.3A-05P	0.432	0.423	0.233	2,175,008	Yes	220,317
RHD01.6A-04E	0.500	0.471	0.303	2,355,782	No	220,317
RHD01.6A-06E	0.500	0.471	0.303	2,355,782	No	220,317
RHD01.6A-08E	0.500	0.471	0.303	2,355,782	No	220,317
RHD01.6A-10E	0.500	0.471	0.303	2,355,782	No	220,317
RHD01.6A-12E	0.500	0.471	0.303	2,355,782	No	220,317
RHD01.6A-14E	0.500	0.471	0.303	2,355,782	No	220,317
RHD02.4A-05P	0.432	0.403	0.233	2,383,786	No	220,317
RHD01.5A-05R	0.000	0.473	0.233	2,642,628	Yes	220,317
RHD01.6A-07P	0.500	0.475	0.303	2,787,167	No	220,317
RHD02.4A-06L	0.594	0.558	0.378	2,844,442	Yes	220,317
RHD01.3A-15R (D/S)	0.000	0.477	0.303	2,999,983	No	220,317
RHD01.6A-02T	0.500	0.477	0.303	2,999,983	No	220,317
RHD01.6A-02T (D/S)	0.000	0.477	0.303	2,999,983	No	220,317
RHD01.7A-01R (D/S)	0.000	0.408	0.233	3,003,533	No	220,317
RHD02.4A-06L (D/S)	0.000	0.568	0.378	3,012,887	No	220,317
RHD01.5A-05R (D/S)	0.000	0.479	0.303	3,040,460	Yes	220,317
RHD01.5A-01R	0.000	0.463	0.303	3,313,213	No	220,317
RHD01.6A-01P	0.500	0.465	0.303	3,354,731	Yes	220,317
RHD01.4A-01P_1	0.500	0.480	0.303	3,680,996	No	220,317
RHD01.6A-05P	0.500	0.480	0.303	3,680,996	No	220,317
RHD01.6A-09P	0.500	0.480	0.303	3,680,996	No	220,317
RHD01.6A-11P	0.500	0.480	0.303	3,680,996	No	220,317
RHD01.6A-13P	0.500	0.480	0.303	3,680,996	No	220,317
RHD01.6A-15P_1	0.500	0.480	0.303	3,680,996	No	220,317
RHD01.7A-01R	0.000	0.480	0.303	3,680,996	No	220,317
RHD01.5A-01R (D/S)	0.000	0.461	0.233	3,902,783	No	220,317
RHD01.5A-04P	0.432	0.412	0.233	4,525,384	Yes	220,317
RHD01.6A-03P_1	0.500	0.484	0.303	4,702,515	No	220,317
RHD02.7A-01P	0.594	0.579	0.378	5,291,532	No	220,317
RHD01.4A-01P_2	0.500	0.491	0.303	8,881,454	No	220,317
RHD01.6A-03P_2	0.500	0.491	0.303	8,881,454	No	220,317
RHD01.6A-15P_2	0.500	0.491	0.303	8,881,454	No	220,317
RHD02.3A-01V	0.337	0.318	0.132	100,000,000	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:25:18AM

Run Name: RHD: RH 32B TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: RHD-01.3B_1 RH 32B to TK 32B							
RHD01.3B-03N	0.432	0.412	0.233	0.233	1,380,294	Yes	220,317
RHD01.3B-02P	0.432	0.385	0.233	0.233	1,734,830	Yes	220,317
RHD01.3B-01N	0.432	0.779	0.233	0.233	3,362,776	Yes	220,317
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR							
RHD01.5B-03F	0.432	0.352	0.233	0.233	603,678	No	220,317
RHD01.3B-06E	0.432	0.340	0.233	0.233	891,267	Yes	220,317
RHD01.3B-16E	0.432	0.353	0.233	0.233	997,836	Yes	220,317
RHD01.3B-04N	0.432	0.396	0.233	0.233	1,003,716	Yes	220,317
RHD01.3B-10E	0.432	0.388	0.233	0.233	1,295,627	Yes	220,317
RHD01.3B-14E	0.432	0.393	0.233	0.233	1,337,264	Yes	220,317
RHD01.3B-08E	0.432	0.394	0.233	0.233	1,343,256	Yes	220,317
RHD01.9B-01R (D/S)	0.000	0.325	0.158	0.158	1,461,526	Yes	220,317
RHD01.3B-12E	0.432	0.410	0.233	0.233	1,478,828	Yes	220,317
RHD01.3B-18E	0.432	0.415	0.233	0.233	1,514,129	Yes	220,317
RHD02.3B-02R	0.000	0.446	0.158	0.158	1,619,623	No	66,848
RHD01.3B-19P	0.432	0.378	0.233	0.233	1,784,800	Yes	220,317
RHD01.3B-09P	0.432	0.385	0.233	0.233	1,870,741	Yes	220,317
RHD01.3B-15P	0.432	0.386	0.233	0.233	1,885,734	Yes	220,317
RHD01.3B-17P	0.432	0.390	0.233	0.233	1,932,693	Yes	220,317
RHD01.3B-13P	0.432	0.391	0.233	0.233	1,947,356	Yes	220,317
RHD01.3B-05P	0.432	0.404	0.233	0.233	1,956,363	Yes	220,317
RHD01.3B-07P	0.432	0.397	0.233	0.233	2,017,651	Yes	220,317
RHD01.3B-11P	0.432	0.398	0.233	0.233	2,033,626	Yes	220,317
RHD01.3B-20R	0.000	0.438	0.233	0.233	2,253,831	Yes	220,317
RHD01.7B-02P	0.432	0.406	0.233	0.233	2,662,672	No	220,317
RHD01.7B-01R (D/S)	0.000	0.408	0.233	0.233	3,003,533	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR						
RHD01.5B-01R (D/S)	0.000	0.408	0.233	3,003,533	No	220,317
RHD01.5B-02P	0.458	0.431	0.233	3,005,213	No	220,317
RHD01.7B-03R	0.000	0.524	0.233	3,208,101	Yes	220,317
RHD02.4B-01P	0.594	0.481	0.378	3,259,964	No	151,585
RHD01.7B-03R (D/S)	0.000	0.503	0.378	3,307,053	Yes	220,317
RHD01.6B-02E	0.594	0.574	0.378	4,186,175	Yes	220,317
RHD01.6B-19E	0.594	0.575	0.378	4,213,794	No	220,317
RHD01.8B-04E	0.594	0.575	0.378	4,213,794	No	220,317
RHD01.6B-06E	0.594	0.575	0.378	4,213,794	No	220,317
RHD01.6B-08E	0.594	0.575	0.378	4,213,794	No	220,317
RHD01.6B-10E	0.594	0.575	0.378	4,213,794	No	220,317
RHD01.6B-11E	0.594	0.575	0.378	4,213,794	No	220,317
RHD01.6B-13E	0.594	0.575	0.378	4,213,794	No	220,317
RHD01.6B-15E	0.594	0.575	0.378	4,213,794	No	220,317
RHD01.5B-04P	0.475	0.405	0.233	4,367,721	Yes	220,317
RHD01.8B-02E	0.594	0.577	0.378	4,773,658	No	220,317
RHD02.4B-04E	0.594	0.577	0.378	4,773,658	No	220,317
RHD02.4B-06E	0.594	0.577	0.378	4,773,658	No	220,317
RHD01.6B-04E	0.594	0.577	0.378	4,773,658	No	220,317
RHD01.6B-12P	0.594	0.578	0.378	4,935,494	No	220,317
RHD01.6B-03P_1	0.594	0.535	0.378	4,963,770	Yes	220,317
RHD01.6B-21T	0.594	0.579	0.378	5,291,532	No	220,317
RHD01.6B-21T (D/S)	0.000	0.579	0.378	5,291,532	No	220,317
RHD01.6B-17T	0.594	0.579	0.378	5,291,532	No	220,317
RHD01.6B-17T (D/S)	0.000	0.579	0.378	5,291,532	No	220,317
RHD02.4B-02E	0.000	0.627	0.378	5,333,090	Yes	220,317
RHD01.4B-01P_1	0.594	0.553	0.378	5,531,622	Yes	220,317
RHD01.8B-01P_1	0.594	0.553	0.378	5,550,595	Yes	220,317
RHD02.4B-03P	0.594	0.565	0.378	5,911,149	Yes	220,317
RHD01.6B-01P	0.634	0.569	0.378	5,944,378	Yes	220,317
RHD01.9B-01R	0.000	0.572	0.378	6,138,039	Yes	220,317
RHD01.6B-20P_1	0.594	0.581	0.378	6,430,854	No	220,317
RHD01.7B-01R	0.000	0.581	0.378	6,430,854	No	220,317
RHD01.8B-05P	0.594	0.581	0.378	6,430,854	No	220,317
RHD01.5B-01R	0.000	0.581	0.378	6,430,854	No	220,317
RHD01.6B-07P	0.594	0.581	0.378	6,430,854	No	220,317
RHD01.6B-09P_1	0.594	0.581	0.378	6,430,854	No	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR						
RHD01.6B-14P	0.594	0.581	0.378	6,430,854	No	220,317
RHD01.6B-16P	0.594	0.581	0.378	6,430,854	No	220,317
RHD01.8B-06E	0.594	0.692	0.378	6,703,149	Yes	220,317
RHD01.5B-05R	0.000	0.849	0.233	6,776,500	Yes	220,317
RHD01.8B-03P	0.594	0.583	0.378	7,363,026	No	220,317
RHD02.4B-05P	0.594	0.583	0.378	7,363,026	No	220,317
RHD01.6B-05P	0.594	0.583	0.378	7,363,026	No	220,317
RHD02.4B-07P	0.609	0.598	0.378	7,853,714	No	220,317
RHD01.6B-22P_1	0.594	0.584	0.378	8,139,837	No	220,317
RHD01.6B-18P	0.594	0.584	0.378	8,139,837	No	220,317
RHD01.5B-05R (D/S)	0.000	0.725	0.378	9,158,899	Yes	220,317
RHD01.3B-20R (D/S)	0.000	0.729	0.378	9,257,615	Yes	220,317
RHD02.3B-02R (D/S)	0.000	0.800	0.378	11,118,576	No	66,848
RHD01.6B-20P_2	0.594	0.588	0.378	15,131,132	No	220,317
RHD01.6B-22P_2	0.594	0.588	0.378	15,131,132	No	220,317
RHD01.8B-01P_2	0.594	0.588	0.378	15,131,132	No	220,317
RHD01.4B-01P_2	0.594	0.588	0.378	15,131,132	No	220,317
RHD01.6B-03P_2	0.594	0.588	0.378	15,131,132	No	220,317
RHD01.6B-09P_2	0.594	0.588	0.378	15,131,132	No	220,317
RHD02.3B-01V	0.337	0.621	0.132	100,000,000	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:25:44AM

Run Name: RHD: RH 33 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: RHD-01.10A_1 RH 33A to TK 33A							
RHD01.10A-01N	0.432	0.366	0.233	0.233	822,021	No	220,317
RHD01.10A-03N	0.432	0.379	0.233	0.233	1,128,796	No	220,317
RHD01.10A-02P	0.432	0.397	0.233	0.233	1,867,329	No	220,317
====>Grouped by Line: RHD-01.10A_2 TK 33A to A HDR							
RHD01.10A-18F	0.432	0.352	0.233	0.233	603,678	No	220,317
RHD02.6A-02E	0.432	0.317	0.233	0.233	698,892	Yes	220,317
RHD01.13A-01R (D/S)	0.000	0.323	0.158	0.158	813,711	No	220,317
RHD01.10A-04N	0.432	0.382	0.233	0.233	919,957	No	220,317
RHD02.5A-02R	0.000	0.374	0.158	0.158	1,213,807	No	151,585
RHD01.12A-08E	0.432	0.382	0.233	0.233	1,243,329	Yes	220,317
RHD01.12A-06E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.12A-03E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.12A-04E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.10A-16E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.10A-14E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.10A-10E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.10A-06E	0.432	0.371	0.233	0.233	1,290,860	Yes	220,317
RHD02.5A-02R (D/S)	0.000	0.365	0.233	0.233	1,360,076	Yes	151,585
RHD01.12A-01T	0.000	0.450	0.303	0.303	1,383,610	No	220,317
RHD01.10A-12E	0.432	0.389	0.233	0.233	1,454,164	No	220,317
RHD02.6A-04E	0.432	0.389	0.233	0.233	1,454,164	No	220,317
RHD01.10A-08E	0.432	0.389	0.233	0.233	1,454,164	No	220,317
RHD01.12A-01T (D/S)	0.000	0.462	0.303	0.303	1,496,841	No	220,317
RHD01.12A-05P	0.432	0.390	0.233	0.233	1,512,265	No	220,317
RHD02.6A-03P	0.432	0.359	0.233	0.233	1,552,141	Yes	220,317
RHD01.13A-01R	0.000	0.417	0.233	0.233	1,621,040	No	220,317

Sorted By: Remaining Life

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: RHD-01.10A_2 TK 33A to A HDR						
RHD01.10A-05P	0.432	0.393	0.233	1,832,664	Yes	220,317
RHD01.11A-01E	0.500	0.444	0.303	1,971,893	Yes	220,317
RHD02.6A-01P	0.432	0.396	0.233	2,006,639	Yes	151,585
RHD01.12A-07P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.10A-17P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.10A-15P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.10A-11P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.11A-03E	0.500	0.471	0.303	2,355,782	No	220,317
RHD01.10A-13P	0.432	0.403	0.233	2,383,786	No	220,317
RHD01.10A-09P	0.432	0.403	0.233	2,383,786	No	220,317
RHD01.10A-07P	0.432	0.403	0.233	2,383,786	No	220,317
RHD01.10A-20R (D/S)	0.000	0.444	0.303	2,436,089	No	220,317
RHD01.10A-20R	0.000	0.470	0.233	2,613,888	No	220,317
RHD01.11A-02P	0.500	0.465	0.303	2,623,316	Yes	220,317
RHD01.12A-02P	0.432	0.404	0.233	2,629,104	No	220,317
RHD02.6A-05P	0.000	0.428	0.233	2,737,189	No	50,194
RHD01.11A-04P	0.500	0.480	0.303	3,680,996	No	220,317
RHD01.10A-19P	0.432	0.399	0.233	4,215,750	Yes	220,317
RHD02.5A-01V	0.337	0.490	0.132	100,000,000	No	220,317
====> Grouped by Line: RHD-01.10B_1 RH 33B to TK 33B						
RHD01.10B-01N	0.432	0.383	0.233	927,102	Yes	220,317
RHD01.10B-03N	0.432	0.398	0.233	1,272,391	No	220,317
RHD01.10B-02P	0.432	0.384	0.233	1,723,639	Yes	220,317
====> Grouped by Line: RHD-01.10B_2 TK 33B to B HDR						
RHD01.10B-26F	0.432	0.352	0.233	603,678	No	220,317
RHD01.10B-04N	0.432	0.366	0.233	822,021	No	220,317
RHD01.12B-01R (D/S)	0.000	0.290	0.158	1,152,195	No	220,317
RHD01.10B-08E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-10E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-12E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-14E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-15E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-17E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-19E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-21E	0.432	0.383	0.233	1,253,165	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR						
RHD01.10B-22E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-24E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-30E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-42E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-44E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-46E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-48E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-50E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-54E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-56E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-58E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-60E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-62E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-63E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10B-52T (D/S)	0.000	0.465	0.233	1,432,402	Yes	220,317
RHD01.10B-06E	0.432	0.389	0.233	1,454,164	No	220,317
RHD01.10B-32E	0.432	0.389	0.233	1,454,164	No	220,317
RHD01.10B-34E	0.432	0.389	0.233	1,454,164	No	220,317
RHD01.10B-36E	0.432	0.389	0.233	1,454,164	No	220,317
RHD01.10B-38E	0.432	0.389	0.233	1,454,164	No	220,317
RHD01.10B-40E	0.432	0.389	0.233	1,454,164	No	220,317
RHD01.10B-13P_1	0.432	0.390	0.233	1,512,265	No	220,317
RHD01.10B-16P	0.432	0.390	0.233	1,512,265	No	220,317
RHD01.10B-23P	0.432	0.390	0.233	1,512,265	No	220,317
RHD01.10B-52T	0.432	0.501	0.233	1,654,242	No	220,317
RHD01.10B-53P	0.432	0.401	0.233	1,724,628	Yes	220,317
RHD01.10B-64R	0.000	0.395	0.233	1,786,172	No	220,317
RHD01.10B-05P	0.432	0.397	0.233	1,867,329	No	220,317
RHD01.10B-28E	0.432	0.465	0.233	1,930,249	Yes	220,317
RHD01.10B-09P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.10B-11P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.10B-18P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.10B-20P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.10B-25P_1	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.10B-31P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.10B-43P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.10B-45P	0.432	0.399	0.233	2,049,122	No	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR					
RHD01.10B-47P_1	0.432	0.399	0.233	No	220,317
RHD01.10B-49P	0.432	0.399	0.233	No	220,317
RHD01.10B-51P	0.432	0.399	0.233	No	220,317
RHD01.10B-55P	0.432	0.399	0.233	No	220,317
RHD01.10B-57P_1	0.432	0.399	0.233	No	220,317
RHD01.10B-59P	0.432	0.399	0.233	No	220,317
RHD01.10B-61P_1	0.432	0.399	0.233	No	220,317
RHD01.10B-29P	0.432	0.403	0.233	Yes	220,317
RHD01.11B-02E	0.500	0.471	0.303	No	220,317
RHD01.11B-04E	0.500	0.471	0.303	No	220,317
RHD01.10B-07P	0.432	0.403	0.233	No	220,317
RHD01.10B-33P	0.432	0.403	0.233	No	220,317
RHD01.10B-35P	0.432	0.403	0.233	No	220,317
RHD01.10B-37P_1	0.432	0.403	0.233	No	220,317
RHD01.10B-39P	0.432	0.403	0.233	No	220,317
RHD01.10B-41P	0.432	0.403	0.233	No	220,317
RHD01.10B-64R (D/S)	0.000	0.477	0.303	No	220,317
RHD02.6B-02P	0.528	0.503	0.303	No	220,317
RHD02.6B-01E	0.559	0.554	0.303	No	66,848
RHD01.11B-01P_1	0.500	0.480	0.303	No	220,317
RHD01.11B-03P	0.500	0.480	0.303	No	220,317
RHD01.11B-05P	0.500	0.480	0.303	No	220,317
RHD01.12B-01R	0.000	0.480	0.303	No	220,317
RHD01.10B-13P_2	0.432	0.418	0.233	No	220,317
RHD01.10B-25P_2	0.432	0.418	0.233	No	220,317
RHD01.10B-37P_2	0.432	0.418	0.233	No	220,317
RHD01.10B-47P_2	0.432	0.418	0.233	No	220,317
RHD01.10B-57P_2	0.432	0.418	0.233	No	220,317
RHD01.10B-61P_2	0.432	0.418	0.233	No	220,317
RHD01.10B-27P	0.432	0.438	0.233	Yes	220,317
RHD01.11B-01P_2	0.500	0.491	0.303	No	220,317
RHD02.5B-01V	0.337	0.552	0.132	No	100,000,000

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:20:53PM
 AnalysisDate/Time: 7/22/2011 10:26:21AM

Run Name: RHD: RHD HDR TO HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				

====>Grouped by Line: RHD-02.10A TK A HDR to FWH 36

RHD02.10A-11T (BR/SE)	0.000	0.347	0.211	0.211	964,396	220,317
RHD02.10A-09E	0.500	0.453	0.303	0.303	1,304,804	220,317
RHD02.10A-07E	0.500	0.453	0.303	0.303	1,304,804	220,317
RHD02.10A-05E	0.500	0.453	0.303	0.303	1,304,804	220,317
RHD02.10A-03E	0.500	0.453	0.303	0.303	1,304,804	220,317
RHD02.10A-01R (D/S)	0.000	0.455	0.303	0.303	1,358,238	220,317
RHD02.10A-11T	0.500	0.584	0.303	0.303	1,461,868	220,317
RHD02.10A-02P	0.500	0.465	0.303	0.303	1,851,966	220,317
RHD02.10A-10P	0.500	0.469	0.303	0.303	2,159,746	220,317
RHD02.10A-08P	0.500	0.469	0.303	0.303	2,159,746	220,317
RHD02.10A-06P	0.500	0.469	0.303	0.303	2,159,746	220,317
RHD02.10A-04P	0.500	0.469	0.303	0.303	2,159,746	220,317
RHD02.10A-01R	0.000	0.562	0.378	0.378	2,292,063	220,317
RHD02.10A-11T (D/S)	0.000	0.548	0.303	0.303	2,311,582	220,317

====>Grouped by Line: RHD-02.10B B HDR to FWH 36A

RHD02.10B-17R	0.000	0.320	0.233	0.233	955,420	220,317
RHD02.10B-12V	0.432	0.366	0.200	0.200	1,022,056	220,317
RHD02.10B-09E	0.432	0.383	0.233	0.233	1,253,165	220,317
RHD02.10B-07E	0.432	0.383	0.233	0.233	1,253,165	220,317
RHD02.10B-11E	0.432	0.383	0.233	0.233	1,253,165	220,317
RHD02.10B-05E	0.432	0.383	0.233	0.233	1,253,165	220,317
RHD02.10B-03E	0.432	0.383	0.233	0.233	1,253,165	220,317
RHD02.10B-16T (BR/SE)	0.000	0.491	0.211	0.211	1,395,197	220,317
RHD02.10B-14T (BR/SE)	0.000	0.500	0.211	0.211	1,439,991	220,317
RHD02.10B-06P	0.432	0.390	0.233	0.233	1,512,265	220,317
RHD02.10B-01R (D/S)	0.000	0.390	0.233	0.233	1,512,265	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: RHD-02.10B B HDR to FWH 36A						
RHD02.10B-14T	0.432	0.549	0.233	1,945,164	Yes	220,317
RHD02.10B-16T	0.432	0.555	0.233	1,982,137	Yes	220,317
RHD02.10B-10P	0.432	0.399	0.233	2,049,122	No	220,317
RHD02.10B-08P	0.432	0.399	0.233	2,049,122	No	220,317
RHD02.10B-04P	0.432	0.399	0.233	2,049,122	No	220,317
RHD02.10B-02P_1	0.432	0.399	0.233	2,049,122	No	220,317
RHD02.10B-13P	0.432	0.403	0.233	2,383,786	No	220,317
RHD02.10B-15P	0.432	0.406	0.233	2,662,672	No	220,317
RHD02.11B-01N	0.500	0.469	0.261	2,697,031	No	220,317
RHD02.10B-01R	0.000	0.576	0.378	4,477,730	No	220,317
RHD02.10B-02P_2	0.432	0.418	0.233	5,172,651	No	220,317
RHD02.10B-17R (D/S)	0.000	0.638	0.303	5,792,128	Yes	220,317
Sorted By: Remaining Life						
====>Grouped by Line: RHD-02.11A A HDR to FWH 36A						
RHD02.11A-19T (BR/SE)	0.000	0.416	0.211	1,021,918	Yes	220,317
RHD02.11A-15V	0.432	0.366	0.200	1,022,056	No	220,317
RHD02.11A-17T (BR/SE)	0.000	0.451	0.211	1,196,115	No	220,317
RHD02.11A-03E	0.432	0.383	0.233	1,253,165	No	220,317
RHD02.11A-05E	0.432	0.383	0.233	1,253,165	No	220,317
RHD02.11A-07E	0.432	0.383	0.233	1,253,165	No	220,317
RHD02.11A-08E	0.432	0.383	0.233	1,253,165	No	220,317
RHD02.11A-10E	0.432	0.383	0.233	1,253,165	No	220,317
RHD02.11A-12E	0.432	0.383	0.233	1,253,165	No	220,317
RHD02.11A-14E	0.432	0.383	0.233	1,253,165	No	220,317
RHD02.11A-17T	0.432	0.471	0.233	1,464,513	Yes	220,317
RHD02.11A-01R (D/S)	0.000	0.390	0.233	1,512,265	No	220,317
RHD02.11A-06P	0.432	0.390	0.233	1,512,265	No	220,317
RHD02.11A-09P_1	0.432	0.390	0.233	1,512,265	No	220,317
RHD02.11A-19T	0.432	0.480	0.233	1,519,972	Yes	220,317
RHD02.11A-20R	0.000	0.395	0.233	1,786,172	No	220,317
RHD02.11A-02P_1	0.432	0.399	0.233	2,049,122	No	220,317
RHD02.11A-04P	0.432	0.399	0.233	2,049,122	No	220,317
RHD02.11A-11P	0.432	0.399	0.233	2,049,122	No	220,317
RHD02.11A-13P	0.432	0.399	0.233	2,049,122	No	220,317
RHD02.11A-01R	0.000	0.473	0.303	2,513,546	No	220,317
RHD02.12A-01N	0.500	0.469	0.261	2,697,031	No	220,317
RHD02.11A-20R (D/S)	0.000	0.477	0.303	2,999,983	No	220,317
Sorted By: Remaining Life						

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: RHD-02.11A HDR to FWH 36A							
RHD02.11A-16P	0.489	0.459	0.233	0.233	3,051,165	No	220,317
RHD02.11A-18P	0.473	0.446	0.233	0.233	3,196,957	No	220,317
RHD02.11A-02P_2	0.432	0.418	0.233	0.233	5,172,651	No	220,317
RHD02.11A-09P_2	0.432	0.418	0.233	0.233	5,172,651	No	220,317
====>Grouped by Line: RHD-02.12B B HDR to FWH 36B							
RHD02.12B-02E	0.432	0.304	0.233	0.233	590,637	Yes	220,317
RHD02.12B-13T (BR/SE)	0.000	0.356	0.211	0.211	723,295	Yes	220,317
RHD02.12B-09V	0.432	0.366	0.200	0.200	1,022,056	No	220,317
RHD02.12B-04E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD02.12B-06E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD02.12B-08E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD02.12B-11T (BR/SE)	0.000	0.471	0.211	0.211	1,296,930	Yes	220,317
RHD02.12B-03P	0.432	0.390	0.233	0.233	1,512,265	No	220,317
RHD02.12B-13T	0.432	0.516	0.233	0.233	1,741,812	Yes	220,317
RHD02.12B-14R	0.000	0.395	0.233	0.233	1,786,172	No	220,317
RHD02.12B-05P	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD02.12B-07P	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD02.12B-11T	0.432	0.595	0.233	0.233	2,232,506	Yes	220,317
RHD02.12B-10P	0.432	0.403	0.233	0.233	2,383,786	No	220,317
RHD02.12B-01P	0.432	0.406	0.233	0.233	2,662,672	No	220,317
RHD02.12B-12P	0.432	0.406	0.233	0.233	2,662,672	No	220,317
RHD02.12B-14R (D/S)	0.000	0.477	0.303	0.303	2,999,983	No	220,317
RHD02.13B-01N	0.500	1.094	0.261	0.261	10,809,104	No	220,317
====>Grouped by Line: RHD-02.13A A HDR to FWH 36B							
RHD02.13A-16T (BR/SE)	0.000	0.297	0.211	0.211	430,923	Yes	220,317
RHD02.13A-05E	0.432	0.330	0.233	0.233	806,308	Yes	220,317
RHD02.13A-12V	0.432	0.366	0.200	0.200	1,022,056	No	220,317
RHD02.13A-14T (BR/SE)	0.000	0.434	0.211	0.211	1,111,505	Yes	220,317
RHD02.13A-02E	0.432	0.369	0.233	0.233	1,131,911	Yes	220,317
RHD02.13A-16T	0.432	0.431	0.233	0.233	1,221,905	Yes	220,317
RHD02.13A-07E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD02.13A-09E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD02.13A-11E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD02.13A-14T	0.432	0.475	0.233	0.233	1,489,161	Yes	220,317
RHD02.13A-03P	0.432	0.390	0.233	0.233	1,512,265	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: RHD-02.13A A HDR to FWH 36B						
RHD02.13A-06P_1	0.432	0.410	0.233	0.233	Yes	220,317
RHD02.13A-01P	0.432	0.346	0.233	0.233	Yes	220,317
RHD02.13A-04E	0.432	0.443	0.233	0.233	Yes	220,317
RHD02.13A-17R	0.000	0.395	0.233	0.233	No	220,317
RHD02.13A-08P	0.432	0.399	0.233	0.233	No	220,317
RHD02.13A-10P	0.432	0.399	0.233	0.233	No	220,317
RHD02.13A-13P	0.432	0.403	0.233	0.233	No	220,317
RHD02.13A-15P	0.432	0.406	0.233	0.233	No	220,317
RHD02.13A-17R (D/S)	0.000	0.477	0.303	0.303	No	220,317
RHD02.13A-06P_2	0.432	0.418	0.233	0.233	No	220,317
RHD02.14A-01N	0.500	1.067	0.261	0.261	Yes	220,317
Sorted By: Remaining Life						
====> Grouped by Line: RHD-02.14B B HDR to FWH 36C						
RHD02.14B-12T (BR/SE)	0.000	0.393	0.211	0.211	Yes	220,317
RHD02.14B-08V	0.432	0.366	0.200	0.200	No	220,317
RHD02.14B-10T (BR/SE)	0.000	0.425	0.211	0.211	No	33,725
RHD02.14B-10T	0.000	0.427	0.233	0.233	No	33,725
RHD02.14B-04E	0.432	0.383	0.233	0.233	No	220,317
RHD02.14B-05E	0.432	0.383	0.233	0.233	No	220,317
RHD02.14B-07E	0.432	0.383	0.233	0.233	No	220,317
RHD02.14B-03P	0.432	0.390	0.233	0.233	No	220,317
RHD02.14B-06P	0.432	0.390	0.233	0.233	No	220,317
RHD02.14B-02E	0.000	0.426	0.233	0.233	No	50,194
RHD02.14B-12T	0.432	0.514	0.233	0.233	Yes	220,317
RHD02.14B-13R	0.000	0.395	0.233	0.233	No	220,317
RHD02.14B-09P	0.432	0.403	0.233	0.233	No	220,317
RHD02.14B-01P	0.432	0.406	0.233	0.233	No	220,317
RHD02.14B-11P	0.432	0.406	0.233	0.233	No	220,317
RHD02.14B-13R (D/S)	0.000	0.477	0.303	0.303	No	220,317
RHD02.14B-14P	0.000	0.429	0.233	0.233	No	50,194
RHD02.15B-01N	0.432	1.094	0.261	0.261	Yes	220,317
Sorted By: Remaining Life						
====> Grouped by Line: RHD-02.15A A HDR to FWH 36C						
RHD02.15A-07V	0.432	0.366	0.200	0.200	No	220,317
RHD02.15A-11T (BR/SE)	0.000	0.422	0.211	0.211	No	50,194
RHD02.15A-11T	0.000	0.424	0.233	0.233	No	50,194
RHD02.15A-09T (BR/SE)	0.000	0.449	0.211	0.211	Yes	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: RHD-02.15A A HDR to FWH 36C						
RHD02.15A-04E	0.432	0.383	0.233	1,253,165	No	220,317
RHD02.15A-06E	0.432	0.383	0.233	1,253,165	No	220,317
RHD02.15A-03P	0.432	0.345	0.233	1,379,599	Yes	220,317
RHD02.15A-02E	0.000	0.439	0.233	1,714,822	No	50,194
RHD02.15A-12R	0.000	0.395	0.233	1,786,172	No	220,317
RHD02.15A-09T	0.432	0.534	0.233	1,852,731	Yes	220,317
RHD02.15A-05P	0.432	0.399	0.233	2,049,122	No	220,317
RHD02.15A-08P	0.432	0.403	0.233	2,383,786	No	220,317
RHD02.15A-01P	0.432	0.406	0.233	2,662,672	No	220,317
RHD02.15A-10P	0.432	0.406	0.233	2,662,672	No	220,317
RHD02.15A-12R (D/S)	0.000	0.477	0.303	2,999,983	No	220,317
RHD02.15A-13P	0.000	0.429	0.233	3,016,075	No	50,194
RHD02.16A-01N	0.500	1.071	0.261	10,510,694	Yes	220,317
====> Grouped by Line: RHD-02.7B TK B HDR to FWH 36						
RHD02.7B-02E	0.500	0.448	0.303	1,119,952	No	220,317
RHD02.2B-06L (D/S)	0.000	0.476	0.303	1,209,676	No	220,317
RHD02.7B-04E	0.500	0.453	0.303	1,304,804	No	220,317
RHD02.7B-06E	0.500	0.453	0.303	1,304,804	No	220,317
RHD02.7B-03P	0.500	0.465	0.303	1,851,966	No	220,317
RHD02.7B-05P	0.500	0.469	0.303	2,159,746	No	220,317
RHD02.7B-01P	0.500	0.472	0.303	2,416,228	No	220,317
RHD02.7B-07P	0.543	0.511	0.303	2,654,810	No	220,317
RHD02.2B-06L (BR/SE)	0.000	0.874	0.211	4,856,246	No	220,317
====> Grouped by Line: RHD-02.8A TK A HDR to FWH 36						
RHD02.6A-06L (BR/SE)	0.000	0.223	0.211	88,135	Yes	220,317
RHD02.6A-06L (D/S)	0.000	0.556	0.378	1,897,359	No	220,317
RHD02.8A-02E	0.594	0.563	0.378	2,455,526	No	220,317
RHD02.6A-06L	0.594	0.556	0.378	3,441,606	Yes	220,317
RHD02.8A-03P	0.594	0.574	0.378	3,885,829	No	220,317
RHD02.8A-01P	0.000	0.575	0.378	4,314,920	No	220,317
====> Grouped by Line: RHD-02.8B TK B HDR to FWH 36						
RHD02.7B-08L (D/S)	0.000	0.529	0.378	1,133,871	Yes	220,317
RHD02.8B-06T	0.594	0.597	0.378	1,225,536	Yes	220,317
RHD02.8B-06T (D/S)	0.000	0.543	0.378	1,311,284	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: RHD-02.8B TK B HDR to FWH 36						
RHD02.8B-02E	0.594	0.545	0.378	0.378	No	220,317
RHD02.8B-04E	0.594	0.545	0.378	0.378	No	220,317
RHD02.8B-05P	0.594	0.552	0.378	0.378	No	220,317
RHD02.8B-03P	0.594	0.561	0.378	0.378	No	220,317
RHD02.8B-01P	0.609	0.540	0.378	0.378	Yes	220,317
RHD02.8B-06T (BR/SE)	0.000	0.584	0.211	0.211	Yes	220,317
RHD02.7B-08L	0.605	0.550	0.378	0.378	Yes	220,317
RHD02.7B-08L (BR/SE)	0.000	1.157	0.281	0.281	No	220,317
Sorted By: Remaining Life						
====> Grouped by Line: RHD-02.9A TK A HDR to FWH 36						
RHD02.2A-06L (BR/SE)	0.000	0.377	0.211	0.211	No	220,317
RHD02.2A-06L (D/S)	0.000	0.540	0.378	0.378	No	220,317
RHD02.9A-11T (D/S)	0.000	0.543	0.378	0.378	No	220,317
RHD02.9A-11T	0.594	0.641	0.378	0.378	Yes	220,317
RHD02.9A-07E	0.594	0.548	0.378	0.378	No	220,317
RHD02.9A-09E	0.594	0.548	0.378	0.378	No	220,317
RHD02.9A-02E	0.594	0.551	0.378	0.378	No	220,317
RHD02.9A-04E	0.594	0.551	0.378	0.378	No	220,317
RHD02.9A-06E	0.594	0.551	0.378	0.378	No	220,317
RHD02.2A-06L	0.594	0.556	0.378	0.378	No	220,317
RHD02.9A-11T (BR/SE)	0.000	0.496	0.211	0.211	Yes	220,317
RHD02.9A-08P	0.594	0.561	0.378	0.378	No	220,317
RHD02.9A-10P	0.594	0.561	0.378	0.378	No	220,317
RHD02.9A-03P	0.594	0.565	0.378	0.378	No	220,317
RHD02.9A-05P	0.594	0.565	0.378	0.378	No	220,317
RHD02.9A-01P	0.594	0.568	0.378	0.378	No	220,317
Sorted By: Remaining Life						
====> Grouped by Line: RHD-02.9B TK B HDR to FWH 36						
RHD02.9B-02T (BR/SE)	0.000	0.375	0.211	0.211	No	220,317
RHD02.9B-02T	0.594	0.543	0.378	0.378	No	220,317
RHD02.9B-02T (D/S)	0.000	0.566	0.378	0.378	No	220,317
RHD02.9B-01P	0.594	0.575	0.378	0.378	No	220,317
Sorted By: Remaining Life						

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:15:02AM

Run Name: CD: HDR TO BFP
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			
====>Grouped by Line: CD-06.1 FWH 35 OUT HDR						
CD-06.1-01T	0.659	0.658	0.561	292,154	No	220,317
CD-06.1-01T (D/S)	0.659	0.659	0.561	245,861	No	220,317
CD-06.1-02P	0.663	0.647	0.524	578,185	No	220,317
CD-06.1-03T	0.702	0.603	0.561	77,042	No	220,317
CD-06.1-03T (BR/SE)	0.721	0.594	0.449	467,009	No	220,317
CD-06.1-03T (D/S)	0.702	0.625	0.561	173,936	No	220,317
CD-06.1-01T (BR/SE)	0.000	0.430	0.299	348,553	Yes	220,317
Sorted By:Flow Order						
====>Grouped by Line: CD-06.2A HDR to BFP 31						
CD-06.2A-01P	0.721	0.659	0.523	764,366	Yes	220,317
CD-06.2A-02E	0.729	0.658	0.523	411,646	Yes	220,317
CD-06.2A-03P	0.688	0.703	0.523	814,772	Yes	220,317
CD-06.2A-04E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-05P	0.688	0.610	0.523	395,540	No	220,317
CD-06.2A-06E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-07V	0.688	0.533	0.559	-58,669	No	220,317
CD-06.2A-08P	0.688	0.643	0.523	615,177	Yes	220,317
CD-06.2A-09E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-10P	0.688	0.610	0.523	395,540	No	220,317
CD-06.2A-11E	0.688	0.663	0.523	428,870	Yes	220,317
CD-06.2A-12P	0.688	0.589	0.523	232,248	No	220,317
CD-06.2A-13E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-14P	0.688	0.610	0.523	395,540	No	220,317
CD-06.2A-15E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-16P	0.688	0.610	0.523	395,540	No	220,317
CD-06.2A-17E	0.688	0.573	0.523	153,440	No	220,317
CD-06.2A-18P	0.688	0.610	0.523	395,540	No	220,317
Sorted By:Flow Order						

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====> Grouped by Line: CD-06.2A HDR to BFP 31							
CD-06.2A-19E	0.688	0.573	0.523	0.523	153,440	No	220,317
CD-06.2A-20E	0.688	0.573	0.523	0.523	153,440	No	220,317
CD-06.2A-21P	0.688	0.589	0.523	0.523	232,248	No	220,317
CD-06.2A-22P	0.688	0.648	0.523	0.523	1,090,132	No	220,317
CD-06.2A-23P	0.688	0.648	0.523	0.523	1,090,132	No	220,317
CD-06.2A-24O	0.688	0.441	0.523	0.523	-115,299	No	220,317
CD-06.2A-25P	0.688	0.641	0.523	0.523	843,098	Yes	220,317
CD-06.2A-26E	0.688	0.573	0.523	0.523	153,440	No	220,317
CD-06.2A-27P	0.688	0.610	0.523	0.523	395,540	No	220,317
CD-06.2A-28E	0.688	0.573	0.523	0.523	153,440	No	220,317
CD-06.2A-29P	0.688	0.589	0.523	0.523	232,248	No	220,317
CD-06.2A-30E	0.688	0.585	0.523	0.523	214,576	No	220,317
CD-06.2A-31E	0.688	0.579	0.523	0.523	182,261	No	220,317
CD-06.2A-32P	0.688	0.610	0.523	0.523	395,540	No	220,317
CD-06.2A-33E	0.688	0.573	0.523	0.523	153,440	No	220,317
CD-06.2A-34P	0.688	0.610	0.523	0.523	395,540	No	220,317
CD-06.3A-01R (D/S)	0.000	0.623	0.523	0.523	450,781	Yes	220,317
CD-06.3A-01R (D/S)	0.000	0.523	0.392	0.392	569,129	Yes	220,317
CD-06.3A-02N	0.562	1.012	0.392	0.392	1,210,084	Yes	220,317
====> Grouped by Line: CD-06.2B HDR to BFP 32							
CD-06.2B-01R	0.000	0.819	0.615	0.615	891,410	Yes	220,317
CD-06.2B-01R (D/S)	0.000	0.668	0.492	0.492	620,876	Yes	220,317
CD-06.2B-02P	0.702	0.615	0.523	0.523	415,652	Yes	220,317
CD-06.2B-35P	0.688	0.648	0.523	0.523	1,090,132	No	220,317
CD-06.2B-03T	0.688	0.595	0.523	0.523	271,127	No	220,317
CD-06.2B-03T (D/S)	0.000	0.595	0.523	0.523	271,127	No	220,317
CD-06.2B-04T	0.688	0.949	0.523	0.523	962,818	Yes	220,317
CD-06.2B-04T (BR/SE)	0.000	0.876	0.523	0.523	797,958	Yes	220,317
CD-06.2B-05V	0.688	0.533	0.559	0.559	-58,669	No	220,317
CD-06.2B-06E	0.688	0.631	0.523	0.523	330,266	Yes	220,317
CD-06.2B-07P	0.688	0.615	0.523	0.523	327,152	Yes	220,317
CD-06.2B-36P	0.688	0.648	0.523	0.523	1,090,132	No	220,317
CD-06.2B-08O	0.688	0.441	0.523	0.523	-115,299	No	220,317
CD-06.2B-09P	0.688	0.614	0.523	0.523	651,084	Yes	220,317
CD-06.2B-10E	0.688	0.573	0.523	0.523	153,440	No	220,317
CD-06.2B-11P	0.688	0.610	0.523	0.523	395,540	No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====> Grouped by Line: CD-06.2B HDR to BFP 32							
CD-06.2B-12E	0.688	0.573	0.523	0.523	153,440	No	220,317
CD-06.2B-13P	0.688	0.589	0.523	0.523	232,248	No	220,317
CD-06.2B-14E	0.688	0.573	0.523	0.523	153,440	No	220,317
CD-06.2B-15P	0.688	0.610	0.523	0.523	395,540	No	220,317
CD-06.3B-01R	0.000	0.610	0.523	0.523	395,540	No	220,317
CD-06.3B-01R (D/S)	0.000	0.481	0.392	0.392	386,414	No	220,317
CD-06.3B-02N	0.562	0.914	0.392	0.392	1,018,328	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:15:08AM

Run Name: CD: HDR TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			
====> Grouped by Line: CD-02.8A HDR to FWH 33A						
CD-02.7-01P	0.675	0.649	0.523	0.523	No	220,317
CD-02.7-02T	0.688	0.651	0.523	0.523	Yes	220,317
CD-02.7-02T (BR/SE)	0.000	0.365	0.305	0.305	Yes	220,317
CD-02.8A-01P	0.438	0.381	0.305	0.305	No	220,317
CD-02.8A-02E	0.438	0.494	0.305	0.305	Yes	220,317
CD-02.8A-03P	0.438	0.353	0.305	0.305	Yes	220,317
CD-02.8A-04V	0.438	0.711	0.326	0.326	No	220,317
CD-02.8A-05E	0.438	0.446	0.305	0.305	Yes	220,317
CD-02.8A-06P	0.438	0.375	0.305	0.305	Yes	220,317
CD-02.8A-07E	0.438	0.451	0.305	0.305	Yes	220,317
CD-02.8A-08N	0.438	0.481	0.305	0.305	Yes	220,317
Sorted By:Flow Order						
						1,636,452
						601,977
						206,708
						458,681
						613,801
						178,596
						923,306
						459,358
						261,410
						475,587
						529,110
====> Grouped by Line: CD-02.8B HDR to FWH 33B						
CD-02.8B-01P	0.445	0.367	0.305	0.305	Yes	220,317
CD-02.8B-02E	0.000	0.418	0.305	0.305	Yes	220,317
CD-02.8B-03P	0.438	0.376	0.305	0.305	Yes	220,317
CD-02.8B-04V	0.438	0.296	0.326	0.326	No	220,317
CD-02.8B-05E	0.438	0.475	0.305	0.305	Yes	220,317
CD-02.8B-06P	0.438	0.394	0.305	0.305	Yes	220,317
CD-02.8B-07E	0.438	0.475	0.305	0.305	Yes	220,317
CD-02.8B-08N	0.438	0.466	0.305	0.305	Yes	220,317
Sorted By:Flow Order						
						374,633
						365,709
						267,971
						-69,645
						550,712
						335,521
						550,712
						484,076
====> Grouped by Line: CD-02.8C HDR to FWH 33C						
CD-02.8C-01P	0.629	0.570	0.305	0.305	No	220,317
CD-02.8C-02E	0.000	0.380	0.305	0.305	Yes	220,317
CD-02.8C-03P	0.594	0.359	0.305	0.305	Yes	220,317
CD-02.8C-04V	0.438	0.961	0.326	0.326	No	220,317
Sorted By:Flow Order						
						1,534,555
						242,373
						197,563
						1,523,754

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: CD-02.8C HDR to FWH 33C						
CD-02.8C-05E	0.438	0.447	0.305	0.305	Yes	220,317
CD-02.8C-06P	0.438	0.371	0.305	0.305	Yes	220,317
CD-02.8C-07E	0.438	0.451	0.305	0.305	Yes	220,317
CD-02.8C-08N	0.438	0.442	0.305	0.305	Yes	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:15:15AM

Run Name: CD: HTR 31 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====>Grouped by Line: CD-01.1A FWH 31A to FWH 32A						
CD-01.1A-01N	0.438	0.336	0.305 0.305	No	108,208	220,317
CD-01.1A-02P	0.438	0.383	0.305 0.305	No	498,622	220,317
CD-01.1A-03E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1A-04P	0.438	0.387	0.305 0.305	No	566,521	220,317
CD-01.1A-05E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1A-06E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1A-07E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1A-08P	0.438	0.373	0.305 0.305	No	366,009	220,317
CD-01.1A-09E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1A-10P	0.438	0.387	0.305 0.305	No	566,521	220,317
CD-01.1A-11E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1A-12P	0.438	0.373	0.305 0.305	No	366,009	220,317
CD-01.1A-13N	0.438	0.357	0.305 0.305	No	222,786	220,317
Sorted By:Flow Order						
====>Grouped by Line: CD-01.1B FWH 31B to FWH 32B						
CD-01.1B-01N	0.438	0.336	0.305 0.305	No	108,208	220,317
CD-01.1B-02P	0.438	0.383	0.305 0.305	No	498,622	220,317
CD-01.1B-03E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1B-04P	0.438	0.387	0.305 0.305	No	566,521	220,317
CD-01.1B-05E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1B-06E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1B-07E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1B-08P	0.438	0.373	0.305 0.305	No	366,009	220,317
CD-01.1B-09E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1B-10P	0.438	0.387	0.305 0.305	No	566,521	220,317
CD-01.1B-11E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1B-12P	0.438	0.373	0.305 0.305	No	366,009	220,317
Sorted By:Flow Order						

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====> Grouped by Line: CD-01.1B FWH 31B to FWH 32B							
CD-01.1B-13N	0.438	0.357	0.305	0.305	222,786	No	220,317
====> Grouped by Line: CD-01.1C FWH 31C to FWH 32C							
CD-01.1C-01N	0.438	0.336	0.305	0.305	108,208	No	220,317
CD-01.1C-02P	0.438	0.383	0.305	0.305	498,622	No	220,317
CD-01.1C-03E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1C-04P	0.438	0.387	0.305	0.305	566,521	No	220,317
CD-01.1C-05E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1C-06E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1C-07E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1C-08P	0.438	0.373	0.305	0.305	366,009	No	220,317
CD-01.1C-09E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1C-10P	0.438	0.387	0.305	0.305	566,521	No	220,317
CD-01.1C-11E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1C-12P	0.438	0.373	0.305	0.305	366,009	No	220,317
CD-01.1C-13N	0.438	0.357	0.305	0.305	222,786	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:15:25AM

Pass 1 Analysis Exclude Measured Wear

Run Name: CD: HTR 32 TO 33 HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====> Grouped by Line: CD-02.2 FWH 32 OUT HDR						
CD-02.1B-11T	0.624	0.551	0.436 0.436	531,530	Yes	220,317
CD-02.1B-11T (BR/SE)	0.000	0.347	0.305 0.305	148,226	Yes	220,317
CD-02.1B-11T (D/S)	0.624	0.545	0.436 0.436	339,308	Yes	220,317
CD-02.2-01P	0.594	0.547	0.436 0.436	711,629	Yes	220,317
CD-02.2-03P	0.594	0.557	0.436 0.436	1,117,336	No	220,317
CD-02.2-02R	0.000	0.679	0.436 0.436	1,111,414	Yes	220,317
CD-02.2-02R (D/S)	0.000	0.672	0.523 0.523	805,089	Yes	220,317
Sorted By:Flow Order						
====> Grouped by Line: CD-02.3 FWH 32 OUT HDR						
CD-02.1C-12T (BR/SE)	0.000	0.369	0.305 0.305	227,737	Yes	220,317
CD-02.1C-12T	0.692	0.632	0.523 0.523	430,090	Yes	220,317
CD-02.1C-12T (D/S)	0.692	0.627	0.523 0.523	328,914	Yes	220,317
CD-02.3-01P	0.736	0.667	0.523 0.523	924,182	Yes	220,317
CD-02.3-02T	0.688	0.609	0.523 0.523	369,455	No	220,317
CD-02.3-02T (D/S)	0.000	0.609	0.523 0.523	369,455	No	220,317
CD-02.3-03P	0.688	0.635	0.523 0.523	724,363	No	220,317
CD-02.3-04E	0.688	0.590	0.523 0.523	235,166	No	220,317
CD-02.3-05E	0.688	0.596	0.523 0.523	268,053	No	220,317
CD-02.3-06P	0.688	0.622	0.523 0.523	511,418	No	220,317
CD-02.3-07E	0.688	0.590	0.523 0.523	235,166	No	220,317
CD-02.3-08P	0.688	0.622	0.523 0.523	511,418	No	220,317
CD-02.3-09E	0.688	0.601	0.523 0.523	304,927	No	220,317
CD-02.3-10P	0.688	0.630	0.523 0.523	627,570	No	220,317
CD-02.3-16P	0.688	0.651	0.523 0.523	1,172,767	No	220,317
CD-02.3-11E	0.688	0.590	0.523 0.523	235,166	No	220,317
CD-02.3-12P	0.688	0.622	0.523 0.523	511,418	No	220,317
CD-02.3-13E	0.688	0.590	0.523 0.523	235,166	No	220,317
Sorted By:Flow Order						

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: CD-02.3 FWH 32 OUT HDR								
CD-02.3-14P	0.688	0.603	0.523	0.523	0.523	325,092	No	220,317
CD-02.3-15T	0.688	0.681	0.523	0.523	0.523	369,652	No	220,317
CD-02.3-15T (D/S)	0.000	0.646	0.523	0.523	0.523	294,340	Yes	220,317
CD-02.3-15T (BR/SE)	0.000	0.495	0.392	0.392	0.392	2,899,944	No	220,317
====> Grouped by Line: CD-02.4 FWH 32 OUT HDR								
CD-02.3-17P	0.688	0.636	0.523	0.523	0.523	747,672	No	220,317
CD-02.4-01R	0.000	0.598	0.523	0.523	0.523	281,373	No	220,317
CD-02.4-01R (D/S)	0.000	0.490	0.436	0.436	0.436	176,355	No	220,317
CD-02.4-02V	0.594	0.431	0.466	0.466	0.466	-71,020	No	220,317
CD-02.4-03P	0.594	0.522	0.436	0.436	0.436	411,225	No	220,317
CD-02.4-04E	0.864	0.715	0.436	0.436	0.436	703,018	Yes	220,317
CD-02.4-04E (D/S)	0.864	0.682	0.523	0.523	0.523	512,642	Yes	220,317
CD-02.5-01P	0.754	0.709	0.523	0.523	0.523	971,995	No	220,317
CD-02.5-02E	0.994	0.662	0.523	0.523	0.523	479,450	No	220,317
====> Grouped by Line: CD-02.5 FWH 32 OUT HDR								
CD-02.5-03T (BR/SE)	0.000	0.550	0.392	0.392	0.392	4,508,023	No	220,317
CD-02.5-03T	0.688	0.607	0.523	0.523	0.523	270,069	Yes	220,317
CD-02.5-03T (D/S)	0.000	0.614	0.523	0.523	0.523	286,041	Yes	220,317
CD-02.5-04T	0.730	0.644	0.523	0.523	0.523	281,687	Yes	220,317
CD-02.5-04T (BR/SE)	0.000	0.354	0.305	0.305	0.305	168,966	No	220,317
CD-02.5-04T (D/S)	0.730	0.634	0.523	0.523	0.523	326,728	Yes	220,317
====> Grouped by Line: CD-02.6 FWH 32 OUT HDR								
CD-02.6-01T (D/S)	0.693	0.644	0.523	0.523	0.523	653,772	Yes	220,317
CD-02.6-02P	0.693	0.637	0.523	0.523	0.523	918,919	Yes	220,317
CD-02.6-03T	0.694	0.656	0.523	0.523	0.523	391,355	Yes	220,317
CD-02.6-03T (D/S)	0.694	0.645	0.523	0.523	0.523	575,301	Yes	220,317
CD-02.6-03T (BR/SE)	0.000	0.368	0.305	0.305	0.305	216,051	Yes	220,317
CD-02.6-01T	0.693	0.628	0.523	0.523	0.523	567,644	Yes	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:15:31AM

Run Name: CD: HTR 32 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====> Grouped by Line: CD-02.1A FWH 32A to HDR						
CD-02.1A-01N	0.438	0.428	0.305 0.305	No	294,891	220,317
CD-02.1A-02P	0.438	0.361	0.305 0.305	No	251,522	220,317
CD-02.1A-03E	0.438	0.333	0.305 0.305	No	91,554	220,317
CD-02.1A-04P	0.438	0.367	0.305 0.305	No	298,873	220,317
CD-02.1A-05V	0.438	0.296	0.326 0.326	No	-69,645	220,317
CD-02.1A-06E	0.438	0.481	0.305 0.305	Yes	352,905	220,317
CD-02.1A-08P	0.438	0.339	0.305 0.305	No	116,235	220,317
CD-02.1A-09E	0.438	0.333	0.305 0.305	No	91,554	220,317
CD-02.1A-10P	0.438	0.367	0.305 0.305	No	298,873	220,317
CD-02.1A-11E	0.438	0.333	0.305 0.305	No	91,554	220,317
CD-02.1A-12P	0.438	0.347	0.305 0.305	No	159,041	220,317
CD-02.1A-14P	0.438	0.399	0.305 0.305	No	799,947	220,317
CD-02.1A-13R	0.000	0.599	0.305 0.305	Yes	1,261,887	220,317
CD-02.1A-13R (D/S)	0.000	0.549	0.436 0.436	Yes	716,965	220,317
Sorted By:Flow Order						
====> Grouped by Line: CD-02.1B FWH 32B to HDR						
CD-02.1B-01N	0.438	0.432	0.305 0.305	No	304,498	220,317
CD-02.1B-02P	0.438	0.361	0.305 0.305	No	251,522	220,317
CD-02.1B-03E	0.438	0.408	0.305 0.305	Yes	333,252	220,317
CD-02.1B-04P	0.438	0.367	0.305 0.305	No	298,873	220,317
CD-02.1B-05E	0.438	0.333	0.305 0.305	No	91,554	220,317
CD-02.1B-06E	0.438	0.333	0.305 0.305	No	91,554	220,317
CD-02.1B-07V	0.438	0.296	0.326 0.326	No	-69,645	220,317
CD-02.1B-08P	0.438	0.376	0.305 0.305	No	386,041	220,317
CD-02.1B-09E	0.438	0.474	0.305 0.305	Yes	548,887	220,317
CD-02.1B-10P	0.661	0.587	0.305 0.305	No	1,297,273	220,317
Sorted By:Flow Order						

Component Name	Thickness (in)		Tcrit	Inspected	Component Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
=====> Grouped by Line: CD-02.1C FWH 32C to HDR						
CD-02.1C-01N	0.438	0.389	0.305	0.305	201,221	220,317
CD-02.1C-02P	0.438	0.349	0.305	0.305	196,302	220,317
CD-02.1C-03E	0.438	0.461	0.305	0.305	505,272	220,317
CD-02.1C-04P	0.438	0.367	0.305	0.305	298,873	220,317
CD-02.1C-05E	0.438	0.333	0.305	0.305	91,554	220,317
CD-02.1C-06E	0.438	0.333	0.305	0.305	91,554	220,317
CD-02.1C-07P	0.438	0.347	0.305	0.305	159,041	220,317
CD-02.1C-08V	0.438	0.296	0.326	0.326	-69,645	220,317
CD-02.1C-09P	0.438	0.376	0.305	0.305	386,041	220,317
CD-02.1C-10E	0.575	0.491	0.305	0.305	586,757	220,317
CD-02.1C-11P	0.438	0.367	0.305	0.305	298,873	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:15:39AM

Run Name: CD: HTR 33 TO HTR 34
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			

====> Grouped by Line: CD-03.1A FWH 33A to FWH 34A

CD-03.1A-01N	0.438	0.379	0.305	0.305	121,287	Yes	220,317
CD-03.1A-02E	0.438	0.451	0.305	0.305	321,998	Yes	220,317
CD-03.1A-03E	0.438	0.466	0.305	0.305	355,163	Yes	220,317
CD-03.1A-04P	0.438	0.361	0.305	0.305	142,727	Yes	220,317
CD-03.1A-05E	0.438	0.297	0.305	0.305	-19,355	No	220,317
CD-03.1A-15P	0.438	0.344	0.305	0.305	145,590	No	220,317
CD-03.1A-06E	0.438	0.280	0.305	0.305	-53,431	No	220,317
CD-03.1A-07P	0.438	0.301	0.305	0.305	-9,046	No	220,317
CD-03.1A-14P	0.438	0.378	0.305	0.305	424,334	No	220,317
CD-03.1A-08E	0.438	0.297	0.305	0.305	-19,355	No	220,317
CD-03.1A-09P	0.438	0.344	0.305	0.305	145,590	No	220,317
CD-03.1A-10E	0.438	0.280	0.305	0.305	-53,431	No	220,317
CD-03.1A-11P	0.438	0.301	0.305	0.305	-9,046	No	220,317
CD-03.1A-12E	0.438	0.297	0.305	0.305	-19,355	No	220,317
CD-03.1A-13N	0.438	0.267	0.305	0.305	-74,887	No	220,317

Sorted By:Flow Order

-126,106	No	220,317
288,075	Yes	220,317
344,517	Yes	220,317
199,101	Yes	220,317
212,271	Yes	220,317
359,829	Yes	220,317
88,599	Yes	220,317
424,334	No	220,317
-53,431	No	220,317
86,210	No	220,317

====> Grouped by Line: CD-03.1B FWH 33B to FWH 34B

CD-03.1B-01N	0.438	0.225	0.305	0.305	-126,106	No	220,317
CD-03.1B-02E	0.438	0.435	0.305	0.305	288,075	Yes	220,317
CD-03.1B-03E	0.438	0.461	0.305	0.305	344,517	Yes	220,317
CD-03.1B-04P	0.438	0.383	0.305	0.305	199,101	Yes	220,317
CD-03.1B-05E	0.547	0.403	0.305	0.305	212,271	Yes	220,317
CD-03.1B-06E	0.555	0.471	0.305	0.305	359,829	Yes	220,317
CD-03.1B-07P	0.477	0.340	0.305	0.305	88,599	Yes	220,317
CD-03.1B-12P	0.438	0.378	0.305	0.305	424,334	No	220,317
CD-03.1B-08E	0.438	0.280	0.305	0.305	-53,431	No	220,317
CD-03.1B-09P	0.438	0.331	0.305	0.305	86,210	No	220,317

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====> Grouped by Line: CD-03.1B FWH 33B to FWH 34B							
CD-03.1B-10E	0.438	0.297	0.305	0.305	-19,355	No	220,317
CD-03.1B-11N	0.438	0.267	0.305	0.305	-74,887	No	220,317
====> Grouped by Line: CD-03.1C FWH 33C to FWH 34C							
CD-03.1C-01N	0.438	0.411	0.305	0.305	174,350	Yes	220,317
CD-03.1C-02E	0.438	0.427	0.305	0.305	269,200	Yes	220,317
CD-03.1C-03E	0.438	0.280	0.305	0.305	-53,431	No	220,317
CD-03.1C-04P	0.438	0.301	0.305	0.305	-9,046	No	220,317
CD-03.1C-05E	0.438	0.280	0.305	0.305	-53,431	No	220,317
CD-03.1C-06E	0.438	0.280	0.305	0.305	-53,431	No	220,317
CD-03.1C-07P	0.438	0.301	0.305	0.305	-9,046	No	220,317
CD-03.1C-12P	0.438	0.378	0.305	0.305	424,334	No	220,317
CD-03.1C-08E	0.438	0.280	0.305	0.305	-53,431	No	220,317
CD-03.1C-09P	0.438	0.331	0.305	0.305	86,210	No	220,317
CD-03.1C-10E	0.438	0.297	0.305	0.305	-19,355	No	220,317
CD-03.1C-11N	0.438	0.267	0.305	0.305	-74,887	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:15:48AM

Run Name: CD: HTR 34 TO HTR 35
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====> Grouped by Line: CD-04.1A FWH 34A to FWH 35A						
CD-04.1A-01N	0.438	0.287	0.305 0.305	-22,323	No	220,317
CD-04.1A-02E	0.438	0.439	0.305 0.305	228,081	Yes	220,317
CD-04.1A-03E	0.438	0.443	0.305 0.305	234,871	Yes	220,317
CD-04.1A-04P	0.438	0.348	0.305 0.305	84,035	Yes	220,317
CD-04.1A-05E	0.438	0.232	0.305 0.305	-120,519	No	220,317
CD-04.1A-06P	0.438	0.299	0.305 0.305	-15,391	No	220,317
CD-04.1A-07E	0.438	0.232	0.305 0.305	-120,519	No	220,317
CD-04.1A-08P	0.438	0.299	0.305 0.305	-15,391	No	220,317
CD-04.1A-09E	0.438	0.232	0.305 0.305	-120,519	No	220,317
CD-04.1A-10P	0.438	0.260	0.305 0.305	-86,724	No	220,317
CD-04.1A-15P	0.438	0.360	0.305 0.305	240,671	No	220,317
CD-04.1A-11E	0.438	0.232	0.305 0.305	-120,519	No	220,317
CD-04.1A-12P	0.438	0.299	0.305 0.305	-15,391	No	220,317
CD-04.1A-13E	0.438	0.254	0.305 0.305	-95,629	No	220,317
CD-04.1A-14N	0.438	0.215	0.305 0.305	-131,278	No	220,317
====> Grouped by Line: CD-04.1B FWH 34B to FWH 35B						
CD-04.1B-01N	0.438	0.352	0.305 0.305	59,297	Yes	220,317
CD-04.1B-02E	0.438	0.451	0.305 0.305	247,607	Yes	220,317
CD-04.1B-03E	0.438	0.429	0.305 0.305	210,257	Yes	220,317
CD-04.1B-04P	0.438	0.375	0.305 0.305	136,691	Yes	220,317
CD-04.1B-05E	0.438	0.232	0.305 0.305	-120,519	No	220,317
CD-04.1B-06E	0.438	0.243	0.305 0.305	-111,112	No	220,317
CD-04.1B-07P	0.438	0.299	0.305 0.305	-15,391	No	220,317
CD-04.1B-08E	0.438	0.232	0.305 0.305	-120,519	No	220,317
CD-04.1B-09P	0.438	0.260	0.305 0.305	-86,724	No	220,317
CD-04.1B-10E	0.438	0.232	0.305 0.305	-120,519	No	220,317

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			Time to Tcrit (hrs)	Inspected	
====> Grouped by Line: CD-04.1B FWH 34B to FWH 35B							
CD-04.1B-11P	0.438	0.260	0.305	0.305	-86,724	No	220,317
CD-04.1B-17P	0.438	0.360	0.305	0.305	240,671	No	220,317
CD-04.1B-12E	0.438	0.254	0.305	0.305	-95,629	No	220,317
CD-04.1B-13E	0.438	0.232	0.305	0.305	-120,519	No	220,317
CD-04.1B-14P	0.438	0.260	0.305	0.305	-86,724	No	220,317
CD-04.1B-15E	0.438	0.254	0.305	0.305	-95,629	No	220,317
CD-04.1B-16N	0.438	0.215	0.305	0.305	-131,278	No	220,317
====> Grouped by Line: CD-04.1C FWH 34C to FWH 35C							
CD-04.1C-01N	0.438	0.432	0.305	0.305	159,597	No	220,317
CD-04.1C-02E	0.594	0.451	0.305	0.305	241,198	Yes	220,317
CD-04.1C-03E	0.570	0.453	0.305	0.305	245,727	Yes	220,317
CD-04.1C-04P	0.438	0.260	0.305	0.305	-86,724	No	220,317
CD-04.1C-05E	0.438	0.451	0.305	0.305	247,368	Yes	220,317
CD-04.1C-06P	0.438	0.416	0.305	0.305	280,296	Yes	220,317
CD-04.1C-07E	0.438	0.419	0.305	0.305	193,041	Yes	220,317
CD-04.1C-08E	0.438	0.232	0.305	0.305	-120,519	No	220,317
CD-04.1C-09P	0.438	0.260	0.305	0.305	-86,724	No	220,317
CD-04.1C-14P	0.438	0.360	0.305	0.305	240,671	No	220,317
CD-04.1C-10E	0.438	0.232	0.305	0.305	-120,519	No	220,317
CD-04.1C-11P	0.438	0.299	0.305	0.305	-15,391	No	220,317
CD-04.1C-12E	0.438	0.254	0.305	0.305	-95,629	No	220,317
CD-04.1C-13N	0.438	0.215	0.305	0.305	-131,278	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:15:51AM

Run Name: CD: HTR 35 TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	----- Thickness (in) -----			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====> Grouped by Line: CD-05.3 FWH 35 OUT HDR						
CD-05.1B-09T	0.724	0.632	0.523 0.523	460,688	Yes	220,317
CD-05.1B-09T (BR/SE)	0.000	0.401	0.305 0.305	235,380	Yes	220,317
CD-05.1B-09T (D/S)	0.724	0.648	0.523 0.523	340,785	Yes	220,317
CD-05.3-01P	0.724	0.659	0.523 0.523	760,201	Yes	220,317
====> Grouped by Line: CD-05.4 FWH 35 OUT HDR						
CD-05.1C-10T (BR/SE)	0.000	0.396	0.305 0.305	224,310	Yes	220,317
CD-05.1C-10T	0.000	0.668	0.523 0.523	397,203	Yes	220,317
CD-05.1C-10T (D/S)	0.000	0.649	0.523 0.523	274,945	Yes	220,317
CD-05.4-04P	0.688	0.633	0.523 0.523	493,001	No	220,317
CD-05.4-01E	0.688	0.638	0.523 0.523	278,374	Yes	220,317
CD-05.4-02P	0.722	0.593	0.523 0.523	196,907	No	220,317
CD-05.4-03T (BR/SE)	0.696	0.651	0.523 0.523	287,068	Yes	220,317
CD-05.4-03T (D/S)	0.696	0.649	0.653 0.653	-10,134	Yes	220,317
CD-05.4-05P	0.625	0.656	0.561 0.561	380,909	No	220,317

Note:
 [1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:15:56AM

Run Name: CD: HTR 35 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			

====> **Grouped by Line: CD-05.1A FWH 35A to HDR**

CD-05.1A-01N	0.438	0.344	0.305	0.305	Yes	220,317
CD-05.1A-02E	0.438	0.348	0.305	0.305	Yes	220,317
CD-05.1A-03E	0.438	0.356	0.305	0.305	Yes	220,317
CD-05.1A-04P	0.438	0.300	0.305	0.305	No	220,317
CD-05.1A-05V	0.438	0.223	0.326	0.326	No	220,317
CD-05.1A-06P	0.438	0.370	0.305	0.305	Yes	220,317
CD-05.1A-07E	0.438	0.467	0.305	0.305	Yes	220,317
CD-05.1A-08P	0.438	0.331	0.305	0.305	No	220,317
CD-05.1A-09E	0.438	0.279	0.305	0.305	No	220,317
CD-05.1A-10P	0.438	0.300	0.305	0.305	No	220,317
CD-05.1A-11R	0.000	0.318	0.305	0.305	No	220,317
CD-05.1A-11R (D/S)	0.000	0.627	0.523	0.523	No	220,317
CD-05.2-01P	0.688	0.637	0.523	0.523	No	220,317

Sorted By:Flow Order

====> **Grouped by Line: CD-05.1B FWH 35B to HDR**

CD-05.1B-01N	0.438	0.223	0.305	0.305	No	220,317
CD-05.1B-02E	0.438	0.418	0.305	0.305	Yes	220,317
CD-05.1B-03E	0.438	0.476	0.305	0.305	Yes	220,317
CD-05.1B-04P	0.438	0.352	0.305	0.305	Yes	220,317
CD-05.1B-05V	0.438	0.223	0.326	0.326	No	220,317
CD-05.1B-06P	0.438	0.381	0.305	0.305	Yes	220,317
CD-05.1B-07E	0.575	0.463	0.305	0.305	Yes	220,317

Sorted By:Flow Order

====> **Grouped by Line: CD-05.1C FWH 35C to HDR**

CD-05.1C-01N	0.438	0.383	0.305	0.305	No	220,317
CD-05.1C-02E	0.438	0.279	0.305	0.305	No	220,317
CD-05.1C-03E	0.438	0.279	0.305	0.305	No	220,317

Sorted By:Flow Order

Component Name	Thickness (in)		Tcrit	Inspected	Component Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
=====> Grouped by Line: CD-05.1C FWH 35C to HDR						
CD-05.1C-04P	0.438	0.300	0.305	0.305	-11,618	220,317
CD-05.1C-05V	0.438	0.223	0.326	0.326	-146,025	220,317
CD-05.1C-06P	0.438	0.343	0.305	0.305	146,209	220,317
CD-05.1C-07E	0.438	0.279	0.305	0.305	-56,757	220,317
CD-05.1C-08E	0.438	0.417	0.305	0.305	252,006	220,317
CD-05.1C-09P	0.498	0.359	0.305	0.305	139,148	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:16:02AM

Run Name: CD: S/G BLWDN HX IN
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====>Grouped by Line: CD-02.9 FWH HDR to SGBD HX3						
CD-02.9-01P	0.562	0.555	0.392 0.392	No	7,898,586	220,317
CD-02.9-02E	0.562	0.549	0.392 0.392	No	4,115,294	220,317
CD-02.9-03P	0.562	0.551	0.392 0.392	No	4,810,752	220,317
CD-02.9-04V	0.562	0.545	0.420 0.420	No	2,425,462	220,317
CD-02.9-05P	0.562	0.554	0.392 0.392	No	7,150,020	220,317
CD-02.9-06E	0.562	0.549	0.392 0.392	No	4,115,294	220,317
CD-02.9-07P	0.562	0.553	0.392 0.392	No	6,251,741	220,317
CD-02.9-08E	0.562	0.549	0.392 0.392	No	4,115,294	220,317
CD-02.9-09P	0.562	0.551	0.392 0.392	No	4,810,752	220,317
CD-02.9-10P	0.562	0.558	0.392 0.392	No	14,635,677	220,317
CD-02.9-11E	0.562	0.549	0.392 0.392	No	4,115,294	220,317
CD-02.9-12P	0.562	0.553	0.392 0.392	No	6,251,741	220,317
CD-02.9-13E	0.562	0.549	0.392 0.392	No	4,115,294	220,317
CD-02.9-14P	0.562	0.553	0.392 0.392	No	6,251,741	220,317
CD-02.9-15P	0.562	0.558	0.392 0.392	No	14,635,677	220,317
CD-02.9-16E	0.562	0.549	0.392 0.392	No	4,115,294	220,317
CD-02.9-17T	0.562	0.543	0.392 0.392	No	2,658,625	220,317
CD-02.9-17T (BR/SE)	0.000	0.265	0.174 0.174	No	537,407	220,317
CD-02.10-01P	0.322	0.294	0.188 0.188	No	1,278,615	220,317
CD-02.10-03P	0.322	0.292	0.188 0.188	No	1,188,958	220,317
CD-02.10-04E	0.322	0.282	0.188 0.188	Yes	610,545	220,317
CD-02.10-05P	0.322	0.287	0.188 0.188	No	955,764	220,317
CD-02.10-06E	0.322	0.270	0.188 0.188	No	536,931	220,317
CD-02.10-07P	0.322	0.287	0.188 0.188	No	955,764	220,317
CD-02.10-08E	0.322	0.304	0.188 0.188	Yes	755,144	220,317
CD-02.10-09P	0.322	0.303	0.188 0.188	Yes	1,106,068	220,317
CD-02.10-10E	0.322	0.286	0.188 0.188	Yes	638,059	220,317

Sorted By:Flow Order

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: CD-02.9 FWH HDR to SGBD HX3								
CD-02.10-11N	0.812	0.741	0.188	0.188	0.188	2,607,609	No	220,317

Sorted By: Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:16:16AM

Run Name: CD: S/G BLWDN HX OUT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====> Grouped by Line: CD-02.11 SGBD HX3 to FWH HDR						
CD-02.11-01N	0.812	0.723	0.188 0.188	2,018,960	No	220,317
CD-02.11-02P	0.322	0.284	0.188 0.188	860,104	No	220,317
CD-02.11-03E	0.322	0.291	0.188 0.188	669,721	Yes	220,317
CD-02.11-04P	0.322	0.291	0.188 0.188	997,748	Yes	220,317
CD-02.11-05E	0.322	0.310	0.188 0.188	890,165	Yes	220,317
CD-02.11-06P	0.322	0.301	0.188 0.188	1,233,360	Yes	220,317
CD-02.11-07E	0.322	0.309	0.188 0.188	789,513	Yes	220,317
CD-02.11-08P	0.322	0.294	0.188 0.188	1,019,189	Yes	220,317
CD-02.11-09P	0.322	0.307	0.188 0.188	2,599,367	No	220,317
CD-02.11-10E	0.322	0.306	0.188 0.188	768,079	Yes	220,317
CD-02.11-11P	0.322	0.304	0.188 0.188	1,119,783	Yes	220,317
CD-02.11-12E	0.322	0.299	0.188 0.188	722,545	No	220,317
CD-02.11-13T (BR/SE)	0.000	0.276	0.174 0.174	523,835	No	220,317
CD-02.11-13T (D/S)	0.000	0.548	0.392 0.392	3,014,913	Yes	220,317
CD-02.12-01P	0.562	0.552	0.392 0.392	5,153,845	No	220,317
CD-02.12-02E	0.562	0.549	0.392 0.392	4,115,294	No	220,317
CD-02.12-03P	0.562	0.553	0.392 0.392	6,251,741	No	220,317
CD-02.12-04V	0.562	0.545	0.420 0.420	2,425,462	No	220,317
CD-02.12-05P	0.562	0.544	0.392 0.392	6,693,046	Yes	220,317
CD-02.12-06E	0.562	0.691	0.392 0.392	7,828,370	Yes	220,317
CD-02.12-07P	0.562	0.553	0.392 0.392	6,251,741	No	220,317
CD-02.12-08E	0.562	0.549	0.392 0.392	4,115,294	No	220,317
CD-02.12-09P	0.562	0.553	0.392 0.392	6,251,741	No	220,317
CD-02.12-10E	0.562	0.549	0.392 0.392	4,115,294	No	220,317
CD-02.12-11P	0.562	0.553	0.392 0.392	6,251,741	No	220,317

Sorted By: Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:16:21AM

Run Name: ES:BFPT DRN TO COND
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: EX-07.1 BFPT 31 Drain to Cond							
EX-07.1-01N	0.000	0.618	0.080	0.080	16,192,661	No	220,317
EX-07.1-02E	0.000	0.621	0.080	0.080	26,233,440	No	220,317
EX-07.1-03EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.1-04P	0.000	0.623	0.080	0.080	66,364,080	No	220,317
EX-07.1-05E	0.000	0.621	0.080	0.080	28,830,762	No	220,317
EX-07.1-06P	0.000	0.620	0.080	0.080	25,489,944	No	220,317
EX-07.1-07E	0.000	0.621	0.080	0.080	30,591,206	No	220,317
EX-07.1-08EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.1-09P	0.000	0.623	0.080	0.080	66,364,080	No	220,317
EX-07.1-10EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.1-11R	0.000	0.622	0.080	0.080	38,993,804	No	220,317
EX-07.1-11R (D/S)	0.000	0.623	0.090	0.090	69,036,992	No	220,317
EX-07.1-12N	0.000	0.622	0.090	0.090	46,054,212	No	220,317
Sorted By:Flow Order							
====>Grouped by Line: EX-07.2 BFPT 32 Drain to Cond							
EX-07.2-01N	0.000	0.618	0.080	0.080	16,192,661	No	220,317
EX-07.2-02E	0.000	0.621	0.080	0.080	26,233,440	No	220,317
EX-07.2-03EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.2-04P	0.000	0.623	0.080	0.080	66,364,080	No	220,317
EX-07.2-05E	0.000	0.621	0.080	0.080	28,830,762	No	220,317
EX-07.2-06P	0.000	0.620	0.080	0.080	25,489,944	No	220,317
EX-07.2-07E	0.000	0.621	0.080	0.080	30,591,206	No	220,317
EX-07.2-08EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.2-09P	0.000	0.623	0.080	0.080	66,364,080	No	220,317
EX-07.2-10EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.2-11R	0.000	0.622	0.080	0.080	38,993,804	No	220,317
EX-07.2-11R (D/S)	0.000	0.623	0.090	0.090	69,036,992	No	220,317
Sorted By:Flow Order							

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: EX-07.2 BFPT 32 Drain to Cond								
EX-07.2-12N	0.000	0.622	0.090	0.090	0.090	46,054,212	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:16:29AM

Run Name: ES: HDR TO 35 HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====> Grouped by Line: EX-02.16 HDR 35 to FWH 35A						
EX-02.19-01P	0.375	0.375	0.232 0.232	No	40,898,904	141,668
EX-02.16-01R	0.000	0.603	0.232 0.232	No	49,528,892	141,668
EX-02.16-01R (D/S)	0.000	0.513	0.149 0.149	No	38,507,948	141,668
EX-02.16-02P	0.284	0.283	0.149 0.149	No	15,804,885	99,292
EX-02.16-03E	0.455	0.454	0.149 0.149	No	28,736,132	99,292
EX-02.16-04P	0.346	0.345	0.149 0.149	No	27,729,780	99,292
EX-02.16-05V	0.312	-0.276	0.160 0.160	No	-154,636	220,317
EX-02.16-06E	0.000	0.374	0.149 0.149	No	21,383,286	99,292
EX-02.16-07P	0.380	0.403	0.149 0.149	No	23,109,196	99,292
EX-02.16-08E	0.924	0.640	0.149 0.149	Yes	160,602	181,524
EX-02.16-09N	0.293	-0.243	0.149 0.149	No	-152,235	220,317
Sorted By:Flow Order						
====> Grouped by Line: EX-02.17 HDR 35 to FWH 35B						
EX-02.17-01P	0.375	0.374	0.149 0.149	No	55,297,812	141,668
EX-02.17-02V	0.312	-0.276	0.160 0.160	No	-154,636	220,317
EX-02.17-03E	0.375	0.466	0.149 0.149	No	30,112,788	99,292
EX-02.17-04P	0.378	0.393	0.149 0.149	No	22,219,774	99,292
EX-02.17-05E	0.968	0.106	0.149 0.149	Yes	-14,070	181,524
EX-02.17-06N	0.293	0.438	0.149 0.149	Yes	100,567	220,317
Sorted By:Flow Order						
====> Grouped by Line: EX-02.18 HDR 35 to FWH 35C						
EX-02.18-01P	0.375	0.374	0.149 0.149	No	55,297,812	141,668
EX-02.18-02V	0.312	-0.276	0.160 0.160	No	-154,636	220,317
EX-02.18-03E	0.375	0.558	0.149 0.149	No	38,841,212	141,668
EX-02.18-04P	0.375	0.383	0.149 0.149	No	23,748,002	141,668
EX-02.18-05E	0.312	0.674	0.149 0.149	Yes	184,036	181,524
EX-02.18-06N	0.293	0.432	0.149 0.149	No	98,493	220,317
Sorted By:Flow Order						

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:16:49AM

Run Name: ES: HDR TO 36 HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====> Grouped by Line: EX-01.5A HP EX HDR to FWH 36A						
EX-01.7-01P	0.438	0.438	0.275 0.275	No	100,000,000	128,112
EX-01.5A-01R	0.000	0.438	0.275 0.275	No	100,000,000	128,112
EX-01.5A-01R (D/S)	0.293	0.293	0.195 0.195	No	100,000,000	128,112
EX-01.5A-02P	0.374	0.374	0.195 0.195	No	100,000,000	128,112
EX-01.5A-03E	0.000	0.375	0.195 0.195	No	100,000,000	128,112
EX-01.5A-04P	0.411	0.411	0.195 0.195	No	100,000,000	128,112
EX-01.5A-05E	0.419	0.419	0.195 0.195	No	100,000,000	128,112
EX-01.5A-06P	0.000	0.375	0.195 0.195	No	100,000,000	128,112
EX-01.5A-16L	0.000	0.375	0.195 0.195	No	172,059,840	128,112
EX-01.5A-16L (D/S)	0.000	0.375	0.195 0.195	No	172,059,840	128,112
EX-01.5A-07L	0.000	0.375	0.195 0.195	No	172,059,840	128,112
EX-01.5A-07L (D/S)	0.000	0.375	0.195 0.195	No	172,059,840	128,112
EX-01.5A-08P	0.000	0.375	0.195 0.195	No	100,000,000	128,112
EX-01.5A-09E	0.000	0.375	0.195 0.195	No	100,000,000	128,112
EX-01.5A-10P	0.330	0.330	0.195 0.195	No	100,000,000	128,112
EX-01.5A-11V	0.330	-0.005	0.202 0.202	No	-171,764	220,317
EX-01.5A-12P	0.387	0.387	0.195 0.195	No	100,000,000	128,112
EX-01.5A-13E	0.426	0.426	0.195 0.195	No	100,000,000	128,112
EX-01.5A-17P	0.335	0.335	0.195 0.195	No	100,000,000	128,112
EX-01.5A-14E	0.470	0.470	0.195 0.195	No	100,000,000	128,112
EX-01.5A-15N	0.309	1.170	0.195 0.195	No	100,000,000	128,112
====> Grouped by Line: EX-01.5B HP EX HDR to FWH 36B						
EX-01.5B-01P	0.363	0.363	0.195 0.195	No	100,000,000	128,112
EX-01.5B-02E	0.477	0.477	0.195 0.195	No	100,000,000	128,112
EX-01.5B-03P	0.330	0.330	0.195 0.195	No	100,000,000	128,112
EX-01.5B-14L	0.330	0.330	0.195 0.195	No	130,138,064	128,112

Sorted By: Flow Order

Sorted By: Flow Order

Component Name	----- Thickness (in) -----		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====> Grouped by Line: EX-01.5B HP EX HDR to FWH 36B							
EX-01.5B-14L (D/S)	0.000	0.330	0.195	0.195	130,138,064	No	128,112
EX-01.5B-04L	0.330	0.330	0.195	0.195	130,138,064	No	128,112
EX-01.5B-04L (D/S)	0.000	0.330	0.195	0.195	130,138,064	No	128,112
EX-01.5B-05P	0.330	0.330	0.195	0.195	100,000,000	No	128,112
EX-01.5B-06E	0.330	0.330	0.195	0.195	100,000,000	No	128,112
EX-01.5B-07E	0.330	0.330	0.195	0.195	100,000,000	No	128,112
EX-01.5B-08P	0.330	0.330	0.195	0.195	100,000,000	No	128,112
EX-01.5B-09V	0.330	-0.005	0.202	0.202	-171,764	No	220,317
EX-01.5B-10P	0.374	0.374	0.195	0.195	100,000,000	No	128,112
EX-01.5B-11E	0.452	0.452	0.195	0.195	100,000,000	No	128,112
EX-01.5B-15P	0.386	0.386	0.195	0.195	100,000,000	No	128,112
EX-01.5B-12E	0.543	0.543	0.195	0.195	100,000,000	No	128,112
EX-01.5B-13N	0.309	0.377	0.195	0.195	100,000,000	No	128,112
====> Grouped by Line: EX-01.5C HP EX HDR to FWH 36C							
EX-01.5C-01P	0.450	0.450	0.195	0.195	100,000,000	No	128,112
EX-01.5C-02E	0.423	0.423	0.195	0.195	100,000,000	No	128,112
EX-01.5C-03P	0.377	0.377	0.195	0.195	100,000,000	No	128,112
EX-01.5C-14L	0.373	0.373	0.195	0.195	170,210,432	No	128,112
EX-01.5C-14L (D/S)	0.373	0.373	0.195	0.195	170,210,432	No	128,112
EX-01.5C-04L	0.364	0.364	0.195	0.195	161,880,000	No	128,112
EX-01.5C-04L (D/S)	0.000	0.330	0.195	0.195	130,138,064	No	128,112
EX-01.5C-05P	0.373	0.373	0.195	0.195	100,000,000	No	128,112
EX-01.5C-06E	0.431	0.431	0.195	0.195	100,000,000	No	128,112
EX-01.5C-07E	0.416	0.416	0.195	0.195	100,000,000	No	128,112
EX-01.5C-08P	0.356	0.356	0.195	0.195	100,000,000	No	128,112
EX-01.5C-09V	0.330	-0.005	0.202	0.202	-171,764	No	220,317
EX-01.5C-10P	0.358	0.358	0.195	0.195	100,000,000	No	128,112
EX-01.5C-11E	0.448	0.448	0.195	0.195	100,000,000	No	128,112
EX-01.5C-15P	0.337	0.337	0.195	0.195	100,000,000	No	128,112
EX-01.5C-12E	0.485	0.485	0.195	0.195	100,000,000	No	128,112
EX-01.5C-13N	0.309	1.166	0.195	0.195	100,000,000	No	128,112

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:17:07AM

Run Name: ES:HTR 36 HEADER
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			

====>Grouped by Line: EX-01.1 HP EXT to FWH 36 HDR

EX-01.1-01N	0.330	0.307	0.189	0.189	No	220,317
EX-01.1-02E	0.446	0.446	0.195	0.195	No	128,112
EX-01.1-03P	0.352	0.352	0.195	0.195	No	128,112
EX-01.1-04E	0.450	0.450	0.195	0.195	No	128,112
EX-01.1-05P	0.368	0.368	0.195	0.195	No	128,112
EX-01.1-06E	0.330	0.330	0.195	0.195	No	128,112
EX-01.1-07P	0.330	0.330	0.195	0.195	No	128,112
EX-01.1-08R	0.000	0.330	0.195	0.195	No	128,112
EX-01.1-08R (D/S)	0.000	0.438	0.275	0.275	No	128,112
EX-01.6-01P	0.378	0.378	0.275	0.275	No	128,112

Sorted By:Flow Order

====>Grouped by Line: EX-01.2 HP EXT to FWH 36 HDR

EX-01.2-01N	0.330	-0.241	0.189	0.189	No	220,317
EX-01.2-02E	0.000	0.330	0.195	0.195	No	128,112
EX-01.2-03P	0.385	0.385	0.195	0.195	No	128,112
EX-01.2-04E	0.330	0.330	0.195	0.195	No	128,112
EX-01.2-05P	0.330	0.330	0.195	0.195	No	128,112
EX-01.2-06E	0.330	0.330	0.195	0.195	No	128,112
EX-01.2-07P	0.330	0.330	0.195	0.195	No	128,112
EX-01.2-08E	0.330	0.330	0.195	0.195	No	128,112
EX-01.2-09P	0.357	0.357	0.195	0.195	No	128,112

Sorted By:Flow Order

====>Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER

EX-01.2-10L	0.482	0.543	0.275	0.275	No	128,112
EX-01.2-10L (BR/SE)	0.391	0.422	0.195	0.195	No	128,112
EX-01.2-10L (D/S)	0.482	0.543	0.275	0.275	No	128,112
EX-01.3-01P	0.456	0.456	0.275	0.275	No	128,112

Sorted By:Flow Order

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====> Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER							
EX-01.3-02E	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-03P	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-04T	0.468	0.468	0.275	0.275	100,000,000	No	128,112
EX-01.3-04T (D/S)	0.468	0.468	0.275	0.275	100,000,000	No	128,112
EX-01.3-05P	0.464	0.464	0.275	0.275	100,000,000	No	128,112
EX-01.3-06V	0.438	0.037	0.286	0.286	-172,002	No	220,317
EX-01.3-07V	0.438	0.001	0.286	0.286	-176,720	No	220,317
EX-01.3-08V	0.438	0.001	0.286	0.286	-176,720	No	220,317
EX-01.3-09E	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-10P	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-11T	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-11T (D/S)	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-12P	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-13E	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-14P	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-15E	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-16P	0.460	0.460	0.275	0.275	100,000,000	No	128,112
EX-01.3-17T	0.501	0.501	0.275	0.275	100,000,000	No	128,112
EX-01.3-17T (D/S)	0.501	0.501	0.275	0.275	100,000,000	No	128,112
EX-01.3-19E	0.000	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-20P	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-21E	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-22P	0.528	0.528	0.275	0.275	100,000,000	No	128,112
EX-01.3-23T	0.539	0.539	0.275	0.275	180,196,608	No	128,112
EX-01.3-23T (D/S)	0.539	0.539	0.275	0.275	222,747,392	No	128,112
EX-01.3-23T (BR/SE)	0.566	0.566	0.195	0.195	100,000,000	No	128,112
====> Grouped by Line: EX-01.4 HP EXT FWH 36 HEADER							
EX-01.4-01P	0.528	0.528	0.275	0.275	100,000,000	No	128,112
EX-01.4-02T	0.439	0.551	0.275	0.275	236,187,664	No	128,112
EX-01.4-02T (D/S)	0.439	0.551	0.275	0.275	100,000,000	No	128,112
EX-01.4-02T (BR/SE)	0.363	0.421	0.195	0.195	100,000,000	No	128,112

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:17:19AM

Run Name: ES:LP TO 31 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====> Grouped by Line: EX-06.1A LP EXT 19 to FWH 31A						
EX-06.1A-01N	0.400	0.206	0.043 0.043	No	212,028	220,317
EX-06.1A-02E	0.313	0.198	0.043 0.043	No	341,985	220,317
EX-06.1A-03E	0.313	0.198	0.043 0.043	No	341,985	220,317
EX-06.1A-04N	0.375	0.247	0.043 0.043	No	402,495	220,317
====> Grouped by Line: EX-06.1B LP EXT 19 to FWH 31B						
EX-06.1B-01N	0.400	0.206	0.043 0.043	No	212,028	220,317
EX-06.1B-02E	0.313	0.198	0.043 0.043	No	341,985	220,317
EX-06.1B-03E	0.313	0.198	0.043 0.043	No	341,985	220,317
EX-06.1B-04N	0.375	0.247	0.043 0.043	No	402,495	220,317
====> Grouped by Line: EX-06.1C LP EXT 19 to FWH 31C						
EX-06.1C-01N	0.400	0.206	0.043 0.043	No	212,028	220,317
EX-06.1C-02E	0.313	0.198	0.043 0.043	No	341,985	220,317
EX-06.1C-03E	0.313	0.198	0.043 0.043	No	341,985	220,317
EX-06.1C-04N	0.375	0.247	0.043 0.043	No	402,495	220,317
====> Grouped by Line: EX-06.2A LP EXT 17 to FWH 31A						
EX-06.2A-01N	0.400	0.206	0.043 0.043	No	212,028	220,317
EX-06.2A-02E	0.313	0.198	0.043 0.043	No	341,985	220,317
EX-06.2A-03E	0.313	0.198	0.043 0.043	No	341,985	220,317
EX-06.2A-04N	0.375	0.313	0.043 0.043	Yes	534,365	220,317
====> Grouped by Line: EX-06.2B LP EXT 17 to FWH 31B						
EX-06.2B-01N	0.400	0.206	0.043 0.043	No	212,028	220,317
EX-06.2B-02E	0.313	0.198	0.043 0.043	No	341,985	220,317
EX-06.2B-03E	0.313	0.198	0.043 0.043	No	341,985	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line:	EX-06.2B LP EXT 17 to FWH 31B							
EX-06.2B-04N	0.375	0.247	0.043	0.043	0.043	402,495	No	220,317
====> Grouped by Line:	EX-06.2C LP EXT 17 to FWH 31C							
EX-06.2C-01N	0.400	0.206	0.043	0.043	0.043	212,028	No	220,317
EX-06.2C-02E	0.313	0.198	0.043	0.043	0.043	341,985	No	220,317
EX-06.2C-03E	0.313	0.198	0.043	0.043	0.043	341,985	No	220,317
EX-06.2C-04N	0.375	0.247	0.043	0.043	0.043	402,495	No	220,317
====> Grouped by Line:	EX-06.3A LP EXT 20 to FWH 31A							
EX-06.3A-01N	0.400	0.206	0.043	0.043	0.043	212,028	No	220,317
EX-06.3A-02E	0.313	0.198	0.043	0.043	0.043	341,985	No	220,317
EX-06.3A-03P	0.313	0.193	0.058	0.058	0.058	286,719	No	220,317
EX-06.3A-04E	0.313	0.214	0.043	0.043	0.043	441,992	No	220,317
EX-06.3A-05N	0.375	0.307	0.043	0.043	0.043	522,485	Yes	220,317
====> Grouped by Line:	EX-06.3B LP EXT 20 to FWH 31B							
EX-06.3B-01N	0.400	0.206	0.043	0.043	0.043	212,028	No	220,317
EX-06.3B-02E	0.313	0.198	0.043	0.043	0.043	341,985	No	220,317
EX-06.3B-03P	0.313	0.193	0.058	0.058	0.058	286,719	No	220,317
EX-06.3B-04E	0.313	0.198	0.043	0.043	0.043	341,985	No	220,317
EX-06.3B-05N	0.375	0.247	0.043	0.043	0.043	402,495	No	220,317
====> Grouped by Line:	EX-06.3C LP EXT 20 to FWH 31C							
EX-06.3C-01N	0.400	0.206	0.043	0.043	0.043	212,028	No	220,317
EX-06.3C-02E	0.313	0.198	0.043	0.043	0.043	341,985	No	220,317
EX-06.3C-03P	0.313	0.193	0.058	0.058	0.058	286,719	No	220,317
EX-06.3C-04E	0.313	0.198	0.043	0.043	0.043	341,985	No	220,317
EX-06.3C-05N	0.375	0.247	0.043	0.043	0.043	402,495	No	220,317
====> Grouped by Line:	EX-06.4A LP EXT 18 to FWH 31A							
EX-06.4A-01N	0.400	0.206	0.043	0.043	0.043	212,028	No	220,317
EX-06.4A-02E	0.313	0.208	0.043	0.043	0.043	402,132	No	220,317
EX-06.4A-03P	0.313	0.277	0.058	0.058	0.058	1,831,959	No	220,317
EX-06.4A-04E	0.313	0.198	0.043	0.043	0.043	341,985	No	220,317
EX-06.4A-05N	0.375	0.247	0.043	0.043	0.043	402,495	No	220,317
====> Grouped by Line:	EX-06.4B LP EXT 18 to FWH 31B							

Component Name	Thickness (in)		Thoop	Tcrit	Inspected	Component Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: EX-06.4B LP EXT 18 to FWH 31B							
EX-06.4B-01N	0.400	0.206	0.043	0.043	No	212,028	220,317
EX-06.4B-02E	0.313	0.208	0.043	0.043	No	402,132	220,317
EX-06.4B-03P	0.313	0.277	0.058	0.058	No	1,831,959	220,317
EX-06.4B-04E	0.313	0.198	0.043	0.043	No	341,985	220,317
EX-06.4B-05N	0.375	0.247	0.043	0.043	No	402,495	220,317
====>Grouped by Line: EX-06.4C LP EXT 18 to FWH 31C							
EX-06.4C-01N	0.400	0.206	0.043	0.043	No	212,028	220,317
EX-06.4C-02E	0.313	0.208	0.043	0.043	No	402,132	220,317
EX-06.4C-03P	0.313	0.277	0.058	0.058	No	1,831,959	220,317
EX-06.4C-04E	0.313	0.198	0.043	0.043	No	341,985	220,317
EX-06.4C-05N	0.375	0.247	0.043	0.043	No	402,495	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:17:25AM

Run Name: ES: LP TO 32 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]						
====> Grouped by Line: EX-05.1A LP EXT 16 to FWH 32A								
EX-05.1A-01N	0.400	-0.211	0.037	0.037	0.037	-128,553	No	220,317
EX-05.1A-02P	0.250	0.141	0.037	0.037	0.037	299,184	No	220,317
EX-05.1A-03E	0.250	-0.099	0.037	0.037	0.037	-125,090	No	220,317
EX-05.1A-04N	0.375	-0.034	0.037	0.037	0.037	-70,703	No	220,317
====> Grouped by Line: EX-05.1B LP EXT 16 to FWH 32B								
EX-05.1B-01N	0.400	0.267	0.037	0.037	0.037	157,343	No	220,317
EX-05.1B-02P	0.250	0.268	0.037	0.037	0.037	661,362	No	220,317
EX-05.1B-03E	0.250	0.212	0.037	0.037	0.037	206,229	Yes	220,317
EX-05.1B-04N	0.375	0.279	0.037	0.037	0.037	246,174	Yes	220,317
====> Grouped by Line: EX-05.1C LP EXT 16 to FWH 32C								
EX-05.1C-01N	0.400	-0.211	0.037	0.037	0.037	-128,553	No	220,317
EX-05.1C-02P	0.250	0.141	0.037	0.037	0.037	299,184	No	220,317
EX-05.1C-03E	0.250	-0.099	0.037	0.037	0.037	-125,090	No	220,317
EX-05.1C-04N	0.375	0.239	0.037	0.037	0.037	205,995	Yes	220,317
====> Grouped by Line: EX-05.2A LP EXT 15 to FWH 32A								
EX-05.2A-01N	0.400	-0.211	0.037	0.037	0.037	-128,553	No	220,317
EX-05.2A-02E	0.250	-0.135	0.037	0.037	0.037	-135,827	No	220,317
EX-05.2A-03E	0.250	-0.099	0.037	0.037	0.037	-125,090	No	220,317
EX-05.2A-04P	0.250	-0.063	0.037	0.037	0.037	-110,332	No	220,317
EX-05.2A-05E	0.250	-0.079	0.037	0.037	0.037	-117,468	No	220,317
EX-05.2A-06N	0.375	-0.034	0.037	0.037	0.037	-70,703	No	220,317
====> Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B								
EX-05.2B-01N	0.400	0.211	0.037	0.037	0.037	119,104	Yes	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B						
EX-05.2B-02E	0.250	0.213	0.037	0.037	Yes	220,317
EX-05.2B-03E	0.250	0.202	0.037	0.037	Yes	220,317
EX-05.2B-04P	0.250	0.209	0.037	0.037	Yes	220,317
EX-05.2B-05E	0.250	0.210	0.037	0.037	Yes	220,317
EX-05.2B-06N	0.375	0.244	0.037	0.037	Yes	220,317
====> Grouped by Line: EX-05.2C LP EXT 15 to FWH 32C						
EX-05.2C-01N	0.400	-0.211	0.037	0.037	No	220,317
EX-05.2C-02E	0.250	-0.135	0.037	0.037	No	220,317
EX-05.2C-03E	0.250	-0.099	0.037	0.037	No	220,317
EX-05.2C-04P	0.250	-0.063	0.037	0.037	No	220,317
EX-05.2C-05E	0.250	-0.079	0.037	0.037	No	220,317
EX-05.2C-06N	0.375	-0.034	0.037	0.037	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:18:08AM

Run Name: ES:LP TO 33 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====>Grouped by Line: EX-04.1 LPEX14 to FWH33A HDR						
EX-04.1-01N	0.400	0.261	0.033 0.033	298,115	No	220,317
EX-04.1-08X	0.000	0.195	0.033 0.033	698,010	No	220,317
EX-04.1-02E	0.250	0.171	0.033 0.033	317,964	No	220,317
EX-04.1-03E	0.250	0.171	0.033 0.033	317,964	No	220,317
EX-04.1-04P	0.250	0.179	0.033 0.033	375,467	No	220,317
EX-04.1-05E	0.250	0.157	0.033 0.033	240,150	No	220,317
EX-04.1-07P	0.250	0.210	0.033 0.033	1,044,192	No	220,317
EX-04.1-06T (BR/SE)	0.250	0.156	0.045 0.045	214,079	No	220,317
EX-04.1-06T (D/S)	0.000	0.226	0.063 0.063	394,615	No	220,317
EX-04.3-01P	0.313	0.282	0.063 0.063	1,458,012	No	220,317
====>Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR						
EX-04.9-09T (D/S)	0.000	0.136	0.063 0.063	79,354	No	220,317
EX-04.11-01P	0.313	0.281	0.063 0.063	1,287,014	No	220,317
EX-04.11-02T	0.313	0.232	0.063 0.063	400,838	No	220,317
EX-04.11-02T (D/S)	0.000	0.241	0.063 0.063	480,047	No	220,317
EX-04.11-03P	0.313	0.233	0.063 0.063	407,861	No	220,317
EX-04.11-04V	0.313	0.216	0.050 0.050	322,504	No	220,317
EX-04.11-05P	0.313	0.274	0.063 0.063	1,026,184	No	220,317
EX-04.11-06V	0.313	0.183	0.050 0.050	196,950	No	220,317
EX-04.11-07P	0.313	0.265	0.063 0.063	815,312	No	220,317
EX-04.11-08E	0.313	0.381	0.047 0.047	597,611	Yes	220,317
EX-04.11-09E	0.313	0.222	0.047 0.047	372,703	No	220,317
EX-04.11-10P	0.313	0.266	0.063 0.063	1,045,645	No	220,317
EX-04.11-11E	0.313	0.222	0.047 0.047	372,703	No	220,317
EX-04.11-12P	0.313	0.232	0.063 0.063	399,766	No	220,317
EX-04.11-13E	0.313	0.206	0.047 0.047	284,960	No	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR								
EX-04.11-14P	0.313	0.274	0.063	0.063	0.063	1,301,972	No	220,317
EX-04.11-15E	0.313	0.206	0.047	0.047	0.047	284,960	No	220,317
EX-04.11-16P	0.313	0.245	0.063	0.063	0.063	517,730	No	220,317
EX-04.11-17T	0.313	0.232	0.063	0.063	0.063	400,838	No	220,317
EX-04.11-17T (D/S)	0.000	0.241	0.063	0.063	0.063	480,047	No	220,317
EX-04.11-18P	0.313	0.233	0.063	0.063	0.063	407,861	No	220,317
EX-04.11-20P	0.313	0.332	0.063	0.063	0.063	2,174,374	No	220,317
EX-04.11-19T	0.313	0.253	0.063	0.063	0.063	175,118	No	220,317
EX-04.11-19T (D/S)	0.000	0.277	0.063	0.063	0.063	337,009	No	220,317
EX-04.11-19T (BR/SE)	0.259	0.175	0.045	0.045	0.045	360,017	Yes	220,317
EX-04.9-09T	0.313	0.200	0.063	0.063	0.063	253,898	No	220,317
EX-04.9-09T (BR/SE)	0.250	0.147	0.045	0.045	0.045	182,141	No	220,317
====>Grouped by Line: EX-04.13 LP EXT 32 to FWH 33B								
EX-04.12-01P	0.313	0.285	0.063	0.063	0.063	1,672,462	No	220,317
EX-04.13-01R	0.000	0.358	0.047	0.047	0.047	1,218,041	No	220,317
EX-04.13-01R (D/S)	0.000	0.167	0.033	0.033	0.033	310,851	No	220,317
EX-04.13-02P	0.255	0.175	0.033	0.033	0.033	364,819	Yes	220,317
EX-04.13-07T	0.250	0.202	0.033	0.033	0.033	434,291	No	220,317
EX-04.13-07T (D/S)	0.000	0.188	0.033	0.033	0.033	451,262	No	220,317
EX-04.13-03E	0.250	0.157	0.033	0.033	0.033	240,150	No	220,317
EX-04.13-04P	0.250	0.192	0.033	0.033	0.033	494,980	No	220,317
EX-04.13-05E	0.250	0.157	0.033	0.033	0.033	240,150	No	220,317
EX-04.13-06N	0.250	0.156	0.033	0.033	0.033	236,121	No	220,317
====>Grouped by Line: EX-04.14 LP EXT 32 to FWH 33B								
EX-04.14-01P	0.276	0.211	0.033	0.033	0.033	869,367	Yes	220,317
EX-04.14-02E	0.250	0.379	0.033	0.033	0.033	672,546	Yes	220,317
EX-04.14-03N	0.250	0.156	0.033	0.033	0.033	236,121	No	220,317
====>Grouped by Line: EX-04.15 LPEX14 to FWH33C HDR								
EX-04.15-01N	0.400	0.261	0.033	0.033	0.033	298,115	No	220,317
EX-04.15-08X	0.000	0.195	0.033	0.033	0.033	698,010	No	220,317
EX-04.15-02E	0.250	0.171	0.033	0.033	0.033	317,964	No	220,317
EX-04.15-03E	0.250	0.171	0.033	0.033	0.033	317,964	No	220,317
EX-04.15-04P	0.250	0.179	0.033	0.033	0.033	375,467	No	220,317
EX-04.15-05E	0.250	0.163	0.033	0.033	0.033	272,129	No	220,317

Component Name	----- Thickness (in) -----		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: EX-04.15 LPEX14 to FWH33C HDR						
EX-04.15-07P	0.250	0.191	0.033	0.033	No	220,317
EX-04.15-06T (BR/SE)	0.250	0.156	0.045	0.045	No	220,317
EX-04.15-06T (D/S)	0.000	0.226	0.063	0.063	No	220,317
EX-04.17-01P	0.313	0.282	0.063	0.063	No	220,317
====> Grouped by Line: EX-04.16 LPEX13 to FWH33C HDR						
EX-04.16-01N	0.400	0.261	0.033	0.033	No	220,317
EX-04.16-10X	0.000	0.195	0.033	0.033	No	220,317
EX-04.16-02E	0.250	0.171	0.033	0.033	No	220,317
EX-04.16-03E	0.250	0.171	0.033	0.033	No	220,317
EX-04.16-04P	0.250	0.179	0.033	0.033	No	220,317
EX-04.16-05E	0.250	0.171	0.033	0.033	No	220,317
EX-04.16-06P	0.250	0.179	0.033	0.033	No	220,317
EX-04.16-07E	0.250	0.163	0.033	0.033	No	220,317
EX-04.16-08P	0.250	0.210	0.033	0.033	No	220,317
Sorted By:Flow Order						
						486,790
						214,079
						394,615
						1,458,012
Sorted By:Flow Order						
						298,115
						698,010
						317,964
						317,964
						375,467
						317,964
						375,467
						272,129
						1,044,192
Sorted By:Flow Order						
						253,898
						182,141
						79,354
						1,287,014
						400,838
						480,047
						407,861
						322,504
						1,026,184
						196,950
						421,048
						361,607
						599,620
						555,194
						523,017
						694,583
						284,960
						1,301,972
						284,960
						517,730
Sorted By:Flow Order						
						0.063
						0.045
						0.063
						0.063
						0.063
						0.063
						0.050
						0.063
						0.063
						0.063
						0.050
						0.047
						0.040
						0.043
						0.040
						0.047
						0.063
						0.047
						0.063
						0.047
						0.063
						0.047
						0.063
						0.045
====> Grouped by Line: EX-04.18 LPEX FWH 33C IN HDR						
EX-04.16-09T	0.313	0.200	0.063	0.063	No	220,317
EX-04.16-09T (BR/SE)	0.250	0.147	0.045	0.045	No	220,317
EX-04.16-09T (D/S)	0.000	0.136	0.063	0.063	No	220,317
EX-04.18-01P	0.313	0.281	0.063	0.063	No	220,317
EX-04.18-02T	0.313	0.232	0.063	0.063	No	220,317
EX-04.18-02T (D/S)	0.000	0.241	0.063	0.063	No	220,317
EX-04.18-03P	0.313	0.233	0.063	0.063	No	220,317
EX-04.18-04V	0.313	0.216	0.050	0.050	No	220,317
EX-04.18-05P	0.313	0.274	0.063	0.063	No	220,317
EX-04.18-06V	0.313	0.183	0.050	0.050	No	220,317
EX-04.19-01R	0.000	0.230	0.047	0.047	No	220,317
EX-04.19-01R (D/S)	0.000	0.177	0.040	0.040	No	220,317
EX-04.19-02V	0.313	0.248	0.043	0.043	No	220,317
EX-04.19-03R	0.000	0.196	0.040	0.040	No	220,317
EX-04.19-03R (D/S)	0.000	0.241	0.047	0.047	No	220,317
EX-04.20-01P	0.313	0.259	0.063	0.063	No	220,317
EX-04.20-02E	0.313	0.206	0.047	0.047	No	220,317
EX-04.20-03P	0.313	0.274	0.063	0.063	No	220,317
EX-04.20-04E	0.313	0.206	0.047	0.047	No	220,317
EX-04.20-05P	0.313	0.245	0.063	0.063	No	220,317

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====> Grouped by Line: EX-04.18 LPEX FWH 33C IN HDR							
EX-04.20-06E	0.313	0.206	0.047	0.047	284,960	No	220,317
EX-04.20-07P	0.313	0.209	0.063	0.063	270,585	No	220,317
EX-04.20-08E	0.313	0.206	0.047	0.047	284,960	No	220,317
EX-04.20-09P	0.313	0.245	0.063	0.063	517,730	No	220,317
EX-04.20-10E	0.313	0.206	0.047	0.047	284,960	No	220,317
EX-04.20-11P	0.313	0.274	0.063	0.063	1,301,972	No	220,317
EX-04.20-12E	0.313	0.206	0.047	0.047	284,960	No	220,317
EX-04.20-13P	0.313	0.245	0.063	0.063	517,730	No	220,317
EX-04.20-14T	0.313	0.232	0.063	0.063	400,838	No	220,317
EX-04.20-14T (D/S)	0.000	0.241	0.063	0.063	480,047	No	220,317
EX-04.20-15P	0.313	0.233	0.063	0.063	407,861	No	220,317
EX-04.20-16T	0.384	0.242	0.063	0.063	165,604	No	220,317
EX-04.20-16T (D/S)	0.384	0.281	0.063	0.063	335,096	No	220,317
EX-04.20-16T (BR/SE)	0.000	0.176	0.045	0.045	362,566	No	220,317
====> Grouped by Line: EX-04.2 LPEX13 to FWH33A HDR							
EX-04.2-01N	0.400	0.261	0.033	0.033	298,115	No	220,317
EX-04.2-10X	0.000	0.195	0.033	0.033	698,010	No	220,317
EX-04.2-02E	0.250	0.171	0.033	0.033	317,964	No	220,317
EX-04.2-03E	0.250	0.171	0.033	0.033	317,964	No	220,317
EX-04.2-04P	0.250	0.179	0.033	0.033	375,467	No	220,317
EX-04.2-05E	0.250	0.171	0.033	0.033	317,964	No	220,317
EX-04.2-06P	0.250	0.179	0.033	0.033	375,467	No	220,317
EX-04.2-07E	0.250	0.163	0.033	0.033	272,129	No	220,317
EX-04.2-08P	0.250	0.210	0.033	0.033	1,044,192	No	220,317
====> Grouped by Line: EX-04.21 LP EXT 31 to FWH 33C							
EX-04.20-17P	0.313	0.285	0.063	0.063	1,672,462	No	220,317
EX-04.21-01R	0.000	0.333	0.047	0.047	1,123,486	Yes	220,317
EX-04.21-01R (D/S)	0.000	0.183	0.033	0.033	347,941	No	220,317
EX-04.21-02P	0.267	0.143	0.033	0.033	281,861	Yes	220,317
EX-04.21-07T	0.250	0.175	0.033	0.033	363,957	Yes	220,317
EX-04.21-07T (D/S)	0.000	0.194	0.033	0.033	470,687	Yes	220,317
EX-04.21-03E	0.250	0.260	0.033	0.033	440,619	Yes	220,317
EX-04.21-04P	0.250	0.178	0.033	0.033	451,695	Yes	220,317
EX-04.21-05E	0.250	0.366	0.033	0.033	647,242	Yes	220,317
EX-04.21-06N	0.250	0.156	0.033	0.033	236,121	No	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: EX-04.22 LP EXT 31 to FWH 33C								
EX-04.22-01P	0.271	0.234	0.033	0.033	0.033	978,950	Yes	220,317
EX-04.22-02E	0.250	0.157	0.033	0.033	0.033	240,150	No	220,317
EX-04.22-03N	0.250	0.226	0.033	0.033	0.033	370,561	No	220,317
====>Grouped by Line: EX-04.4 LPEX FWH 33A IN HDR								
EX-04.2-09T	0.313	0.340	0.063	0.063	0.063	512,483	No	220,317
EX-04.2-09T (BR/SE)	0.250	0.282	0.045	0.045	0.045	421,139	Yes	220,317
EX-04.2-09T (D/S)	0.000	0.136	0.063	0.063	0.063	79,354	No	220,317
EX-04.4-01P	0.313	0.281	0.063	0.063	0.063	1,287,014	No	220,317
EX-04.4-02T	0.313	0.232	0.063	0.063	0.063	400,838	No	220,317
EX-04.4-02T (D/S)	0.000	0.241	0.063	0.063	0.063	480,047	No	220,317
EX-04.4-03P	0.313	0.233	0.063	0.063	0.063	409,069	No	220,317
EX-04.4-04V	0.313	0.216	0.050	0.050	0.050	322,504	No	220,317
EX-04.4-05P	0.313	0.274	0.063	0.063	0.063	1,028,613	No	220,317
EX-04.4-06V	0.313	0.183	0.050	0.050	0.050	196,950	No	220,317
EX-04.4-07P	0.313	0.266	0.063	0.063	0.063	817,337	No	220,317
EX-04.4-08E	0.313	0.405	0.047	0.047	0.047	640,551	Yes	220,317
EX-04.4-09P	0.313	0.275	0.063	0.063	0.063	1,304,980	No	220,317
EX-04.4-10E	0.313	0.206	0.047	0.047	0.047	284,960	No	220,317
EX-04.4-11P	0.313	0.246	0.063	0.063	0.063	519,159	No	220,317
EX-04.4-12E	0.313	0.206	0.047	0.047	0.047	284,960	No	220,317
EX-04.4-13P	0.313	0.210	0.063	0.063	0.063	271,518	No	220,317
EX-04.4-14E	0.313	0.206	0.047	0.047	0.047	284,960	No	220,317
EX-04.4-15P	0.313	0.246	0.063	0.063	0.063	519,159	No	220,317
EX-04.4-16E	0.313	0.206	0.047	0.047	0.047	284,960	No	220,317
EX-04.4-17P	0.313	0.275	0.063	0.063	0.063	1,304,980	No	220,317
EX-04.4-18E	0.313	0.206	0.047	0.047	0.047	284,960	No	220,317
EX-04.4-19P	0.313	0.246	0.063	0.063	0.063	519,159	No	220,317
EX-04.4-20T	0.313	0.232	0.063	0.063	0.063	400,838	No	220,317
EX-04.4-20T (D/S)	0.000	0.241	0.063	0.063	0.063	480,047	No	220,317
EX-04.4-21P	0.313	0.233	0.063	0.063	0.063	409,069	No	220,317
EX-04.4-23P	0.313	0.289	0.063	0.063	0.063	1,827,009	No	220,317
EX-04.4-22T	0.352	0.243	0.063	0.063	0.063	166,375	No	220,317
EX-04.4-22T (D/S)	0.352	0.272	0.063	0.063	0.063	324,893	No	220,317
EX-04.4-22T (BR/SE)	0.259	0.186	0.045	0.045	0.045	390,327	No	220,317

Sorted By:Flow Order

Sorted By:Flow Order

Sorted By:Flow Order

Sorted By:Flow Order

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====> Grouped by Line: EX-04.6 LP EXT to FWH 33A							
EX-04.5-01P	0.313	0.285	0.063	0.063	1,675,885	No	220,317
EX-04.6-01R	0.000	0.317	0.047	0.047	1,060,806	Yes	220,317
EX-04.6-01R (D/S)	0.000	0.217	0.033	0.033	426,725	No	220,317
EX-04.6-02P	0.264	0.182	0.033	0.033	382,058	Yes	220,317
EX-04.6-07T	0.262	0.197	0.033	0.033	420,582	Yes	220,317
EX-04.6-07T (D/S)	0.262	0.209	0.033	0.033	514,584	No	220,317
EX-04.6-03E	0.461	0.259	0.033	0.033	453,444	Yes	220,317
EX-04.6-04P	0.279	0.203	0.033	0.033	532,745	Yes	220,317
EX-04.6-05E	0.250	0.296	0.033	0.033	511,345	Yes	220,317
EX-04.6-06N	0.250	0.423	0.033	0.033	750,640	Yes	220,317
====> Grouped by Line: EX-04.7 LP EXT to FWH 33A							
EX-04.7-01P	0.264	0.225	0.033	0.033	937,634	Yes	220,317
EX-04.7-02E	0.250	0.157	0.033	0.033	240,150	No	220,317
EX-04.7-03N	0.250	0.156	0.033	0.033	236,121	No	220,317
====> Grouped by Line: EX-04.8 LPEX14 to FWH33B HDR							
EX-04.8-01N	0.400	0.261	0.033	0.033	298,115	No	220,317
EX-04.8-08X	0.000	0.195	0.033	0.033	698,010	No	220,317
EX-04.8-02E	0.250	0.171	0.033	0.033	317,964	No	220,317
EX-04.8-03E	0.250	0.171	0.033	0.033	317,964	No	220,317
EX-04.8-04P	0.250	0.179	0.033	0.033	375,467	No	220,317
EX-04.8-05E	0.250	0.157	0.033	0.033	240,150	No	220,317
EX-04.8-07P	0.250	0.210	0.033	0.033	1,044,192	No	220,317
EX-04.8-06T (BR/SE)	0.250	0.156	0.045	0.045	214,079	No	220,317
EX-04.8-06T (D/S)	0.000	0.226	0.063	0.063	394,615	No	220,317
EX-04.10-01P	0.313	0.282	0.063	0.063	1,458,012	No	220,317
====> Grouped by Line: EX-04.9 LPEX13 to FWH33B HDR							
EX-04.9-01N	0.400	0.261	0.033	0.033	298,115	No	220,317
EX-04.9-10X	0.000	0.195	0.033	0.033	698,010	No	220,317
EX-04.9-02E	0.250	0.171	0.033	0.033	317,964	No	220,317
EX-04.9-03E	0.250	0.171	0.033	0.033	317,964	No	220,317
EX-04.9-04P	0.250	0.179	0.033	0.033	375,467	No	220,317
EX-04.9-05E	0.250	0.171	0.033	0.033	317,964	No	220,317
EX-04.9-06P	0.250	0.179	0.033	0.033	375,467	No	220,317
EX-04.9-07E	0.250	0.163	0.033	0.033	272,129	No	220,317

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====> Grouped by Line: EX-04.9 LPEX13 to FWH33B HDR							
EX-04.9-08P	0.250	0.210	0.033	0.033	1,044,192	No	220,317

Sorted By: Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:18:42AM

Run Name: ES: PRESEP TO 35 HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====> Grouped by Line: EX-02.1 PSEP 2A 10" to 35 HDR							
EX-02.1-01N	0.365	0.365	0.072	0.072	261,018,528	No	171,511
EX-02.1-02P	0.378	0.378	0.091	0.091	100,000,000	No	66,848
EX-02.1-03E	0.425	0.425	0.091	0.091	100,000,000	No	66,848
EX-02.1-04P	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.1-05O	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.1-06T (BR/SE)	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.1-06T (D/S)	0.500	0.500	0.152	0.152	100,000,000	No	66,848
EX-02.5-01P	0.500	0.500	0.152	0.152	100,000,000	No	66,848
====> Grouped by Line: EX-02.11 PSEP1B 14" to 35 HDR							
EX-02.11-02P	0.375	0.375	0.118	0.118	100,000,000	No	66,848
EX-02.11-03E	0.375	0.375	0.118	0.118	100,000,000	No	66,848
EX-02.11-04P	0.375	0.375	0.118	0.118	100,000,000	No	66,848
EX-02.11-06O	0.375	0.375	0.118	0.118	100,000,000	No	66,848
EX-02.11-07P	0.000	0.375	0.118	0.118	100,000,000	No	66,848
====> Grouped by Line: EX-02.12 PSEP 1B&2B to 35 HDR							
EX-02.9-10T (D/S)	0.500	0.500	0.152	0.152	232,175,504	No	66,848
EX-02.12-01P	0.500	0.500	0.152	0.152	100,000,000	No	66,848
EX-02.9-10T (BR/SE)	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.9-10T	0.500	0.500	0.152	0.152	100,000,000	No	66,848
====> Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR							
EX-02.11-05T (BR/SE)	0.375	0.375	0.118	0.118	242,273,200	No	66,848
EX-02.11-05T	0.500	0.500	0.152	0.152	232,175,504	No	66,848
EX-02.11-05T (D/S)	0.500	0.500	0.152	0.152	232,175,504	No	66,848
EX-02.13-01P	0.500	0.500	0.152	0.152	100,000,000	No	66,848

Component Name	Thickness (in)		Thoop	Tcrit	Inspected	Component Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====> Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR							
EX-02.13-02B	0.500	0.500	0.152	0.152	No	100,000,000	66,848
EX-02.13-03E	0.375	0.375	0.152	0.152	No	100,000,000	66,848
EX-02.13-03P	0.000	0.500	0.152	0.152	No	100,000,000	66,848
EX-02.13-04E	0.375	0.375	0.152	0.152	No	100,000,000	66,848
EX-02.13-05P	0.375	0.375	0.152	0.152	No	100,000,000	66,848
EX-02.13-06R	0.000	0.312	0.149	0.149	No	73,205,992	171,511
EX-02.13-06R (D/S)	0.000	0.375	0.232	0.232	No	87,321,008	171,511
====> Grouped by Line: EX-02.14 FWH 35 HEADER							
EX-02.7-02T	0.375	0.375	0.232	0.232	No	39,136,304	141,668
EX-02.7-02T (D/S)	0.375	0.374	0.232	0.232	No	31,365,290	141,668
EX-02.14-01P	0.375	0.398	0.311	0.311	No	370,587	220,317
EX-02.14-02E	0.375	0.346	0.232	0.232	No	158,645	171,511
EX-02.14-03P	0.375	0.271	0.311	0.311	No	-78,136	220,317
EX-02.14-04T	0.375	0.348	0.311	0.311	No	63,263	220,317
EX-02.14-04T (D/S)	0.375	0.388	0.311	0.311	No	148,758	220,317
EX-02.14-05P	0.375	0.252	0.311	0.311	No	-103,513	220,317
EX-02.14-06E	0.000	0.351	0.232	0.232	No	164,647	33,725
EX-02.14-07P	0.375	0.356	0.311	0.311	No	93,154	220,317
EX-02.14-08E	0.000	0.351	0.232	0.232	No	164,647	33,725
EX-02.14-09P	0.375	0.271	0.311	0.311	No	-78,136	220,317
EX-02.14-10V	0.375	0.156	0.248	0.248	No	-84,821	220,317
EX-02.14-11V	0.375	0.176	0.248	0.248	No	-74,732	220,317
EX-02.14-12P	0.375	0.372	0.311	0.311	Yes	175,865	220,317
EX-02.14-13V	0.375	0.176	0.248	0.248	No	-74,732	220,317
EX-02.14-31P	0.375	0.391	0.311	0.311	No	233,342	220,317
EX-02.14-14E	0.375	0.528	0.232	0.232	Yes	452,044	220,317
EX-02.14-32T	0.375	0.360	0.311	0.311	No	84,223	220,317
EX-02.14-32T (D/S)	0.000	0.357	0.311	0.311	No	90,039	220,317
EX-02.14-16E	0.375	0.300	0.232	0.232	Yes	87,384	220,317
EX-02.14-17P	0.375	0.412	0.311	0.311	No	348,101	220,317
EX-02.14-18E	0.375	0.342	0.232	0.232	Yes	142,076	220,317
EX-02.14-19P	0.375	0.350	0.311	0.311	No	79,518	220,317
EX-02.14-20E	0.375	0.372	0.232	0.232	Yes	180,279	220,317
EX-02.14-21P	0.375	0.373	0.311	0.311	No	82,080	220,317
EX-02.14-33P	0.375	0.375	0.232	0.232	No	100,000,000	141,668
EX-02.14-22T	0.375	0.375	0.232	0.232	No	68,721,904	141,668

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: EX-02.14 FWH 35 HEADER						
EX-02.14-22T (D/S)	0.000	0.375	0.232	0.232	No	141,668
EX-02.14-23P	0.375	0.375	0.232	0.232	No	141,668
EX-02.14-24E	0.375	0.313	0.232	0.232	Yes	220,317
EX-02.14-25E	0.000	0.361	0.232	0.232	No	17,520
EX-02.14-26P	0.375	0.381	0.311	0.311	No	220,317
EX-02.14-27E	0.000	0.271	0.232	0.232	Yes	220,317
EX-02.14-28P	0.375	0.375	0.232	0.232	No	141,668
EX-02.14-29T	0.375	0.374	0.232	0.232	No	141,668
EX-02.14-29T (D/S)	0.000	0.374	0.232	0.232	No	141,668
EX-02.14-29T (BR/SE)	0.312	0.312	0.149	0.149	No	141,668
EX-02.7-02T (BR/SE)	0.375	0.375	0.149	0.149	No	141,668
====> Grouped by Line: EX-02.15 FWH 35 HEADER						
EX-02.15-01P	0.625	0.625	0.232	0.232	No	141,668
EX-02.15-02T	0.656	0.655	0.232	0.232	No	141,668
EX-02.15-02T (D/S)	0.656	0.655	0.232	0.232	No	141,668
EX-02.15-02T (BR/SE)	0.312	0.312	0.149	0.149	No	141,668
====> Grouped by Line: EX-02.2 PSEP 1A 10" to 35 HDR						
EX-02.2-02P	0.365	0.365	0.091	0.091	No	66,848
EX-02.2-03E	0.365	0.365	0.091	0.091	No	66,848
EX-02.2-04P	0.365	0.365	0.091	0.091	No	66,848
EX-02.2-05E	0.365	0.365	0.091	0.091	No	66,848
EX-02.2-06P	0.365	0.365	0.091	0.091	No	66,848
EX-02.2-08O	0.365	0.365	0.091	0.091	No	66,848
====> Grouped by Line: EX-02.4 PSEP2A 14" to 35 HDR						
EX-02.4-02P	0.375	0.375	0.118	0.118	No	66,848
EX-02.4-03E	0.375	0.375	0.118	0.118	No	66,848
EX-02.4-04P	0.375	0.375	0.118	0.118	No	66,848
EX-02.4-06O	0.375	0.375	0.118	0.118	No	66,848
EX-02.4-07P	0.000	0.375	0.118	0.118	No	66,848
====> Grouped by Line: EX-02.6 PSEP 1A&2A to 35 HDR						
EX-02.2-07T	0.500	0.500	0.152	0.152	No	66,848
EX-02.2-07T (BR/SE)	0.365	0.365	0.091	0.091	No	66,848
EX-02.2-07T (D/S)	0.500	0.500	0.152	0.152	No	66,848

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====> Grouped by Line: EX-02.6 PSEP 1A&2A to 35 HDR							
EX-02.6-01P	0.500	0.500	0.152	0.152	100,000,000	No	66,848
====> Grouped by Line: EX-02.7 PSEP 1A&2A to 35 HDR							
EX-02.4-05T (BR/SE)	0.375	0.375	0.118	0.118	242,273,200	No	66,848
EX-02.4-05T	0.500	0.500	0.152	0.152	232,175,504	No	66,848
EX-02.4-05T (D/S)	0.500	0.500	0.152	0.152	232,175,504	No	66,848
EX-02.7-01P	0.500	0.500	0.152	0.152	100,000,000	No	66,848
====> Grouped by Line: EX-02.8 PSEP 2B 10" to 35 HDR							
EX-02.8-01N	0.365	0.365	0.072	0.072	261,018,528	No	171,511
EX-02.8-02E	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.8-03P	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.8-04E	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.8-05P	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.8-07O	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.8-06E	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.8-09P	0.000	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.8-08T (BR/SE)	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.8-08T (D/S)	0.500	0.500	0.152	0.152	100,000,000	No	66,848
====> Grouped by Line: EX-02.9 PSEP 1B 10" to 35 HDR							
EX-02.9-01N	0.365	0.365	0.072	0.072	261,018,528	No	171,511
EX-02.9-02P	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.9-03E	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.9-04P	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.9-05E	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.9-06P	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.9-11O	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.9-07E	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.9-08P	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.9-09E	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.9-10P	0.000	0.365	0.091	0.091	100,000,000	No	66,848

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:18:51AM

Run Name: FW: 36 HTR TO SG HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			
====> Grouped by Line: FW-02.1A FWH 36A to SG HDR						
FW-02.1A-01N	0.938	0.860	0.717	0.717	No	220,317
FW-02.1A-02E	0.938	0.999	0.717	0.717	Yes	220,317
FW-02.1A-03P	0.938	0.909	0.717	0.717	Yes	220,317
FW-02.1A-04E	0.938	0.960	0.717	0.717	Yes	220,317
FW-02.1A-05V	0.938	0.828	0.889	0.889	No	220,317
FW-02.1A-06P	0.938	0.904	0.717	0.717	No	220,317
FW-02.1A-07E	0.938	0.881	0.717	0.717	No	220,317
FW-02.1A-08P	0.938	0.899	0.717	0.717	No	220,317
FW-02.1A-09E	0.938	0.853	0.717	0.717	No	220,317
FW-02.1A-10P	0.938	0.881	0.717	0.717	Yes	220,317
FW-02.1A-11E	0.938	0.888	0.717	0.717	Yes	220,317
FW-02.1A-12P	0.938	0.909	0.717	0.717	Yes	220,317
FW-02.1A-13R	0.000	0.898	0.717	0.717	Yes	220,317
FW-02.1A-13R (D/S)	0.000	1.352	1.195	1.195	No	220,317
Sorted By:Flow Order						
				682,364	No	220,317
				1,811,944	Yes	220,317
				1,427,084	Yes	220,317
				1,561,375	Yes	220,317
				-161,859	No	220,317
				2,019,806	No	220,317
				1,051,581	No	220,317
				1,733,212	No	220,317
				872,352	Yes	220,317
				1,564,006	Yes	220,317
				1,097,221	Yes	220,317
				1,830,251	Yes	220,317
				1,536,905	Yes	220,317
				2,589,299	No	220,317
====> Grouped by Line: FW-02.1B FWH 36B to SG HDR						
FW-02.1B-01N	0.938	2.476	0.717	0.717	No	220,317
FW-02.1B-02E	0.938	0.989	0.717	0.717	Yes	220,317
FW-02.1B-03P	0.938	0.914	0.717	0.717	Yes	220,317
FW-02.1B-04E	0.938	0.978	0.717	0.717	Yes	220,317
FW-02.1B-05V	0.938	0.828	0.889	0.889	No	220,317
FW-02.1B-06P	0.938	0.879	0.717	0.717	Yes	220,317
FW-02.1B-07E	0.938	0.881	0.717	0.717	No	220,317
FW-02.1B-08P	0.938	0.899	0.717	0.717	No	220,317
FW-02.1B-09E	0.938	0.881	0.717	0.717	No	220,317
FW-02.1B-10P	0.965	0.863	0.717	0.717	Yes	220,317
Sorted By:Flow Order						
				8,364,357	No	220,317
				1,746,948	Yes	220,317
				1,461,070	Yes	220,317
				1,676,275	Yes	220,317
				-161,859	No	220,317
				1,752,908	Yes	220,317
				1,051,581	No	220,317
				1,733,212	No	220,317
				1,051,581	No	220,317
				1,386,840	Yes	220,317

Component Name	Thickness (in)		Tcrit	Inspected	Component Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: FW-02.1C FWH 36C to SG HDR						
FW-02.1C-01N	0.938	1.166	0.717	0.717	2,137,122	220,317
FW-02.1C-02E	0.938	0.892	0.717	0.717	1,126,155	220,317
FW-02.1C-03P	0.938	0.906	0.717	0.717	1,402,049	220,317
FW-02.1C-04E	0.938	0.881	0.717	0.717	1,051,581	220,317
FW-02.1C-05V	0.938	0.828	0.889	0.889	-161,859	220,317
FW-02.1C-06P	0.938	0.904	0.717	0.717	2,019,806	220,317
FW-02.1C-07E	0.938	0.881	0.717	0.717	1,051,581	220,317
FW-02.1C-08P	0.938	0.899	0.717	0.717	1,733,212	220,317
FW-02.1C-09E	0.938	0.881	0.717	0.717	1,051,581	220,317
FW-02.1C-10P	0.998	0.929	0.717	0.717	1,998,578	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:19:13AM

Run Name: FW: BFP TO 36 HTR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			

====> **Grouped by Line: FW-01.1A BFP 31 to RCIRC T**

FW-01.1A-01N	1.031	1.001	0.620	0.620	No	220,317
FW-01.1A-02P	1.075	0.960	0.740	0.740	Yes	220,317
FW-01.1A-03R	1.095	1.034	0.740	0.740	Yes	220,317
FW-01.1A-03R (D/S)	1.095	0.954	0.924	0.924	Yes	220,317
FW-01.2A-01E	1.031	0.969	0.797	0.797	Yes	220,317
FW-01.2A-02P	1.043	0.963	0.797	0.797	Yes	220,317
FW-01.2A-03T	1.039	1.001	0.797	0.797	No	220,317
FW-01.2A-03T (D/S)	1.039	0.999	0.797	0.797	Yes	220,317
FW-01.2A-03T (BR/SE)	0.000	0.802	0.264	0.264	No	4,406

Sorted By:Flow Order

259,370,000	No	220,317
508,674	Yes	220,317
652,287	Yes	220,317
83,339	Yes	220,317
400,742	Yes	220,317
446,877	Yes	220,317
586,650	No	220,317
580,906	Yes	220,317
205,128	No	4,406

====> **Grouped by Line: FW-01.1B BFP 32 to RCIRC T**

FW-01.1B-01N	1.031	0.990	0.620	0.620	No	220,317
FW-01.1B-02P	1.176	0.974	0.740	0.740	No	220,317
FW-01.1B-03R	1.095	1.005	0.740	0.740	Yes	220,317
FW-01.1B-03R (D/S)	1.095	1.021	0.924	0.924	Yes	220,317
FW-01.2B-01E	1.031	0.898	0.797	0.797	Yes	220,317
FW-01.2B-02P	1.031	0.888	0.797	0.797	No	220,317
FW-01.2B-03E	1.251	1.032	0.797	0.797	Yes	220,317
FW-01.2B-04P	1.032	0.980	0.797	0.797	Yes	220,317
FW-01.2B-05T	1.036	0.967	0.797	0.797	No	220,317
FW-01.2B-05T (D/S)	1.036	0.982	0.797	0.797	No	220,317
FW-01.2B-05T (BR/SE)	0.000	0.844	0.264	0.264	No	4,406

Sorted By:Flow Order

251,778,016	No	220,317
530,930	No	220,317
587,908	Yes	220,317
275,444	Yes	220,317
236,508	Yes	220,317
247,098	No	220,317
595,496	Yes	220,317
720,389	Yes	220,317
488,490	No	220,317
531,589	No	220,317
221,035	No	4,406

====> **Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR**

FW-01.2A-04P	1.039	0.994	0.797	0.797	Yes	220,317
FW-01.2A-05V	1.031	0.781	0.988	0.988	No	220,317
FW-01.2A-06V	1.031	0.719	0.988	0.988	No	220,317

Sorted By:Flow Order

850,990	Yes	220,317
-201,183	No	220,317
-204,514	No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====> Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR							
FW-01.2A-07E	1.031	0.866	0.797	0.797	161,728	No	220,317
FW-01.2A-08T	1.031	0.897	0.797	0.797	289,214	No	220,317
FW-01.2A-08T (D/S)	0.000	0.897	0.797	0.797	289,214	No	220,317
FW-01.2A-09P	1.031	0.942	0.797	0.797	626,141	No	220,317
FW-01.2A-10E	1.031	1.018	0.797	0.797	517,192	Yes	220,317
FW-01.2A-11P	1.031	0.920	0.797	0.797	423,985	No	220,317
FW-01.2A-12E	1.031	0.866	0.797	0.797	161,728	No	220,317
FW-01.2A-13P	1.031	0.920	0.797	0.797	423,985	No	220,317
FW-01.2A-14E	1.031	0.866	0.797	0.797	161,728	No	220,317
FW-01.2A-15P_1	1.031	0.920	0.797	0.797	423,985	No	220,317
FW-01.2A-15P_2	1.031	0.965	0.797	0.797	973,561	No	220,317
FW-01.2A-16E	1.031	0.866	0.797	0.797	161,728	No	220,317
FW-01.2A-17P	1.031	0.920	0.797	0.797	423,985	No	220,317
FW-01.2A-18E	1.031	0.866	0.797	0.797	161,728	No	220,317
FW-01.2A-19P	1.031	0.920	0.797	0.797	423,985	No	220,317
FW-01.2A-20E	1.031	0.866	0.797	0.797	161,728	No	220,317
FW-01.2A-21P	1.031	0.920	0.797	0.797	423,985	No	220,317
FW-01.2A-22E	1.031	0.866	0.797	0.797	161,728	No	220,317
FW-01.2A-23P	1.053	0.978	0.797	0.797	623,508	Yes	220,317
Sorted By:Flow Order							
====> Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR							
FW-01.2B-06P	1.057	0.967	0.797	0.797	734,183	No	220,317
FW-01.2B-07V	1.031	0.781	0.988	0.988	-201,183	No	220,317
FW-01.2B-08V	1.031	0.719	0.988	0.988	-204,514	No	220,317
FW-01.2B-09E	1.031	0.866	0.797	0.797	161,728	No	220,317
FW-01.2B-10P	1.031	0.888	0.797	0.797	247,098	No	220,317
FW-01.2B-11T	1.031	0.897	0.797	0.797	289,214	No	220,317
FW-01.2B-11T (D/S)	0.000	0.897	0.797	0.797	289,214	No	220,317
FW-01.2B-12P	1.031	0.942	0.797	0.797	626,141	No	220,317
FW-01.2B-13E	1.031	0.866	0.797	0.797	161,728	No	220,317
FW-01.2B-14P	1.031	0.920	0.797	0.797	423,985	No	220,317
FW-01.2B-15E	1.031	0.866	0.797	0.797	161,728	No	220,317
FW-01.2B-16P	1.031	0.920	0.797	0.797	423,985	No	220,317
FW-01.2B-17E	1.031	0.866	0.797	0.797	161,728	No	220,317
FW-01.2B-18P	1.031	0.920	0.797	0.797	423,985	No	220,317
FW-01.2B-19E	1.031	0.866	0.797	0.797	161,728	No	220,317
FW-01.2B-20P	1.031	0.920	0.797	0.797	423,985	No	220,317
Sorted By:Flow Order							

Component Name	Init.	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]						
====> Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR								
FW-01.2B-21E	1.031	0.866	0.797	0.797	0.797	161,728	No	220,317
FW-01.2B-22P	1.031	0.920	0.797	0.797	0.797	423,985	No	220,317
FW-01.2B-23E	1.031	0.866	0.797	0.797	0.797	161,728	No	220,317
FW-01.2B-24P	1.031	0.920	0.797	0.797	0.797	423,985	No	220,317
FW-01.2B-25E	1.031	0.866	0.797	0.797	0.797	161,728	No	220,317
FW-01.2B-26P	1.031	0.920	0.797	0.797	0.797	423,985	No	220,317
FW-01.2B-27R	0.000	1.537	0.797	0.797	0.797	2,281,750	Yes	220,317
FW-01.2B-27R (D/S)	0.000	1.284	1.195	1.195	1.195	439,996	Yes	220,317
====> Grouped by Line: FW-01.3 BFP DISCHARGE HDR								
FW-01.3-01T (BR/SE)	1.042	0.945	0.797	0.797	0.797	374,685	Yes	220,317
FW-01.3-01T	1.375	1.267	1.195	1.195	1.195	256,331	No	220,317
FW-01.3-01T (D/S)	1.375	1.338	1.195	1.195	1.195	346,536	Yes	220,317
FW-01.3-02P	1.371	1.358	1.195	1.195	1.195	806,845	Yes	220,317
FW-01.3-03E	1.514	1.352	1.195	1.195	1.195	415,771	Yes	220,317
FW-01.3-04E	1.638	1.382	1.195	1.195	1.195	488,963	Yes	220,317
FW-01.3-05P	1.260	1.354	1.195	1.195	1.195	498,349	Yes	220,317
FW-01.3-06E	1.260	1.347	1.195	1.195	1.195	410,210	Yes	220,317
FW-01.3-07P	1.260	1.334	1.195	1.195	1.195	557,569	Yes	220,317
FW-01.3-08E	1.260	1.370	1.195	1.195	1.195	472,452	Yes	220,317
FW-01.3-09P	1.260	1.353	1.195	1.195	1.195	495,220	Yes	220,317
FW-01.3-10E	1.260	1.309	1.195	1.195	1.195	309,724	Yes	220,317
FW-01.3-11P	1.260	1.338	1.195	1.195	1.195	571,524	No	220,317
FW-01.3-12E	1.260	1.293	1.195	1.195	1.195	266,578	Yes	220,317
FW-01.3-13P	1.260	1.358	1.195	1.195	1.195	653,618	No	220,317
FW-01.3-14E	1.260	1.356	1.195	1.195	1.195	435,766	Yes	220,317
FW-01.3-15E	1.260	1.328	1.195	1.195	1.195	358,761	Yes	220,317
FW-01.3-16P	1.260	1.301	1.195	1.195	1.195	330,666	Yes	220,317
FW-01.3-17T	1.260	1.330	1.195	1.195	1.195	451,709	Yes	220,317
FW-01.3-17T (D/S)	1.260	1.324	1.195	1.195	1.195	431,684	Yes	220,317
FW-01.3-18P	1.348	1.337	1.195	1.195	1.195	705,829	Yes	220,317
FW-01.4-01T	1.351	1.332	1.195	1.195	1.195	247,993	No	220,317
FW-01.4-01T (D/S)	1.351	1.336	1.195	1.195	1.195	319,563	No	220,317
FW-01.4-01T (BR/SE)	1.019	0.832	0.717	0.717	0.717	308,212	Yes	220,317
====> Grouped by Line: FW-01.4 BFP DISCHARGE HDR								
FW-01.4-02P	1.341	1.279	1.195	1.195	1.195	525,478	No	220,317

Sorted By:Flow Order

Sorted By:Flow Order

Sorted By:Flow Order

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====> Grouped by Line: FW-01.4 BFP DISCHARGE HDR							
FW-01.5-01T	1.385	1.329	1.195	1.195	No	302,657	220,317
FW-01.5-01T (D/S)	1.385	1.342	1.195	1.195	Yes	521,281	220,317
FW-01.5-01T (BR/SE)	1.015	0.836	0.717	0.717	Yes	319,117	220,317
====> Grouped by Line: FW-01.6A BFP HDR to FWH 36A							
FW-01.6A-01R	0.000	1.299	1.195	1.195	No	593,074	220,317
FW-01.6A-01R (D/S)	0.000	1.428	0.717	0.717	No	2,102,919	220,317
FW-01.6A-02P	1.009	0.871	0.717	0.717	Yes	576,674	220,317
FW-01.6A-03E	0.938	0.788	0.717	0.717	No	180,911	220,317
FW-01.6A-04P	0.938	0.836	0.717	0.717	No	452,376	220,317
FW-01.6A-05E	0.938	0.788	0.717	0.717	No	180,911	220,317
FW-01.6A-06P	0.938	0.836	0.717	0.717	No	452,376	220,317
FW-01.6A-07V	0.938	0.651	0.889	0.889	No	-201,379	220,317
FW-01.6A-08E	0.938	0.788	0.717	0.717	No	180,911	220,317
FW-01.6A-09P	0.938	0.808	0.717	0.717	No	269,278	220,317
FW-01.6A-10E	0.938	0.796	0.717	0.717	No	213,228	220,317
FW-01.6A-11P	0.938	0.836	0.717	0.717	No	452,376	220,317
FW-01.6A-12N	0.938	2.596	0.717	0.717	Yes	4,447,956	220,317
====> Grouped by Line: FW-01.6B BFP HDR to FWH 36B							
FW-01.6B-02P	0.930	0.874	0.717	0.717	Yes	742,496	220,317
FW-01.6B-03E	0.938	0.788	0.717	0.717	No	180,911	220,317
FW-01.6B-04P	0.938	0.836	0.717	0.717	No	452,376	220,317
FW-01.6B-05V	0.938	0.651	0.889	0.889	No	-201,379	220,317
FW-01.6B-06E	0.938	1.047	0.717	0.717	Yes	843,395	220,317
FW-01.6B-07P	0.938	0.824	0.717	0.717	Yes	316,944	220,317
FW-01.6B-08E	0.938	0.954	0.717	0.717	Yes	642,208	220,317
FW-01.6B-10N	0.938	2.705	0.717	0.717	Yes	4,705,045	220,317
====> Grouped by Line: FW-01.6C BFP HDR to FWH 36C							
FW-01.6C-02P	0.938	0.877	0.717	0.717	Yes	756,928	220,317
FW-01.6C-03E	0.938	0.788	0.717	0.717	No	180,911	220,317
FW-01.6C-04P	0.938	0.836	0.717	0.717	No	452,376	220,317
FW-01.6C-05V	0.938	0.651	0.889	0.889	No	-201,379	220,317
FW-01.6C-06E	0.938	0.788	0.717	0.717	No	180,911	220,317
FW-01.6C-08E	0.938	0.796	0.717	0.717	No	213,228	220,317
FW-01.6C-10N	0.938	2.769	0.717	0.717	No	4,857,418	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:19:30AM

Run Name: FW: FW RECIRC
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 0.020

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			
====> Grouped by Line: FW-04.1A BFP 31 RECIRC						
FW-04.1A-10P	0.864	0.864	0.306	0.306	No	4,406
FW-04.1A-01E	0.954	0.779	0.260	0.260	No	4,406
FW-04.1A-02P	0.864	0.864	0.306	0.306	No	4,406
FW-04.1A-03E	0.864	0.864	0.260	0.260	No	4,406
FW-04.1A-04P_1	0.864	0.864	0.306	0.306	No	4,406
FW-04.1A-04P_2	0.864	0.864	0.306	0.306	No	4,406
FW-04.1A-05E	0.864	0.864	0.260	0.260	No	4,406
FW-04.1A-06P_1	0.864	0.864	0.306	0.306	No	4,406
FW-04.1A-06P_2	0.864	0.864	0.306	0.306	No	4,406
FW-04.1A-07E	0.864	0.864	0.260	0.260	No	4,406
FW-04.1A-08E	0.864	0.864	0.260	0.260	No	4,406
FW-04.1A-09P	0.896	0.896	0.306	0.306	No	4,406
FW-04.2A-01R	0.000	0.864	0.260	0.260	No	4,406
FW-04.2A-01R (D/S)	0.000	0.674	0.176	0.176	No	4,406
FW-04.2A-02P	0.709	0.709	0.208	0.208	No	4,406
FW-04.2A-03B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-04E	0.674	0.674	0.176	0.176	No	4,406
FW-04.2A-05P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-06E	0.674	0.674	0.176	0.176	No	4,406
FW-04.2A-07P_1	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-07P_2	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-08B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-09P_1	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-09P_2	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-10B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-11P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-12B	0.674	0.674	0.208	0.208	No	4,406

Sorted By:Flow Order

Component Name	----- Thickness (in) -----		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: FW-04.1A BFP 31 RECIRC						
FW-04.2A-13P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-14B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-15P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-16B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-17P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-18B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-19P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-20B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2A-21P	0.700	0.700	0.208	0.208	No	4,406
FW-04.2A-22B	0.782	0.610	0.208	0.208	No	4,406
FW-04.2A-23P	0.724	0.724	0.208	0.208	No	4,406
FW-04.2A-24R	0.000	0.674	0.176	0.176	No	4,406
FW-04.2A-24R (D/S)	0.000	0.864	0.260	0.260	No	4,406
FW-05.1A-01V	0.864	0.864	0.327	0.327	No	4,406
FW-05.1A-02P	0.886	0.811	0.306	0.306	No	4,406
FW-05.1A-03V	0.864	0.864	0.327	0.327	No	4,406
FW-05.1A-04R	0.000	0.864	0.306	0.306	No	4,406
FW-05.1A-04R (D/S)	0.000	0.875	0.399	0.399	No	4,406
FW-05.2A-01N	0.875	0.875	0.399	0.399	No	4,406
====> Grouped by Line: FW-04.1B BFP 32 RECIRC						
FW-04.1B-10P	0.864	0.864	0.306	0.306	No	4,406
FW-04.1B-01E	0.979	0.753	0.260	0.260	No	4,406
FW-04.1B-02P	0.912	0.912	0.306	0.306	No	4,406
FW-04.1B-03E	1.083	0.800	0.260	0.260	No	4,406
FW-04.1B-04P_1	0.864	0.864	0.306	0.306	No	4,406
FW-04.1B-04P_2	0.864	0.864	0.306	0.306	No	4,406
FW-04.1B-05E	0.864	0.864	0.260	0.260	No	4,406
FW-04.1B-06P_1	0.864	0.864	0.306	0.306	No	4,406
FW-04.1B-06P_2	0.864	0.864	0.306	0.306	No	4,406
FW-04.1B-07E	0.864	0.864	0.260	0.260	No	4,406
FW-04.1B-08E	0.864	0.864	0.260	0.260	No	4,406
FW-04.1B-09P	0.864	0.864	0.306	0.306	No	4,406
FW-04.2B-01R	0.000	0.864	0.260	0.260	No	4,406
FW-04.2B-01R (D/S)	0.000	0.674	0.176	0.176	No	4,406
FW-04.2B-02P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-03B	0.674	0.674	0.208	0.208	No	4,406

Component Name	Thickness (in)		Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]		Time to Tcrit (hrs)	Inspected	
=====> Grouped by Line: FW-04.1B BFP 32 RECIRC						
FW-04.2B-04P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-05E	0.674	0.674	0.176	0.176	No	4,406
FW-04.2B-06P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-07E	0.674	0.674	0.176	0.176	No	4,406
FW-04.2B-08P_1	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-08P_2	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-09B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-10P_1	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-10P_2	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-11B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-12P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-13B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-14P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-15B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-16P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-17B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-18P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-19B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-20P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-21B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-22P	0.716	0.716	0.208	0.208	No	4,406
FW-04.2B-23R	0.000	0.778	0.176	0.176	No	4,406
FW-04.2B-23R (D/S)	0.962	0.839	0.260	0.260	No	4,406
FW-05.1B-01V	0.864	0.864	0.327	0.327	No	4,406
FW-05.1B-02P	0.864	0.864	0.306	0.306	No	4,406
FW-05.1B-03V	0.864	0.864	0.327	0.327	No	4,406
FW-05.1B-04R	0.000	0.864	0.306	0.306	No	4,406
FW-05.1B-04R (D/S)	0.000	0.875	0.399	0.399	No	4,406
FW-05.2B-01N	0.875	0.875	0.399	0.399	No	4,406

Sorted By:Flow Order

Note:
[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:20:10AM

Run Name: FW: SG HEADERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			
====>Grouped by Line: FW-02.3 SG INLET HEADER						
FW-02.1B-11T	1.398	1.367	1.195	1.195	Yes	220,317
FW-02.1B-11T (BR/SE)	0.974	0.909	0.717	0.717	Yes	220,317
FW-02.1B-11T (D/S)	1.398	1.353	1.195	1.195	No	220,317
FW-02.3-01P	1.380	1.363	1.195	1.195	No	220,317
====>Grouped by Line: FW-02.4 SG INLET HEADER						
FW-02.1C-11T (BR/SE)	0.975	0.885	0.717	0.717	No	220,317
FW-02.1C-11T	1.375	1.340	1.195	1.195	No	220,317
FW-02.1C-11T (D/S)	1.375	1.281	1.195	1.195	No	220,317
FW-02.4-02T	1.260	1.338	1.195	1.195	Yes	220,317
FW-02.4-02T (D/S)	0.000	1.350	1.195	1.195	Yes	220,317
FW-02.4-03P	1.260	1.231	1.195	1.195	No	220,317
FW-02.4-04E	1.260	1.451	1.195	1.195	Yes	220,317
FW-02.4-05E	1.260	1.355	1.195	1.195	Yes	220,317
FW-02.4-06P	1.260	1.390	1.195	1.195	Yes	220,317
FW-02.4-07E	1.260	1.404	1.195	1.195	Yes	220,317
FW-02.4-08P	1.260	1.325	1.195	1.195	No	220,317
FW-02.4-09E	1.260	1.342	1.195	1.195	Yes	220,317
FW-02.4-10P	1.260	1.342	1.195	1.195	Yes	220,317
FW-02.4-11E	1.260	1.349	1.195	1.195	Yes	220,317
FW-02.4-12P_1	1.260	1.223	1.195	1.195	No	220,317
FW-02.4-12P_2	1.260	1.239	1.195	1.195	No	220,317
FW-02.4-13E	1.260	1.206	1.195	1.195	No	220,317
FW-02.4-14P	1.260	1.223	1.195	1.195	No	220,317
FW-02.4-15E	1.260	1.318	1.195	1.195	Yes	220,317
FW-02.4-16P	1.260	1.344	1.195	1.195	No	220,317
FW-02.4-17E	1.260	1.295	1.195	1.195	Yes	220,317

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====> Grouped by Line: FW-02.4 SG INLET HEADER							
FW-02.4-18P	1.365	1.355	1.195	1.195	1,594,739	Yes	220,317
FW-02.4-19T	1.368	1.350	1.195	1.195	702,326	No	220,317
FW-02.4-19T (BR/SE)	0.974	0.862	0.717	0.717	1,148,072	Yes	220,317
FW-02.4-19T (D/S)	1.368	1.347	1.195	1.195	806,652	No	220,317
====> Grouped by Line: FW-02.5 SG INLET HEADER							
FW-02.5-01T (D/S)	1.372	1.355	1.195	1.195	1,555,915	No	220,317
FW-02.5-02P	1.260	1.235	1.195	1.195	591,844	No	220,317
FW-02.5-03T	1.260	1.341	1.195	1.195	1,435,252	No	220,317
FW-02.5-03T (D/S)	0.000	1.223	1.195	1.195	271,735	No	220,317
FW-02.5-06P	1.365	1.340	1.195	1.195	2,117,951	No	220,317
FW-02.5-04T	1.368	1.345	1.195	1.195	798,339	No	220,317
FW-02.5-04T (D/S)	1.368	1.354	1.195	1.195	1,062,889	No	220,317
FW-02.5-04T (BR/SE)	1.002	0.925	0.717	0.717	1,644,465	Yes	220,317
FW-02.5-01T	1.372	1.348	1.195	1.195	1,487,722	No	220,317
====> Grouped by Line: FW-02.6 SG INLET HEADER							
FW-02.6-01P	1.361	1.341	1.195	1.195	2,678,246	No	220,317
FW-02.6-03T	1.361	1.357	1.195	1.195	1,080,849	No	220,317
FW-02.6-03T (BR/SE)	1.006	0.856	0.717	0.717	1,094,471	Yes	220,317
FW-02.6-03T (D/S)	1.361	1.340	1.195	1.195	1,643,173	Yes	220,317
====> Grouped by Line: FW-02.8A SG HDR to SG 31							
FW-02.8A-01P	0.968	0.941	0.717	0.717	3,117,423	Yes	220,317
FW-02.8A-02E	0.938	0.945	0.717	0.717	1,718,327	Yes	220,317
FW-02.8A-03T	0.938	0.854	0.717	0.717	1,273,927	Yes	220,317
FW-02.8A-03T (D/S)	0.000	0.887	0.717	0.717	1,580,868	Yes	220,317
FW-02.8A-04V	0.938	0.845	0.889	0.889	-150,121	No	220,317
FW-02.8A-25R	0.000	0.934	0.832	0.832	810,965	No	33,725
FW-02.8A-25R (D/S)	0.000	0.838	0.589	0.589	1,348,460	No	33,725
FW-02.8A-05V	1.312	1.193	0.630	0.630	1,752,035	No	220,317
FW-02.8A-26R	0.000	0.648	0.589	0.589	364,820	Yes	220,317
FW-02.8A-26R (D/S)	0.000	1.338	0.832	0.832	4,707,048	Yes	220,317
FW-02.8A-06E	0.938	0.901	0.717	0.717	1,386,500	Yes	220,317
FW-02.8A-07P	0.938	0.893	0.717	0.717	1,537,834	Yes	220,317
FW-02.8A-08T	0.938	0.898	0.717	0.717	1,687,342	No	220,317
FW-02.8A-08T (D/S)	0.000	0.898	0.717	0.717	1,687,342	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]		Time to Tcrit (hrs)	Inspected	
====> Grouped by Line: FW-02.8A SG HDR to SG 31						
FW-02.8A-09P	0.938	0.912	0.717	0.717	No	2,715,255 220,317
FW-02.8A-10E	0.938	0.889	0.717	0.717	No	1,298,402 220,317
FW-02.8A-11P_1	0.938	0.896	0.717	0.717	No	1,558,853 220,317
FW-02.8A-11P_2	0.938	0.921	0.717	0.717	No	4,344,532 220,317
FW-02.8A-12F	0.938	0.863	0.717	0.717	No	710,805 220,317
FW-02.8A-13P	0.938	0.904	0.717	0.717	Yes	4,557,013 220,317
FW-02.8A-14E	0.938	0.894	0.717	0.717	No	1,500,449 220,317
FW-02.8A-15P	0.938	0.909	0.717	0.717	No	2,434,915 220,317
FW-02.8A-16E	0.938	0.889	0.717	0.717	No	1,298,402 220,317
FW-02.8A-17P	0.938	0.905	0.717	0.717	No	2,098,508 220,317
FW-02.8A-18V	0.938	0.851	0.717	0.717	No	572,274 220,317
FW-02.8A-19V	0.938	0.840	0.717	0.717	No	459,925 220,317
FW-02.8A-20P	0.750	0.707	0.544	0.544	No	1,382,029 220,317
FW-02.8A-21T	0.750	0.712	0.544	0.544	No	1,599,193 220,317
FW-02.8A-21T (D/S)	0.000	0.712	0.544	0.544	No	1,599,193 220,317
FW-02.8A-22E	0.750	0.703	0.544	0.544	No	1,226,930 220,317
FW-02.8A-23E	0.750	0.703	0.544	0.544	No	1,226,930 220,317
FW-02.8A-24P	0.750	0.709	0.544	0.544	No	1,476,214 220,317
FW-03.1A-01P	0.750	0.718	0.544	0.544	No	1,992,729 220,317
FW-03.1A-02E	0.750	0.703	0.544	0.544	No	1,226,930 220,317
FW-03.1A-03P	0.750	0.718	0.544	0.544	No	1,992,729 220,317
FW-03.1A-04B	0.750	0.708	0.544	0.544	No	1,420,314 220,317
FW-03.1A-05B	0.750	0.705	0.544	0.544	No	1,318,097 220,317
FW-03.1A-06P_1	0.750	0.718	0.544	0.544	No	1,992,729 220,317
FW-03.1A-06P_2	0.750	0.734	0.544	0.544	No	4,205,638 220,317
FW-03.1A-07B	0.750	0.708	0.544	0.544	No	1,420,314 220,317
FW-03.1A-08B	0.750	0.976	0.544	0.544	Yes	3,347,279 220,317
FW-03.1A-09N	0.750	0.746	0.478	0.478	No	131,339,016 220,317
====> Grouped by Line: FW-02.8B SG HDR to SG 32						
FW-02.8B-01P	0.938	0.903	0.717	0.717	Yes	2,591,856 220,317
FW-02.8B-02E	0.938	0.889	0.717	0.717	No	1,298,402 220,317
FW-02.8B-03P	0.938	0.905	0.717	0.717	No	2,098,508 220,317
FW-02.8B-04T	0.938	0.898	0.717	0.717	No	1,687,342 220,317
FW-02.8B-04T (D/S)	0.000	0.898	0.717	0.717	No	1,687,342 220,317
FW-02.8B-05V	0.938	0.845	0.889	0.889	No	-150,121 220,317
FW-02.8B-25R	0.000	1.893	0.832	0.832	No	8,456,838 220,317

Component Name	----- Thickness (in) -----		Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop	Tcrit	
====> Grouped by Line: FW-02.8B SG HDR to SG 32					
FW-02.8B-25R (D/S)	1.312	0.871	0.589	0.589	220,317
FW-02.8B-06V	1.312	1.193	0.630	0.630	220,317
FW-02.8B-26R	0.000	0.839	0.589	0.589	33,725
FW-02.8B-26R (D/S)	0.000	0.934	0.832	0.832	33,725
FW-02.8B-07E	0.938	0.824	0.717	0.717	220,317
FW-02.8B-08P	0.938	0.870	0.717	0.717	220,317
FW-02.8B-09T	0.938	0.875	0.717	0.717	220,317
FW-02.8B-09T (D/S)	0.000	0.888	0.717	0.717	220,317
FW-02.8B-10P	0.938	0.912	0.717	0.717	220,317
FW-02.8B-11E	0.938	0.889	0.717	0.717	220,317
FW-02.8B-12P_1	0.998	0.955	0.717	0.717	220,317
FW-02.8B-12P_2	0.938	0.921	0.717	0.717	220,317
FW-02.8B-13F	0.938	0.797	0.717	0.717	220,317
FW-02.8B-14P	0.990	0.864	0.717	0.717	220,317
FW-02.8B-15E	0.938	0.894	0.717	0.717	220,317
FW-02.8B-16P	0.938	0.909	0.717	0.717	220,317
FW-02.8B-17E	0.938	0.889	0.717	0.717	220,317
FW-02.8B-18P	0.938	0.905	0.717	0.717	220,317
FW-02.8B-19V	0.938	0.851	0.717	0.717	220,317
FW-02.8B-20V	0.938	0.840	0.717	0.717	220,317
FW-02.8B-21P	0.750	0.707	0.544	0.544	220,317
FW-02.8B-22T	0.000	0.737	0.544	0.544	220,317
FW-02.8B-22T (D/S)	0.000	0.690	0.544	0.544	220,317
FW-02.8B-23E	0.924	0.689	0.544	0.544	220,317
FW-02.8B-24P	0.750	0.709	0.544	0.544	220,317
FW-03.1B-01P	0.750	0.718	0.544	0.544	220,317
FW-03.1B-02E	0.750	0.703	0.544	0.544	220,317
FW-03.1B-03P	0.750	0.718	0.544	0.544	220,317
FW-03.1B-04B	0.750	0.708	0.544	0.544	220,317
FW-03.1B-05B	0.750	0.705	0.544	0.544	220,317
FW-03.1B-06P	0.750	0.718	0.544	0.544	220,317
FW-03.1B-07B	0.750	0.708	0.544	0.544	220,317
FW-03.1B-08E	0.750	0.663	0.544	0.544	220,317
FW-03.1B-09P	0.750	0.870	0.544	0.544	220,317
FW-03.1B-10E	0.750	0.708	0.544	0.544	220,317
FW-03.1B-11E	0.750	0.705	0.544	0.544	220,317
FW-03.1B-12N	0.750	0.749	0.478	0.478	220,317

Sorted By:Flow Order

1,369,741	No	220,317
1,752,035	No	220,317
1,545,915	No	33,725
951,747	No	33,725
803,591	Yes	220,317
1,333,733	Yes	220,317
1,469,253	Yes	220,317
1,590,170	Yes	220,317
2,715,255	No	220,317
1,298,402	No	220,317
2,059,126	No	220,317
4,344,532	No	220,317
393,058	Yes	220,317
3,587,109	Yes	220,317
1,500,449	No	220,317
2,434,915	No	220,317
1,298,402	No	220,317
2,098,508	No	220,317
572,274	No	220,317
459,925	No	220,317
1,382,029	No	220,317
1,839,895	Yes	220,317
1,389,874	Yes	220,317
1,088,667	Yes	220,317
1,476,214	No	220,317
1,992,729	No	220,317
1,226,930	No	220,317
1,992,729	No	220,317
1,420,314	No	220,317
1,318,097	No	220,317
1,992,729	No	220,317
1,420,314	No	220,317
920,826	Yes	220,317
3,739,898	Yes	220,317
1,420,314	No	220,317
1,318,097	No	220,317
133,063,352	No	220,317

Component Name	----- Thickness (in) -----		Tcrit	Inspected	Component Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: FW-02.8C SG HDR to SG 34						
FW-02.8C-01P	0.946	0.920	0.717	0.717	2,822,881	220,317
FW-02.8C-02E	0.938	0.889	0.717	0.717	1,298,402	220,317
FW-02.8C-03P	0.938	0.905	0.717	0.717	2,098,508	220,317
FW-02.8C-04T	0.938	0.898	0.717	0.717	1,687,342	220,317
FW-02.8C-04T (D/S)	0.000	0.898	0.717	0.717	1,687,342	220,317
FW-02.8C-05V	0.938	1.246	0.889	0.889	1,410,007	220,317
FW-02.8C-24R	0.000	1.606	0.832	0.832	6,167,720	220,317
FW-02.8C-24R (D/S)	0.000	0.859	0.589	0.589	1,463,054	220,317
FW-02.8C-06V	1.312	1.783	0.630	0.630	3,585,765	220,317
FW-02.8C-25R	0.000	0.683	0.589	0.589	581,947	220,317
FW-02.8C-25R (D/S)	0.000	1.695	0.832	0.832	8,027,588	220,317
FW-02.8C-07E	0.938	0.949	0.717	0.717	1,749,622	220,317
FW-02.8C-08P	0.938	0.887	0.717	0.717	1,480,280	220,317
FW-02.8C-09T	0.938	0.898	0.717	0.717	1,687,342	220,317
FW-02.8C-09T (D/S)	0.000	0.898	0.717	0.717	1,687,342	220,317
FW-02.8C-10P	0.938	0.912	0.717	0.717	2,715,255	220,317
FW-02.8C-11E	0.938	0.889	0.717	0.717	1,298,402	220,317
FW-02.8C-12P_1	0.938	0.896	0.717	0.717	1,558,853	220,317
FW-02.8C-12P_2	0.938	0.921	0.717	0.717	4,344,532	220,317
FW-02.8C-13F	0.938	0.863	0.717	0.717	710,805	220,317
FW-02.8C-14P	0.938	0.902	0.717	0.717	4,508,183	220,317
FW-02.8C-15E	0.938	0.894	0.717	0.717	1,500,449	220,317
FW-02.8C-16E	0.938	0.889	0.717	0.717	1,298,402	220,317
FW-02.8C-17P	0.938	0.905	0.717	0.717	2,098,508	220,317
FW-02.8C-18V	0.938	0.851	0.717	0.717	572,274	220,317
FW-02.8C-19V	0.938	0.840	0.717	0.717	459,925	220,317
FW-02.8C-20P	0.750	0.715	0.544	0.544	1,451,893	220,317
FW-02.8C-21T	0.750	0.712	0.544	0.544	1,599,193	220,317
FW-02.8C-21T (D/S)	0.000	0.712	0.544	0.544	1,599,193	220,317
FW-02.8C-22E	0.750	0.703	0.544	0.544	1,226,930	220,317
FW-02.8C-23P	0.750	0.709	0.544	0.544	1,476,214	220,317
FW-03.1C-01P	0.750	0.718	0.544	0.544	1,992,729	220,317
FW-03.1C-02E	0.750	0.703	0.544	0.544	1,226,930	220,317
FW-03.1C-03P	0.750	0.718	0.544	0.544	1,992,729	220,317
FW-03.1C-04B	0.750	0.708	0.544	0.544	1,420,314	220,317
FW-03.1C-16P_1	0.750	0.722	0.544	0.544	2,314,712	220,317
FW-03.1C-16P_2	0.750	0.734	0.544	0.544	4,205,638	220,317

Sorted By:Flow Order

Component Name	Thickness (in)		Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]		Time to Tcrit (hrs)	Inspected	
====> Grouped by Line: FW-02.8C SG HDR to SG 34						
FW-03.1C-05B	0.750	0.703	0.544	0.544	No	220,317
FW-03.1C-06P_1	0.750	0.718	0.544	0.544	No	220,317
FW-03.1C-06P_2	0.750	0.734	0.544	0.544	No	220,317
FW-03.1C-07B	0.750	0.708	0.544	0.544	No	220,317
FW-03.1C-09P	0.750	0.722	0.544	0.544	No	220,317
FW-03.1C-10E	0.750	0.776	0.544	0.544	Yes	220,317
FW-03.1C-11P	0.750	0.698	0.544	0.544	Yes	220,317
FW-03.1C-12E	0.750	0.774	0.544	0.544	Yes	220,317
FW-03.1C-13P	0.750	0.635	0.544	0.544	Yes	220,317
FW-03.1C-14E	0.750	0.730	0.544	0.544	No	220,317
FW-03.1C-15N	0.750	0.704	0.478	0.478	No	220,317
====> Grouped by Line: FW-02.8D SG HDR to SG 33						
FW-02.6-02T (D/S)	0.000	1.243	1.195	1.195	No	220,317
FW-02.7-01P	1.372	1.360	1.195	1.195	No	220,317
FW-02.7-02T	1.260	1.243	1.195	1.195	No	220,317
FW-02.7-02T (D/S)	0.000	1.243	1.195	1.195	No	220,317
FW-02.7-03P	1.372	1.360	1.195	1.195	No	220,317
FW-02.7-04T	1.395	1.355	1.195	1.195	No	220,317
FW-02.7-04T (BR/SE)	1.013	0.872	0.717	0.717	Yes	220,317
FW-02.8D-01P	0.964	0.937	0.717	0.717	Yes	220,317
FW-02.8D-02E	0.938	0.889	0.717	0.717	No	220,317
FW-02.8D-03P	0.938	0.905	0.717	0.717	No	220,317
FW-02.8D-04T	0.938	0.898	0.717	0.717	No	220,317
FW-02.8D-04T (D/S)	0.000	0.898	0.717	0.717	No	220,317
FW-02.8D-05V	0.938	0.845	0.889	0.889	No	220,317
FW-02.8D-24R	0.000	1.514	0.832	0.832	No	220,317
FW-02.8D-24R (D/S)	1.312	0.844	0.589	0.589	No	220,317
FW-02.8D-06V	1.312	1.193	0.630	0.630	No	220,317
FW-02.8D-25R	1.312	0.706	0.589	0.589	Yes	220,317
FW-02.8D-25R (D/S)	0.000	0.861	0.832	0.832	Yes	220,317
FW-02.8D-07E	0.938	0.896	0.717	0.717	Yes	220,317
FW-02.8D-08P	0.938	0.874	0.717	0.717	Yes	220,317
FW-02.8D-09T	0.938	0.898	0.717	0.717	No	220,317
FW-02.8D-09T (D/S)	0.000	0.898	0.717	0.717	No	220,317
FW-02.8D-10P	0.938	0.912	0.717	0.717	No	220,317
FW-02.8D-11E	0.938	0.889	0.717	0.717	No	220,317

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			Time to Tcrit (hrs)	Inspected	
=====> Grouped by Line: FW-02.8D SG HDR to SG 33							
FW-02.8D-12P_1	0.938	0.896	0.717	0.717	No	1,558,853	220,317
FW-02.8D-12P_2	0.938	0.921	0.717	0.717	No	4,344,532	220,317
FW-02.8D-13F	0.938	0.863	0.717	0.717	No	710,805	220,317
FW-02.8D-14P	0.938	0.904	0.717	0.717	Yes	4,557,013	220,317
FW-02.8D-15E	0.938	0.889	0.717	0.717	No	1,298,402	220,317
FW-02.8D-16P	0.938	0.905	0.717	0.717	No	2,098,508	220,317
FW-02.8D-17V	0.938	0.851	0.717	0.717	No	572,274	220,317
FW-02.8D-18V	0.938	0.840	0.717	0.717	No	459,925	220,317
FW-02.8D-19P	0.750	0.704	0.544	0.544	Yes	1,358,193	220,317
FW-02.8D-20T	0.750	0.712	0.544	0.544	No	1,599,193	220,317
FW-02.8D-20T (D/S)	0.000	0.712	0.544	0.544	No	1,599,193	220,317
FW-02.8D-21E	0.750	0.703	0.544	0.544	No	1,226,930	220,317
FW-02.8D-22E	0.750	0.703	0.544	0.544	No	1,226,930	220,317
FW-02.8D-23P	0.750	0.709	0.544	0.544	No	1,476,214	220,317
FW-03.1D-01P	0.750	0.718	0.544	0.544	No	1,992,729	220,317
FW-03.1D-02E	0.750	0.703	0.544	0.544	No	1,226,930	220,317
FW-03.1D-03P	0.750	0.718	0.544	0.544	No	1,992,729	220,317
FW-03.1D-04B	0.750	0.708	0.544	0.544	No	1,420,314	220,317
FW-03.1D-05B	0.750	0.705	0.544	0.544	No	1,318,097	220,317
FW-03.1D-06P_1	0.750	0.718	0.544	0.544	No	1,992,729	220,317
FW-03.1D-06P_2	0.750	0.734	0.544	0.544	No	4,205,638	220,317
FW-03.1D-07B	0.750	0.708	0.544	0.544	No	1,420,314	220,317
FW-03.1D-08B	0.750	0.718	0.544	0.544	Yes	1,423,057	220,317
FW-03.1D-09P	0.750	0.718	0.544	0.544	No	1,992,729	220,317
FW-03.1D-10N	0.750	0.749	0.478	0.478	No	133,063,352	220,317
FW-02.6-02T	1.260	1.243	1.195	1.195	No	1,006,154	220,317

Sorted By:Flow Order

Note:
 [1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:20:22AM

Run Name: HD: HD PMP TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====> Grouped by Line: HD-11.1A HD PMP 31 to HDR						
HD-11.1A-01N	0.500	0.462	0.304 0.304	328,560	No	220,317
HD-11.1A-02V	0.500	0.337	0.326 0.326	22,963	No	220,317
HD-11.2A-01R	0.000	0.510	0.304 0.304	612,514	Yes	220,317
HD-11.2A-01R (D/S)	0.000	0.324	0.206 0.206	236,900	No	220,317
HD-12.1A-01V	0.500	0.219	0.220 0.220	-1,054	No	220,317
HD-12.1A-02R	0.000	0.253	0.206 0.206	108,379	Yes	220,317
HD-12.1A-02R (D/S)	0.000	0.461	0.304 0.304	545,052	Yes	220,317
HD-12.2A-01V	0.500	0.337	0.326 0.326	22,963	No	220,317
HD-12.2A-02P	0.500	0.428	0.304 0.304	586,203	No	220,317
HD-12.2A-03E	0.500	0.451	0.304 0.304	412,341	Yes	220,317
HD-12.2A-04T	0.500	0.402	0.304 0.304	339,120	No	220,317
HD-12.2A-04T (D/S)	0.000	0.402	0.304 0.304	339,120	No	220,317
HD-12.2A-05P	0.664	0.596	0.304 0.304	1,467,544	No	220,317
HD-12.2A-06O	0.500	0.462	0.304 0.304	183,406	No	220,317
HD-12.2A-07P	0.569	0.442	0.304 0.304	802,940	Yes	220,317
Sorted By:Flow Order						
====> Grouped by Line: HD-11.1B HD PMP 32 to HDR						
HD-11.1B-01N	0.500	0.337	0.304 0.304	67,328	No	220,317
HD-11.1B-02V	0.500	0.337	0.326 0.326	22,963	No	220,317
HD-11.2B-01R	0.000	0.503	0.304 0.304	591,679	Yes	220,317
HD-11.2B-01R (D/S)	0.000	0.311	0.206 0.206	210,884	Yes	220,317
HD-12.1B-01V	0.322	0.257	0.220 0.220	46,704	No	220,317
HD-12.1B-02R	0.000	0.310	0.206 0.206	238,098	No	220,317
HD-12.1B-02R (D/S)	0.000	0.461	0.304 0.304	544,824	Yes	220,317
HD-12.2B-01V	0.500	0.337	0.326 0.326	22,963	No	220,317
HD-12.2B-02P	0.539	0.461	0.304 0.304	735,022	Yes	220,317
HD-12.2B-03E	0.535	0.435	0.304 0.304	364,972	Yes	220,317
Sorted By:Flow Order						

Component Name	Thickness (in)		Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]		Time to Tcrit (hrs)	Inspected	
====> Grouped by Line: HD-11.1B HD PMP 32 to HDR						
HD-12.2B-04T	0.500	0.559	0.304	0.304	No	220,317
HD-12.2B-04T (D/S)	0.000	0.529	0.304	0.304	No	220,317
HD-12.2B-05P	0.516	0.471	0.304	0.304	Yes	220,317
HD-12.2B-06O	0.500	0.208	0.304	0.304	No	220,317
HD-12.2B-07P	0.527	0.450	0.304	0.304	Yes	220,317
HD-12.2B-08T (BR/SE)	0.000	0.442	0.304	0.304	Yes	220,317
HD-12.2B-08T (D/S)	0.000	0.633	0.382	0.382	Yes	220,317
HD-12.3-01P	0.654	0.627	0.382	0.382	Yes	220,317
====> Grouped by Line: HD-12.2A HD PMP HDR to CD SYS						
HD-12.2A-08T (BR/SE)	0.000	0.452	0.304	0.304	Yes	220,317
HD-12.2A-08T	0.700	0.613	0.382	0.382	Yes	220,317
HD-12.2A-08T (D/S)	0.000	0.475	0.382	0.382	No	220,317
HD-12.4-01E	0.789	0.606	0.382	0.382	Yes	220,317
HD-12.4-02P	0.656	0.515	0.382	0.382	No	220,317
HD-12.4-03E	0.656	0.493	0.382	0.382	No	220,317
HD-12.4-04P	0.656	0.546	0.382	0.382	No	220,317
HD-12.4-05E	0.656	0.511	0.382	0.382	No	220,317
HD-12.4-06P	0.656	0.559	0.382	0.382	No	220,317
HD-12.4-07E	0.656	0.493	0.382	0.382	No	220,317
HD-12.4-08P	0.656	0.546	0.382	0.382	No	220,317
HD-12.4-09E	0.656	0.493	0.382	0.382	No	220,317
HD-12.4-10P_1	0.656	0.546	0.382	0.382	No	220,317
HD-12.4-10P_2	0.656	0.595	0.382	0.382	No	220,317
HD-12.4-11E	0.656	0.493	0.382	0.382	No	220,317
HD-12.4-12P	0.656	0.546	0.382	0.382	No	220,317
HD-12.4-13E	0.656	0.493	0.382	0.382	No	220,317
HD-12.4-14P	0.656	0.546	0.382	0.382	No	220,317
HD-12.4-15T	0.000	0.524	0.382	0.382	No	220,317
HD-12.4-15T (D/S)	0.656	0.568	0.382	0.382	No	220,317
HD-12.4-16P	0.656	0.493	0.382	0.382	No	220,317
HD-12.4-17E	0.656	0.493	0.382	0.382	No	220,317
HD-12.4-18P	0.656	0.546	0.382	0.382	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:20:36AM

Pass 1 Analysis Exclude Measured Wear

Run Name: HD: HTR 31 TO COND
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====>Grouped by Line: HD-13.1 FWH 31A to Cond 33						
HD-13.1-01N	0.000	0.219	0.025 0.025	2,220,907	No	220,317
HD-13.1-02P	0.000	0.233	0.025 0.025	4,417,253	No	220,317
HD-13.1-03E	0.000	0.227	0.021 0.021	3,183,163	No	220,317
HD-13.1-04P	0.000	0.230	0.025 0.025	3,671,211	No	220,317
HD-13.1-05E	0.000	0.227	0.021 0.021	3,183,163	No	220,317
HD-13.1-06P	0.000	0.234	0.025 0.025	4,799,226	No	220,317
HD-13.1-07T	0.000	0.231	0.021 0.021	4,009,297	No	220,317
HD-13.1-07T (D/S)	0.000	0.231	0.021 0.021	4,009,297	No	220,317
HD-13.1-08E	0.000	0.227	0.021 0.021	3,183,163	No	220,317
HD-13.1-09V	0.000	0.219	0.023 0.023	2,245,279	No	220,317
HD-13.1-10E	0.000	0.227	0.021 0.021	3,183,163	No	220,317
HD-13.1-11E	0.000	0.227	0.021 0.021	3,183,163	No	220,317
HD-13.1-12E	0.000	0.228	0.021 0.021	3,385,482	No	220,317
HD-13.1-13P	0.000	0.234	0.025 0.025	4,799,226	No	220,317
HD-13.1-14E	0.000	0.227	0.021 0.021	3,183,163	No	220,317
HD-13.1-15P	0.000	0.234	0.025 0.025	4,799,226	No	220,317
HD-13.1-16E	0.000	0.227	0.021 0.021	3,183,163	No	220,317
HD-13.1-17P	0.000	0.234	0.025 0.025	4,799,226	No	220,317
HD-13.1-18E	0.000	0.234	0.021 0.021	4,882,639	No	220,317
HD-13.1-18E (D/S)	0.000	2.393	0.014 0.014	7,986,195	No	220,317
HD-13.1-19V	0.000	0.188	0.015 0.015	989,301	No	220,317
HD-13.1-20R	0.000	2.403	0.014 0.014	8,880,289	No	220,317
HD-13.1-20R (D/S)	0.000	0.231	0.021 0.021	4,009,297	No	220,317
HD-13.1-21V	0.000	0.219	0.023 0.023	2,245,279	No	220,317
HD-13.1-22P	0.000	0.236	0.025 0.025	5,502,404	No	220,317
HD-13.1-23N	0.000	0.225	0.025 0.025	2,865,487	No	220,317

Sorted By:Flow Order

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			Time to Tcrit (hrs)	Inspected	
====> Grouped by Line: HD-13.2 FWH 31B to Cond 32							
HD-13.2-01N	0.000	0.219	0.025	0.025	No	2,240,979	220,317
HD-13.2-02P	0.000	0.233	0.025	0.025	No	4,454,809	220,317
HD-13.2-03E	0.000	0.227	0.021	0.021	No	3,210,895	220,317
HD-13.2-04P	0.000	0.230	0.025	0.025	No	3,702,829	220,317
HD-13.2-05E	0.000	0.230	0.021	0.021	No	3,643,473	220,317
HD-13.2-06P	0.000	0.236	0.025	0.025	No	5,548,599	220,317
HD-13.2-07T	0.000	0.225	0.021	0.021	No	2,862,724	220,317
HD-13.2-07T (BR/SE)	0.000	0.229	0.021	0.021	No	3,525,786	220,317
HD-13.2-08V	0.000	0.219	0.023	0.023	No	2,265,545	220,317
HD-13.2-09E	0.000	0.227	0.021	0.021	No	3,210,895	220,317
HD-13.2-10E	0.000	0.227	0.021	0.021	No	3,210,895	220,317
HD-13.2-11P	0.000	0.230	0.025	0.025	No	3,702,829	220,317
HD-13.2-12E	0.000	0.227	0.021	0.021	No	3,210,895	220,317
HD-13.2-13P	0.000	0.234	0.025	0.025	No	4,839,823	220,317
HD-13.2-14E	0.000	0.227	0.021	0.021	No	3,210,895	220,317
HD-13.2-15P	0.000	0.234	0.025	0.025	No	4,839,823	220,317
HD-13.2-16E	0.000	0.234	0.021	0.021	No	4,923,901	220,317
HD-13.2-16E (D/S)	0.000	0.211	0.014	0.014	No	1,835,965	220,317
HD-13.2-17V	0.000	0.188	0.015	0.015	No	995,971	220,317
HD-13.2-18R	0.000	0.215	0.014	0.014	No	2,071,138	220,317
HD-13.2-18R (D/S)	0.000	0.231	0.021	0.021	No	4,043,606	220,317
HD-13.2-19V	0.000	0.219	0.023	0.023	No	2,265,545	220,317
HD-13.2-20P	0.000	0.236	0.025	0.025	No	5,548,599	220,317
HD-13.2-21N	0.000	0.225	0.025	0.025	No	2,890,690	220,317
====> Grouped by Line: HD-13.3 FWH 31C to Cond 31							
HD-13.3-01N	0.000	0.219	0.025	0.025	No	2,228,603	220,317
HD-13.3-02P	0.000	0.233	0.025	0.025	No	4,431,006	220,317
HD-13.3-03E	0.000	0.227	0.021	0.021	No	3,193,513	220,317
HD-13.3-04P	0.000	0.230	0.025	0.025	No	3,682,907	220,317
HD-13.3-05E	0.000	0.229	0.021	0.021	No	3,623,857	220,317
HD-13.3-06P	0.000	0.236	0.025	0.025	No	5,519,150	220,317
HD-13.3-07T	0.000	0.225	0.021	0.021	No	2,847,138	220,317
HD-13.3-07T (BR/SE)	0.000	0.229	0.021	0.021	No	3,506,778	220,317
HD-13.3-08V	0.000	0.219	0.023	0.023	No	2,253,042	220,317
HD-13.3-09E	0.000	0.227	0.021	0.021	No	3,193,513	220,317
HD-13.3-10E	0.000	0.227	0.021	0.021	No	3,193,513	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: HD-13.3 FWH 31C to Cond 31						
HD-13.3-11P	0.000	0.230	0.025	3,682,907	No	220,317
HD-13.3-12E	0.000	0.227	0.021	3,193,513	No	220,317
HD-13.3-13P	0.000	0.234	0.025	4,814,032	No	220,317
HD-13.3-14E	0.000	0.227	0.021	3,193,513	No	220,317
HD-13.3-15P	0.000	0.234	0.025	4,814,032	No	220,317
HD-13.3-16E	0.000	0.234	0.021	4,897,676	No	220,317
HD-13.3-16E (D/S)	0.000	0.211	0.014	1,829,273	No	220,317
HD-13.3-17V	0.000	0.188	0.015	992,099	No	220,317
HD-13.3-18R	0.000	0.215	0.014	2,063,656	No	220,317
HD-13.3-18R (D/S)	0.000	0.231	0.021	4,021,926	No	220,317
HD-13.3-19V	0.000	0.219	0.023	2,253,042	No	220,317
HD-13.3-20P	0.000	0.236	0.025	5,519,150	No	220,317
HD-13.3-21N	0.000	0.225	0.025	2,874,960	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:20:52AM

Run Name: HD: HTR 32 TO HTR 31
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====>Grouped by Line: HD-08.1A FWH 32A to FWH 31A						
HD-8.1A-01N	0.375	0.290	0.021 0.021	No	2,902,394	220,317
HD-8.1A-02P	0.250	0.201	0.021 0.021	No	3,743,095	220,317
HD-8.1A-03E	0.250	0.190	0.021 0.021	No	2,551,942	220,317
HD-8.1A-04P	0.250	0.198	0.021 0.021	No	3,093,875	220,317
HD-8.1A-05E	0.250	0.190	0.021 0.021	No	2,551,942	220,317
HD-8.1A-06P	0.250	0.209	0.021 0.021	No	4,216,759	220,317
HD-8.1A-07T (BR/SE)	0.000	0.185	0.021 0.021	No	2,291,815	220,317
HD-8.1A-07T (D/S)	0.000	0.168	0.021 0.021	No	1,650,167	220,317
HD-8.1A-08P	0.250	0.200	0.021 0.021	No	3,333,424	220,317
HD-8.1A-09E	0.250	0.190	0.021 0.021	No	2,551,942	220,317
HD-8.1A-10V	0.250	0.168	0.023 0.023	No	1,633,185	220,317
HD-8.2A-01R	0.000	0.193	0.021 0.021	No	2,750,135	220,317
HD-8.2A-01R (D/S)	0.000	0.177	0.018 0.018	No	1,998,727	220,317
HD-09.1A-01V	0.250	0.136	0.019 0.019	No	937,053	220,317
HD-09.1A-02R	0.000	0.284	0.018 0.018	No	3,823,294	220,317
HD-09.1A-02R (D/S)	0.000	0.260	0.021 0.021	Yes	4,464,232	220,317
HD-09.2A-01V	0.250	0.168	0.023 0.023	No	1,633,185	220,317
HD-09.2A-02P	0.406	0.406	0.020 0.020	No	100,000,000	220,317
HD-09.2A-03E	0.406	0.406	0.020 0.020	No	100,000,000	220,317
HD-09.2A-04T	0.406	0.406	0.020 0.020	No	100,000,000	220,317
HD-09.2A-04T (BR/SE)	0.000	0.406	0.020 0.020	No	100,000,000	220,317
HD-09.2A-04T (D/S)	0.000	0.406	0.020 0.020	No	100,000,000	220,317
====>Grouped by Line: HD-08.1B FWH 32B to FWH 31B						
HD-8.1B-01N	0.375	0.290	0.021 0.021	No	2,902,394	220,317
HD-8.1B-02P	0.250	0.201	0.021 0.021	No	3,743,095	220,317
HD-8.1B-03E	0.250	0.190	0.021 0.021	No	2,551,942	220,317

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			Time to Tcrit (hrs)	Inspected	
====> Grouped by Line: HD-08.1B FWH 32B to FWH 31B							
HD-8.1B-04P	0.250	0.198	0.021	0.021	No	3,093,875	220,317
HD-8.1B-05E	0.250	0.190	0.021	0.021	No	2,551,942	220,317
HD-8.1B-06P	0.250	0.209	0.021	0.021	No	4,216,759	220,317
HD-8.1B-07T (BR/SE)	0.000	0.185	0.021	0.021	No	2,291,815	220,317
HD-8.1B-07T (D/S)	0.000	0.168	0.021	0.021	No	1,650,167	220,317
HD-8.1B-08P	0.250	0.200	0.021	0.021	No	3,333,424	220,317
HD-8.1B-09E	0.250	0.190	0.021	0.021	No	2,551,942	220,317
HD-8.1B-10V	0.250	0.168	0.023	0.023	No	1,633,185	220,317
HD-8.2B-01R	0.000	0.193	0.021	0.021	No	2,750,135	220,317
HD-8.2B-01R (D/S)	0.000	0.177	0.018	0.018	No	1,998,727	220,317
HD-09.1B-01V	0.250	0.136	0.019	0.019	No	937,053	220,317
HD-09.1B-02R	0.000	0.239	0.018	0.018	Yes	3,176,182	220,317
HD-09.1B-02R (D/S)	0.000	0.329	0.021	0.021	Yes	5,754,381	220,317
HD-09.2B-01V	0.250	0.168	0.023	0.023	No	1,633,185	220,317
HD-09.2B-02P	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.2B-03E	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.2B-04T	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.2B-04T (BR/SE)	0.000	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.2B-04T (D/S)	0.000	0.406	0.020	0.020	No	100,000,000	220,317
====> Grouped by Line: HD-08.1C FWH 32C to FWH 31C							
HD-8.1C-01N	0.375	0.290	0.021	0.021	No	2,902,394	220,317
HD-8.1C-02P	0.250	0.201	0.021	0.021	No	3,743,095	220,317
HD-8.1C-03E	0.250	0.190	0.021	0.021	No	2,551,942	220,317
HD-8.1C-04P	0.250	0.198	0.021	0.021	No	3,093,875	220,317
HD-8.1C-05E	0.250	0.190	0.021	0.021	No	2,551,942	220,317
HD-8.1C-06P	0.250	0.209	0.021	0.021	No	4,216,759	220,317
HD-8.1C-07T (BR/SE)	0.000	0.185	0.021	0.021	No	2,291,815	220,317
HD-8.1C-07T (D/S)	0.000	0.168	0.021	0.021	No	1,650,167	220,317
HD-8.1C-08P	0.250	0.200	0.021	0.021	No	3,333,424	220,317
HD-8.1C-09E	0.250	0.190	0.021	0.021	No	2,551,942	220,317
HD-8.1C-10V	0.250	0.168	0.023	0.023	No	1,633,185	220,317
HD-8.2C-01R	0.000	0.193	0.021	0.021	No	2,750,135	220,317
HD-8.2C-01R (D/S)	0.000	0.177	0.018	0.018	No	1,998,727	220,317
HD-09.1C-01V	0.250	0.136	0.019	0.019	No	937,053	220,317
HD-09.1C-02R	0.000	0.231	0.018	0.018	No	3,059,577	220,317
HD-09.1C-02R (D/S)	0.000	0.261	0.021	0.021	No	4,487,002	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: HD-08.1C FWH 32C to FWH 31C								
HD-09.2C-01V	0.250	0.168	0.023	0.023	0.023	1,633,185	No	220,317
HD-09.2C-02P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.2C-03E	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.2C-04T	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.2C-04T (BR/SE)	0.000	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.2C-04T (D/S)	0.000	0.406	0.020	0.020	0.020	100,000,000	No	220,317
====> Grouped by Line: HD-09.3A FWH 32A to FWH 31A								
HD-09.3A-01P	0.409	0.409	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.3A-02N	0.406	0.363	0.020	0.020	0.020	100,000,000	No	220,317
====> Grouped by Line: HD-09.3B FWH 32B to FWH 31B								
HD-09.3B-01P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.3B-02N	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
====> Grouped by Line: HD-09.3C FWH 32C to FWH 31C								
HD-09.3C-01P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.3C-02N	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
====> Grouped by Line: HD-09.4A FWH 32A to FWH 31A								
HD-09.4A-01P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4A-02E	0.462	0.462	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4A-03P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4A-04N	0.375	0.354	0.020	0.020	0.020	100,000,000	No	220,317
====> Grouped by Line: HD-09.4B FWH 32B to FWH 31B								
HD-09.4B-01P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4B-02E	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4B-03P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4B-04N	0.375	0.375	0.020	0.020	0.020	100,000,000	No	220,317
====> Grouped by Line: HD-09.4C FWH 32C to FWH 31C								
HD-09.4C-01P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4C-02E	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4C-03P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4C-04N	0.375	0.375	0.020	0.020	0.020	100,000,000	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:21:24AM

Run Name: HD: HTR 33 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			
====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A						
HD-6.1A-01N	0.250	0.112	0.014	0.014	No	220,317
HD-6.1A-02P	0.250	0.166	0.014	0.014	No	220,317
HD-6.1A-03E	0.250	0.148	0.014	0.014	No	220,317
HD-6.1A-04P	0.250	0.181	0.014	0.014	No	220,317
HD-6.1A-05E	0.250	0.148	0.014	0.014	No	220,317
HD-6.1A-06P_1	0.250	0.181	0.014	0.014	No	220,317
HD-6.1A-06P_2	0.250	0.220	0.014	0.014	No	220,317
HD-6.1A-07E	0.250	0.148	0.014	0.014	No	220,317
HD-6.1A-08P	0.250	0.172	0.014	0.014	No	220,317
HD-6.1A-09E	0.250	0.148	0.014	0.014	No	220,317
HD-6.1A-10P	0.250	0.162	0.014	0.014	No	220,317
HD-6.1A-11E	0.250	0.148	0.014	0.014	No	220,317
HD-6.1A-12P_1	0.250	0.181	0.014	0.014	No	220,317
HD-6.1A-12P_2	0.250	0.220	0.014	0.014	No	220,317
HD-6.1A-13E	0.250	0.148	0.014	0.014	No	220,317
HD-6.1A-43P	0.250	0.181	0.014	0.014	No	220,317
HD-6.1A-14E	0.250	0.148	0.014	0.014	No	220,317
HD-6.1A-15P	0.250	0.150	0.014	0.014	No	220,317
HD-6.1A-16E	0.250	0.148	0.014	0.014	No	220,317
HD-6.1A-17P_1	0.250	0.181	0.014	0.014	No	220,317
HD-6.1A-17P_2	0.250	0.220	0.014	0.014	No	220,317
HD-6.1A-18E	0.250	0.148	0.014	0.014	No	220,317
HD-6.1A-19P	0.250	0.172	0.014	0.014	No	220,317
HD-6.1A-20E	0.250	0.148	0.014	0.014	No	220,317
HD-6.1A-21P_1	0.250	0.181	0.014	0.014	No	220,317
HD-6.1A-21P_2	0.250	0.220	0.014	0.014	No	220,317
HD-6.1A-22E	0.250	0.148	0.014	0.014	No	220,317

Sorted By:Flow Order

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			Time to Tcrit (hrs)	Inspected	
====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A							
HD-6.1A-23P	0.250	0.181	0.014	0.014	No	1,742,686	220,317
HD-6.1A-24E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-25P_1	0.250	0.181	0.014	0.014	No	1,742,686	220,317
HD-6.1A-25P_2	0.250	0.220	0.014	0.014	No	4,880,006	220,317
HD-6.1A-26E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-27P	0.250	0.181	0.014	0.014	No	1,742,686	220,317
HD-6.1A-28T	0.250	0.167	0.014	0.014	No	1,331,847	220,317
HD-6.1A-28T (D/S)	0.000	0.167	0.014	0.014	No	1,331,847	220,317
HD-6.1A-29P	0.250	0.195	0.014	0.014	No	2,358,945	220,317
HD-6.1A-44T	0.250	0.167	0.014	0.014	No	1,331,847	220,317
HD-6.1A-44T (D/S)	0.000	0.167	0.014	0.014	No	1,331,847	220,317
HD-6.1A-30E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-31P	0.250	0.178	0.014	0.014	No	1,707,919	220,317
HD-6.1A-32E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-33P	0.250	0.181	0.014	0.014	No	1,742,686	220,317
HD-6.1A-34E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1A-37E	0.250	0.153	0.014	0.014	No	1,038,390	220,317
HD-6.1A-38P	0.250	0.179	0.014	0.014	No	1,726,053	220,317
HD-6.1A-39E	0.250	0.159	0.014	0.014	No	1,145,101	220,317
HD-6.1A-40P	0.250	0.189	0.014	0.014	No	2,078,827	220,317
HD-6.1A-41E	0.250	0.257	0.014	0.014	Yes	1,714,994	220,317
HD-6.1A-42P	0.250	0.233	0.014	0.014	Yes	1,783,736	220,317
HD-6.2A-01E	0.000	0.423	0.014	0.014	Yes	4,273,584	220,317
HD-6.2A-01E (D/S)	0.000	0.331	0.011	0.011	Yes	1,605,148	220,317
HD-07.1A-01V	0.280	0.033	0.012	0.012	No	65,065	220,317
HD-07.1A 02R	0.000	0.339	0.011	0.011	Yes	1,819,563	220,317
HD-07.1A 02R (D/S)	0.000	0.257	0.014	0.014	Yes	2,117,527	220,317
HD-07.2A-01V	0.250	0.112	0.015	0.015	No	504,812	220,317
HD-07.2A-02P	0.250	0.208	0.014	0.014	Yes	2,300,256	220,317
HD-07.2A-03T	0.250	0.471	0.014	0.014	Yes	2,390,611	220,317
HD-07.2A-03T (BR/SE)	0.000	0.376	0.014	0.014	Yes	1,893,721	220,317
HD-07.2A-04P	0.250	0.193	0.014	0.014	No	2,335,262	220,317
HD-07.2A-05R	0.000	0.170	0.014	0.014	No	1,454,892	220,317
HD-07.2A-05R (D/S)	0.000	0.195	0.018	0.018	No	2,372,586	220,317
HD-07.3A-01N	0.365	0.291	0.018	0.018	No	2,634,714	220,317
====>Grouped by Line: HD-06.1B FWH 33B to FWH 32B							

Sorted By:Flow Order

Sorted By:Flow Order

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			Time to Tcrit (hrs)	Inspected	
=====> Grouped by Line: HD-06.1B FWH 33B to FWH 32B							
HD-6.1B-01N	0.250	0.112	0.014	0.014	No	510,168	220,317
HD-6.1B-02P	0.250	0.166	0.014	0.014	No	1,467,937	220,317
HD-6.1B-03E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1B-04E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1B-05P_1	0.250	0.162	0.014	0.014	No	1,203,459	220,317
HD-6.1B-05P_2	0.250	0.220	0.014	0.014	No	4,880,006	220,317
HD-6.1B-06E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1B-07P	0.250	0.172	0.014	0.014	No	1,650,532	220,317
HD-6.1B-08E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1B-09P	0.250	0.162	0.014	0.014	No	1,203,459	220,317
HD-6.1B-10E	0.250	0.153	0.014	0.014	No	1,038,390	220,317
HD-6.1B-11P_1	0.250	0.181	0.014	0.014	No	1,742,686	220,317
HD-6.1B-11P_2	0.250	0.220	0.014	0.014	No	4,880,006	220,317
HD-6.1B-12E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1B-13E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1B-14P	0.250	0.150	0.014	0.014	No	1,111,305	220,317
HD-6.1B-15E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1B-16P_1	0.250	0.162	0.014	0.014	No	1,203,459	220,317
HD-6.1B-16P_2	0.250	0.220	0.014	0.014	No	4,880,006	220,317
HD-6.1B-17E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1B-18P	0.250	0.181	0.014	0.014	No	1,742,686	220,317
HD-6.1B-19E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1B-20P	0.250	0.172	0.014	0.014	No	1,650,532	220,317
HD-6.1B-21E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1B-22P_1	0.250	0.181	0.014	0.014	No	1,742,686	220,317
HD-6.1B-22P_2	0.250	0.220	0.014	0.014	No	4,880,006	220,317
HD-6.1B-23T	0.250	0.167	0.014	0.014	No	1,331,847	220,317
HD-6.1B-23T (D/S)	0.000	0.167	0.014	0.014	No	1,331,847	220,317
HD-6.1B-24P	0.250	0.195	0.014	0.014	No	2,358,945	220,317
HD-6.1B-38T	0.250	0.167	0.014	0.014	No	1,331,847	220,317
HD-6.1B-38T (D/S)	0.000	0.167	0.014	0.014	No	1,331,847	220,317
HD-6.1B-25E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1B-26P	0.250	0.178	0.014	0.014	No	1,707,919	220,317
HD-6.1B-27E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1B-28P	0.250	0.181	0.014	0.014	No	1,742,686	220,317
HD-6.1B-29E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1B-32E	0.250	0.153	0.014	0.014	No	1,038,390	220,317

Sorted By:Flow Order

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			Time to Tcrit (hrs)	Inspected	
====> Grouped by Line: HD-06.1B FWH 33B to FWH 32B							
HD-6.1B-33P	0.250	0.179	0.014	0.014	No	1,726,053	220,317
HD-6.1B-34E	0.250	0.159	0.014	0.014	No	1,145,101	220,317
HD-6.1B-35P	0.250	0.189	0.014	0.014	No	2,078,827	220,317
HD-6.1B-36E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1B-37P	0.250	0.162	0.014	0.014	No	1,203,459	220,317
HD-6.2B-01E	0.000	0.181	0.014	0.014	No	1,742,686	220,317
HD-6.2B-01E (D/S)	0.000	0.133	0.011	0.011	No	613,879	220,317
HD-07.1B-01V	0.280	0.044	0.012	0.012	No	98,761	220,317
HD-07.1B-02R	0.000	0.261	0.011	0.011	Yes	1,390,810	220,317
HD-07.1B-02R (D/S)	0.000	0.238	0.014	0.014	Yes	1,949,772	220,317
HD-07.2B-01V	0.250	0.112	0.015	0.015	No	504,812	220,317
HD-07.2B-02P	0.250	0.189	0.014	0.014	No	2,078,827	220,317
HD-07.2B-03T	0.250	0.446	0.014	0.014	Yes	2,259,851	220,317
HD-07.2B-03T (BR/SE)	0.000	0.355	0.014	0.014	Yes	1,783,882	220,317
HD-07.2B-04P	0.250	0.193	0.014	0.014	No	2,335,262	220,317
HD-07.2B-05R	0.000	0.170	0.014	0.014	No	1,454,892	220,317
HD-07.2B-05R (D/S)	0.000	0.195	0.018	0.018	No	2,372,586	220,317
HD-07.3B-01N	0.365	0.291	0.018	0.018	No	2,634,714	220,317
====> Grouped by Line: HD-06.1C FWH 33C to FWH 32C							
HD-6.1C-01N	0.250	0.112	0.014	0.014	No	510,168	220,317
HD-6.1C-02P	0.250	0.166	0.014	0.014	No	1,467,937	220,317
HD-6.1C-03E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1C-04P	0.250	0.181	0.014	0.014	No	1,742,686	220,317
HD-6.1C-05E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1C-06P	0.250	0.172	0.014	0.014	No	1,650,532	220,317
HD-6.1C-07E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1C-08P_1	0.250	0.162	0.014	0.014	No	1,203,459	220,317
HD-6.1C-08P_2	0.250	0.220	0.014	0.014	No	4,880,006	220,317
HD-6.1C-09E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1C-10P	0.250	0.181	0.014	0.014	No	1,742,686	220,317
HD-6.1C-11E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1C-12P	0.250	0.172	0.014	0.014	No	1,650,532	220,317
HD-6.1C-13E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1C-14P	0.250	0.181	0.014	0.014	No	1,742,686	220,317
HD-6.1C-15E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1C-16P	0.250	0.181	0.014	0.014	No	1,742,686	220,317

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			Time to Tcrit (hrs)	Inspected	
=====> Grouped by Line: HD-06.1C FWH 33C to FWH 32C							
HD-6.1C-17E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1C-18P	0.250	0.181	0.014	0.014	No	1,742,686	220,317
HD-6.1C-19T	0.250	0.167	0.014	0.014	No	1,331,847	220,317
HD-6.1C-19T (D/S)	0.000	0.167	0.014	0.014	No	1,331,847	220,317
HD-6.1C-20P	0.250	0.195	0.014	0.014	No	2,358,945	220,317
HD-6.1C-34T	0.250	0.167	0.014	0.014	No	1,331,847	220,317
HD-6.1C-34T (D/S)	0.000	0.167	0.014	0.014	No	1,331,847	220,317
HD-6.1C-35P	0.250	0.195	0.014	0.014	No	2,358,945	220,317
HD-6.1C-21E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1C-22P	0.250	0.178	0.014	0.014	No	1,707,919	220,317
HD-6.1C-23E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1C-24P	0.250	0.181	0.014	0.014	No	1,742,686	220,317
HD-6.1C-25E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1C-28E	0.250	0.153	0.014	0.014	No	1,038,390	220,317
HD-6.1C-29P	0.250	0.179	0.014	0.014	No	1,726,053	220,317
HD-6.1C-30E	0.250	0.159	0.014	0.014	No	1,145,101	220,317
HD-6.1C-31P	0.250	0.189	0.014	0.014	No	2,078,827	220,317
HD-6.1C-32E	0.250	0.148	0.014	0.014	No	943,215	220,317
HD-6.1C-33P	0.250	0.157	0.014	0.014	No	1,168,692	220,317
HD-6.2C-01E	0.000	0.392	0.014	0.014	Yes	3,948,676	220,317
HD-6.2C-01E (D/S)	0.000	0.407	0.011	0.011	Yes	1,983,823	220,317
HD-07.1C-01V	0.280	0.508	0.012	0.012	No	1,543,541	220,317
HD-07.1C-02R	0.000	0.283	0.011	0.011	Yes	1,509,270	220,317
HD-07.1C-02R (D/S)	0.000	0.237	0.014	0.014	Yes	1,937,327	220,317
HD-07.2C-01V	0.250	0.634	0.015	0.015	No	3,233,845	220,317
HD-07.2C-02P	0.250	0.219	0.014	0.014	Yes	2,434,674	220,317
HD-07.2C-03T	0.250	0.278	0.014	0.014	Yes	1,381,140	220,317
HD-07.2C-03T (BR/SE)	0.000	0.431	0.014	0.014	Yes	2,181,394	220,317
HD-07.2C-04P	0.250	0.193	0.014	0.014	No	2,335,262	220,317
HD-07.2C-05R	0.000	0.170	0.014	0.014	No	1,454,892	220,317
HD-07.2C-05R (D/S)	0.000	0.195	0.018	0.018	No	2,372,586	220,317
HD-07.3C-01N	0.365	0.291	0.018	0.018	No	2,634,714	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:21:45AM

Run Name: HD: HTR 34 TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====>Grouped by Line: HD-04.1A FWH 34A to FWH 33A						
HD-4.1A-01N	0.280	0.149	0.022 0.022	No	430,008	220,317
HD-4.1A-02P	0.280	0.197	0.022 0.022	No	1,096,959	220,317
HD-4.1A-03T	0.280	0.188	0.022 0.022	No	935,062	220,317
HD-4.1A-03T (D/S)	0.000	0.188	0.022 0.022	No	935,062	220,317
HD-4.1A-04P	0.280	0.218	0.022 0.022	No	1,663,597	220,317
HD-4.1A-05E	0.280	0.183	0.022 0.022	No	737,174	220,317
HD-4.1A-06E	0.280	0.188	0.022 0.022	No	804,683	220,317
HD-4.1A-07P	0.280	0.214	0.022 0.022	No	1,304,250	220,317
HD-4.1A-08E	0.280	0.183	0.022 0.022	No	737,174	220,317
HD-4.1A-09P_1	0.280	0.214	0.022 0.022	No	1,304,250	220,317
HD-4.1A-09P_2	0.280	0.251	0.022 0.022	No	3,529,594	220,317
HD-4.1A-10E	0.280	0.183	0.022 0.022	No	737,174	220,317
HD-4.1A-11P	0.280	0.210	0.022 0.022	No	1,270,875	220,317
HD-4.1A-12E	0.280	0.183	0.022 0.022	No	737,174	220,317
HD-4.1A-13P	0.280	0.214	0.022 0.022	No	1,304,250	220,317
HD-4.1A-14E	0.280	0.183	0.022 0.022	No	737,174	220,317
HD-4.1A-15P	0.280	0.210	0.022 0.022	No	1,270,875	220,317
HD-4.2A-01E	0.000	0.299	0.022 0.022	No	1,875,187	220,317
HD-4.2A-01E (D/S)	0.000	0.222	0.015 0.015	No	576,776	220,317
HD-4.2A-02V	0.237	-0.027	0.016 0.016	No	-71,661	220,317
HD-4.3A-01R	0.000	0.190	0.015 0.015	No	432,158	220,317
HD-4.3A-01R (D/S)	0.000	0.171	0.012 0.012	No	305,420	220,317
HD-05.1A-01V	0.216	0.165	0.012 0.012	No	187,411	220,317
HD-05.1A-02R	0.000	0.008	0.012 0.012	Yes	-8,420	220,317
HD-05.1A-02R (D/S)	0.000	0.260	0.022 0.022	Yes	1,343,989	220,317
HD-05.2A-01T	0.280	0.222	0.022 0.022	Yes	677,852	220,317
HD-05.2A-01T (BR/SE)	0.000	0.246	0.022 0.022	Yes	759,185	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]		Time to Tcrit (hrs)	Inspected	
====> Grouped by Line: HD-04.1A FWH 34A to FWH 33A						
HD-05.2A-02P	0.280	0.229	0.022	0.022	1,749,879	220,317
HD-05.2A-03E	0.280	0.193	0.022	0.022	880,375	220,317
HD-05.2A-04E	0.280	0.183	0.022	0.022	737,174	220,317
HD-05.2A-05P	0.280	0.196	0.022	0.022	921,769	220,317
HD-05.2A-06N	0.280	0.175	0.022	0.022	648,568	220,317
====> Grouped by Line: HD-04.1B FWH 34B to FWH 33B						
HD-4.1B-01N	0.280	0.149	0.022	0.022	430,008	220,317
HD-4.1B-02P	0.280	0.197	0.022	0.022	1,096,959	220,317
HD-4.1B-03E	0.280	0.193	0.022	0.022	880,375	220,317
HD-4.1B-04P	0.280	0.212	0.022	0.022	1,464,906	220,317
HD-4.1B-05T (BR/SE)	0.000	0.175	0.022	0.022	648,568	220,317
HD-4.1B-05T (D/S)	0.000	0.149	0.022	0.022	430,008	220,317
HD-4.1B-06P	0.280	0.201	0.022	0.022	1,012,836	220,317
HD-4.1B-07E	0.280	0.183	0.022	0.022	737,174	220,317
HD-4.1B-08P	0.280	0.203	0.022	0.022	1,226,476	220,317
HD-4.1B-09E	0.280	0.183	0.022	0.022	737,174	220,317
HD-4.1B-10E	0.280	0.188	0.022	0.022	804,683	220,317
HD-4.1B-11P_1	0.280	0.214	0.022	0.022	1,304,250	220,317
HD-4.1B-11P_2	0.280	0.251	0.022	0.022	3,529,594	220,317
HD-4.1B-12E	0.280	0.183	0.022	0.022	737,174	220,317
HD-4.1B-13P	0.280	0.210	0.022	0.022	1,270,875	220,317
HD-4.1B-14E	0.280	0.183	0.022	0.022	737,174	220,317
HD-4.1B-15P	0.280	0.214	0.022	0.022	1,304,250	220,317
HD-4.1B-16E	0.280	0.183	0.022	0.022	737,174	220,317
HD-4.1B-17P	0.280	0.210	0.022	0.022	1,270,875	220,317
HD-4.2B-01E	0.000	0.229	0.022	0.022	1,406,090	220,317
HD-4.2B-01E (D/S)	0.000	0.248	0.015	0.015	649,305	220,317
HD-4.2B-02V	0.237	-0.027	0.016	0.016	-71,661	220,317
HD-4.3B-01R	0.000	0.200	0.015	0.015	456,591	220,317
HD-4.3B-01R (D/S)	0.000	0.173	0.012	0.012	309,571	220,317
HD-05.1B-01V	0.216	0.206	0.012	0.012	237,690	220,317
HD-05.1B-02R	0.000	0.191	0.012	0.012	393,557	220,317
HD-05.1B-02R (D/S)	0.000	0.140	0.022	0.022	666,217	220,317
HD-05.2B-01T	0.280	0.274	0.022	0.022	853,789	220,317
HD-05.2B-01T (BR/SE)	0.000	0.306	0.022	0.022	962,233	220,317
HD-05.2B-02P	0.280	0.224	0.022	0.022	1,707,996	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: HD-04.1B FWH 34B to FWH 33B								
HD-05.2B-03E	0.280	0.193	0.022	0.022	0.022	880,375	No	220,317
HD-05.2B-04E	0.280	0.183	0.022	0.022	0.022	737,174	No	220,317
HD-05.2B-05P	0.280	0.196	0.022	0.022	0.022	921,769	No	220,317
HD-05.2B-06N	0.280	0.175	0.022	0.022	0.022	648,568	No	220,317
====> Grouped by Line: HD-04.1C FWH 34C to FWH 33C								
HD-4.1C-01N	0.280	0.149	0.022	0.022	0.022	430,008	No	220,317
HD-4.1C-02P	0.280	0.197	0.022	0.022	0.022	1,096,959	No	220,317
HD-4.1C-03E	0.280	0.183	0.022	0.022	0.022	737,174	No	220,317
HD-4.1C-04P	0.280	0.214	0.022	0.022	0.022	1,304,250	No	220,317
HD-4.1C-05E	0.280	0.183	0.022	0.022	0.022	737,174	No	220,317
HD-4.1C-06T	0.280	0.188	0.022	0.022	0.022	935,062	No	220,317
HD-4.1C-06T (D/S)	0.000	0.188	0.022	0.022	0.022	935,062	No	220,317
HD-4.1C-07P	0.280	0.218	0.022	0.022	0.022	1,663,597	No	220,317
HD-4.1C-08E	0.280	0.183	0.022	0.022	0.022	737,174	No	220,317
HD-4.1C-09P	0.280	0.196	0.022	0.022	0.022	921,769	No	220,317
HD-4.1C-10E	0.280	0.183	0.022	0.022	0.022	737,174	No	220,317
HD-4.1C-11P	0.280	0.203	0.022	0.022	0.022	1,226,476	No	220,317
HD-4.1C-12E	0.280	0.183	0.022	0.022	0.022	737,174	No	220,317
HD-4.1C-13P_1	0.280	0.214	0.022	0.022	0.022	1,304,250	No	220,317
HD-4.1C-13P_2	0.280	0.251	0.022	0.022	0.022	3,529,594	No	220,317
HD-4.1C-14E	0.280	0.183	0.022	0.022	0.022	737,174	No	220,317
HD-4.1C-15P	0.280	0.214	0.022	0.022	0.022	1,304,250	No	220,317
HD-4.1C-16E	0.280	0.183	0.022	0.022	0.022	737,174	No	220,317
HD-4.1C-17P_1	0.280	0.214	0.022	0.022	0.022	1,304,250	No	220,317
HD-4.1C-17P_2	0.280	0.251	0.022	0.022	0.022	3,529,594	No	220,317
HD-4.1C-18E	0.280	0.183	0.022	0.022	0.022	737,174	No	220,317
HD-4.1C-19P	0.280	0.210	0.022	0.022	0.022	1,270,875	No	220,317
HD-4.1C-20E	0.280	0.183	0.022	0.022	0.022	737,174	No	220,317
HD-4.1C-21P	0.280	0.214	0.022	0.022	0.022	1,304,250	No	220,317
HD-4.1C-22E	0.280	0.183	0.022	0.022	0.022	737,174	No	220,317
HD-4.1C-23P	0.280	0.210	0.022	0.022	0.022	1,270,875	No	220,317
HD-4.2C-01E	0.000	0.224	0.022	0.022	0.022	1,366,531	Yes	220,317
HD-4.2C-01E (D/S)	0.000	0.215	0.015	0.015	0.015	558,103	Yes	220,317
HD-4.2C-02V	0.237	-0.027	0.016	0.016	0.016	-71,661	No	220,317
HD-4.3C-01R	0.000	0.182	0.015	0.015	0.015	412,085	No	220,317
HD-4.3C-01R (D/S)	0.000	0.198	0.012	0.012	0.012	357,604	No	220,317

Component Name	Thickness (in)		Tcrit	Inspected	Component Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
=====> Grouped by Line: HD-04.1C FWH 34C to FWH 33C						
HD-05.1C-01V	0.216	0.141	0.012	0.012	158,053	220,317
HD-05.1C-02R	0.000	0.199	0.012	0.012	410,356	220,317
HD-05.1C-02R (D/S)	0.000	0.121	0.022	0.022	558,297	220,317
HD-05.2C-01T	0.280	0.296	0.022	0.022	928,641	220,317
HD-05.2C-01T (BR/SE)	0.000	0.325	0.022	0.022	1,026,918	220,317
HD-05.2C-02P	0.280	0.224	0.022	0.022	1,707,996	220,317
HD-05.2C-03E	0.280	0.193	0.022	0.022	880,375	220,317
HD-05.2C-04E	0.280	0.183	0.022	0.022	737,174	220,317
HD-05.2C-05P	0.280	0.196	0.022	0.022	921,769	220,317
HD-05.2C-06N	0.280	0.175	0.022	0.022	648,568	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:21:55AM

Run Name: HD: HTR 35 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====>Grouped by Line: HD-03.1A FWH 35A to HD TK						
HD-03.1A-01N	0.240	0.180	0.089 0.089	536,897	No	220,317
HD-03.1A-02P	0.250	0.217	0.089 0.089	1,403,118	No	220,317
HD-03.1A-03E	0.250	0.205	0.089 0.089	926,986	No	220,317
HD-03.1A-04P	0.250	0.220	0.089 0.089	1,544,053	No	220,317
HD-03.1A-05E	0.250	0.205	0.089 0.089	926,986	No	220,317
HD-03.1A-06P	0.250	0.211	0.089 0.089	1,127,854	No	220,317
HD-03.1A-07E	0.250	0.205	0.089 0.089	926,986	No	220,317
HD-03.1A-08P	0.250	0.220	0.089 0.089	1,544,053	No	220,317
HD-03.1A-09E	0.250	0.205	0.089 0.089	926,986	No	220,317
HD-03.1A-10P	0.250	0.220	0.089 0.089	1,544,053	No	220,317
HD-03.1A-11E	0.250	0.224	0.089 0.089	1,077,728	Yes	220,317
HD-03.1A-12E	0.250	0.256	0.089 0.089	1,333,226	Yes	220,317
HD-03.1A-13P	0.250	0.225	0.089 0.089	1,252,647	Yes	220,317
HD-03.1A-14E	0.250	0.237	0.089 0.089	1,181,524	Yes	220,317
HD-03.1A-15V	0.250	0.189	0.095 0.095	555,450	No	220,317
HD-03.1A-16N	0.250	0.313	0.089 0.089	1,656,986	No	220,317
====>Grouped by Line: HD-03.1B FWH 35B to HD TK						
HD-03.1B-01N	0.240	0.180	0.089 0.089	536,897	No	220,317
HD-03.1B-02P	0.250	0.217	0.089 0.089	1,403,118	No	220,317
HD-03.1B-03E	0.250	0.205	0.089 0.089	926,986	No	220,317
HD-03.1B-04P	0.250	0.220	0.089 0.089	1,544,053	No	220,317
HD-03.1B-05E	0.250	0.205	0.089 0.089	926,986	No	220,317
HD-03.1B-06P	0.250	0.220	0.089 0.089	1,544,053	No	220,317
HD-03.1B-07E	0.250	0.205	0.089 0.089	926,986	No	220,317
HD-03.1B-08P	0.250	0.220	0.089 0.089	1,544,053	No	220,317
HD-03.1B-09E	0.250	0.236	0.089 0.089	1,170,216	Yes	220,317

Sorted By:Flow Order

Sorted By:Flow Order

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====> Grouped by Line: HD-03.1B FWH 35B to HD TK							
HD-03.1B-10E	0.250	0.205	0.089	0.089	926,986	No	220,317
HD-03.1B-11P	0.250	0.211	0.089	0.089	1,127,854	No	220,317
HD-03.1B-12E	0.250	0.205	0.089	0.089	926,986	No	220,317
HD-03.1B-13V	0.250	0.189	0.095	0.095	555,450	No	220,317
HD-03.1B-14N	0.250	0.201	0.089	0.089	830,569	No	220,317
====> Grouped by Line: HD-03.1C FWH 35C to HD TK							
HD-03.1C-01N	0.240	0.180	0.089	0.089	536,897	No	220,317
HD-03.1C-02P	0.250	0.217	0.089	0.089	1,403,118	No	220,317
HD-03.1C-03E	0.250	0.205	0.089	0.089	926,986	No	220,317
HD-03.1C-04P	0.250	0.220	0.089	0.089	1,544,053	No	220,317
HD-03.1C-05E	0.250	0.205	0.089	0.089	926,986	No	220,317
HD-03.1C-06P	0.250	0.220	0.089	0.089	1,544,053	No	220,317
HD-03.1C-07E	0.250	0.205	0.089	0.089	926,986	No	220,317
HD-03.1C-08P	0.250	0.220	0.089	0.089	1,544,053	No	220,317
HD-03.1C-09E	0.250	0.205	0.089	0.089	926,986	No	220,317
HD-03.1C-10P	0.250	0.220	0.089	0.089	1,544,053	No	220,317
HD-03.1C-11E	0.250	0.205	0.089	0.089	926,986	No	220,317
HD-03.1C-12P	0.250	0.220	0.089	0.089	1,544,053	No	220,317
HD-03.1C-13E	0.250	0.245	0.089	0.089	1,248,384	Yes	220,317
HD-03.1C-14E	0.250	0.225	0.089	0.089	1,088,697	Yes	220,317
HD-03.1C-15P	0.250	0.229	0.089	0.089	1,288,068	Yes	220,317
HD-03.1C-16E	0.250	0.248	0.089	0.089	1,272,337	Yes	220,317
HD-03.1C-17V	0.250	0.189	0.095	0.095	555,450	No	220,317
HD-03.1C-18N	0.250	0.201	0.089	0.089	830,569	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:22:05AM

Pass 1 Analysis Exclude Measured Wear

Run Name: HD: HTR 36 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====>Grouped by Line: HD-01.1A FWH 36A to HD TK						
HD-01.1A-01N	0.288	0.201	0.137 0.137	283,129	No	220,317
HD-01.1A-02P	0.307	0.260	0.159 0.159	815,188	No	220,317
HD-01.1A-03E	0.307	0.242	0.159 0.159	490,750	No	220,317
HD-01.1A-04P	0.307	0.263	0.159 0.159	911,222	No	220,317
HD-01.1A-05E	0.307	0.242	0.159 0.159	490,750	No	220,317
HD-01.1A-06P	0.307	0.263	0.159 0.159	911,222	No	220,317
HD-01.1A-07E	0.307	0.242	0.159 0.159	490,750	No	220,317
HD-01.1A-08P	0.307	0.263	0.159 0.159	911,222	No	220,317
HD-01.1A-09E	0.307	0.327	0.159 0.159	996,566	Yes	220,317
HD-01.1A-10P	0.307	0.263	0.159 0.159	911,222	No	220,317
HD-01.2A-01R	0.000	0.318	0.159 0.159	995,773	Yes	220,317
HD-01.2A-01R (D/S)	0.000	0.298	0.098 0.098	654,082	Yes	220,317
HD-02.1A 01V	0.280	0.278	0.105 0.105	45,030,464	No	220,317
HD-02.1A-02R	0.000	0.289	0.098 0.098	711,415	Yes	220,317
HD-02.1A-02R (D/S)	0.000	0.353	0.159 0.159	1,385,819	Yes	220,317
HD-02.2A-01V	0.365	0.364	0.171 0.171	103,377,392	No	220,317
HD-02.2A-02N	0.365	0.348	0.137 0.137	1,133,247	Yes	220,317
====>Grouped by Line: HD-01.1B FWH 36B to HD TK						
HD-01.1B-01N	0.288	0.201	0.137 0.137	283,129	No	220,317
HD-01.1B-02P	0.307	0.260	0.159 0.159	815,188	No	220,317
HD-01.1B-03E	0.307	0.242	0.159 0.159	490,750	No	220,317
HD-01.1B-04P	0.307	0.263	0.159 0.159	911,222	No	220,317
HD-01.1B-05E	0.307	0.242	0.159 0.159	490,750	No	220,317
HD-01.1B-06P	0.307	0.263	0.159 0.159	911,222	No	220,317
HD-01.1B-07E	0.307	0.326	0.159 0.159	990,853	Yes	220,317
HD-01.2B-01R	0.000	0.342	0.159 0.159	1,143,285	Yes	220,317

Component Name	Thickness (in)		Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
=====>Grouped by Line: HD-01.1B FWH 36B to HD TK					
HD-01.2B-01R (D/S)	0.000	0.253	0.098	0.098	220,317
HD-02.1B-01V	0.280	0.440	0.105	0.105	220,317
HD-02.1B-02R	0.000	0.292	0.098	0.098	220,317
HD-02.1B-02R (D/S)	0.000	0.321	0.159	0.159	220,317
HD-02.2B-01V	0.365	0.364	0.171	0.171	220,317
HD-02.2B-02N	0.365	0.293	0.137	0.137	220,317
=====>Grouped by Line: HD-01.1C FWH 36C to HD TK					
HD-01.1C-01N	0.288	0.201	0.137	0.137	220,317
HD-01.1C-02P	0.307	0.260	0.159	0.159	220,317
HD-01.1C-03E	0.307	0.242	0.159	0.159	220,317
HD-01.1C-04P	0.307	0.263	0.159	0.159	220,317
HD-01.1C-05E	0.307	0.242	0.159	0.159	220,317
HD-01.1C-06P	0.307	0.263	0.159	0.159	220,317
HD-01.1C-07E	0.307	0.242	0.159	0.159	220,317
HD-01.1C-08P	0.307	0.251	0.159	0.159	220,317
HD-01.1C-09E	0.307	0.242	0.159	0.159	220,317
HD-01.1C-10P	0.307	0.263	0.159	0.159	220,317
HD-01.1C-11E	0.421	0.270	0.159	0.159	220,317
HD-01.2C-01R	0.000	0.311	0.159	0.159	220,317
HD-01.2C-01R (D/S)	0.000	0.263	0.098	0.098	220,317
HD-02.1C-01V	0.280	0.278	0.105	0.105	220,317
HD-02.1C-02R	0.000	0.323	0.098	0.098	220,317
HD-02.1C-02R (D/S)	0.000	0.291	0.159	0.159	220,317
HD-02.2C-01V	0.000	0.364	0.171	0.171	220,317
HD-02.2C-02N	0.000	0.378	0.137	0.137	220,317

Sorted By:Flow Order

507,166	Yes	220,317
87,109,792	No	220,317
723,727	Yes	220,317
1,159,843	Yes	220,317
103,377,392	No	220,317
840,435	No	220,317

Sorted By:Flow Order

283,129	No	220,317
815,188	No	220,317
490,750	No	220,317
911,222	No	220,317
490,750	No	220,317
911,222	No	220,317
490,750	No	220,317
627,622	No	220,317
490,750	No	220,317
911,222	No	220,317
628,811	Yes	220,317
948,635	Yes	220,317
539,663	Yes	220,317
45,030,464	No	220,317
840,698	No	220,317
940,341	Yes	220,317
103,377,392	No	220,317
1,294,715	Yes	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:22:16AM

Run Name: HD: HTR DN TO PUMPS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====>Grouped by Line: HD-10.1A HD TK to HD PMP 31						
HD-10.1A-01N	0.562	0.521	0.199 0.199	2,093,187	No	220,317
HD-10.1A-02P	0.375	0.350	0.199 0.199	1,882,804	No	220,317
HD-10.2A-01E	0.000	0.358	0.199 0.199	2,132,697	Yes	220,317
HD-10.2A-01E (D/S)	0.000	0.357	0.149 0.149	1,307,779	Yes	220,317
HD-10.2A-02E	0.312	0.374	0.149 0.149	1,250,677	Yes	220,317
HD-10.2A-03P	0.312	0.298	0.149 0.149	1,162,704	Yes	220,317
HD-10.2A-04V	0.312	0.243	0.160 0.160	325,860	No	220,317
HD-10.2A-05P	0.312	0.282	0.149 0.149	1,175,437	No	220,317
HD-10.2A-07X	0.312	0.229	0.149 0.149	255,405	No	220,317
HD-10.2A-06N	0.312	0.257	0.149 0.149	525,834	No	220,317
====>Grouped by Line: HD-10.1B HD TK to HD PMP 32						
HD-10.1B-01N	0.562	0.521	0.199 0.199	2,093,187	No	220,317
HD-10.1B-02P	0.375	0.353	0.199 0.199	1,919,018	No	220,317
HD-10.2B-01E	0.000	0.355	0.199 0.199	2,093,990	No	220,317
HD-10.2B-01E (D/S)	0.000	0.269	0.149 0.149	756,338	No	220,317
HD-10.2B-02P	0.312	0.268	0.149 0.149	724,323	No	220,317
HD-10.2B-03V	0.312	0.243	0.160 0.160	325,860	No	220,317
HD-10.2B-04P	0.312	0.282	0.149 0.149	1,175,437	No	220,317
HD-10.2B-06X	0.312	0.229	0.149 0.149	255,405	No	220,317
HD-10.2B-05N	0.312	0.257	0.149 0.149	525,834	No	220,317

Note:
 [1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:22:25AM

Run Name: MSD: MS 31 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: MSD-01.1A_1 MSEP 31A to HDR							
MSD-01.1A-01N	0.250	0.245	0.106	0.106	11,900,515	No	220,317
MSD-01.1A-02T (BR/SE)	0.000	0.347	0.106	0.106	25,805,420	No	220,317
MSD-01.1A-02T (D/S)	0.000	0.316	0.106	0.106	17,983,622	No	220,317
MSD-01.1A-03P	0.250	0.226	0.106	0.106	17,153,392	Yes	220,317
====>Grouped by Line: MSD-01.1A_2 MSEP 31A to HDR							
MSD-01.1A-04N	0.250	0.245	0.106	0.106	11,900,515	No	220,317
MSD-01.1A-08P	0.250	0.247	0.106	0.106	22,435,330	No	220,317
====>Grouped by Line: MSD-01.1A_3 MSEP 31A to HDR							
MSD-01.1A-05N	0.250	0.245	0.106	0.106	11,900,515	No	220,317
MSD-01.1A-06T (BR/SE)	0.000	0.246	0.106	0.106	14,992,254	No	220,317
MSD-01.1A-06T (D/S)	0.000	0.245	0.106	0.106	11,900,515	No	220,317
MSD-01.1A-07P	0.250	0.247	0.106	0.106	20,145,154	No	220,317
====>Grouped by Line: MSD-01.1B_1 MSEP 31B to HDR							
MSD-01.1B-01N	0.250	0.245	0.106	0.106	11,900,515	No	220,317
MSD-01.1B-02T (BR/SE)	0.000	0.246	0.106	0.106	14,992,254	No	220,317
MSD-01.1B-02T (D/S)	0.000	0.245	0.106	0.106	11,900,515	No	220,317
MSD-01.1B-03P	0.250	0.247	0.106	0.106	20,145,154	No	220,317
====>Grouped by Line: MSD-01.1B_2 MSEP 31B to HDR							
MSD-01.1B-04N	0.250	0.245	0.106	0.106	11,900,515	No	220,317
MSD-01.1B-08P	0.250	0.247	0.106	0.106	22,435,330	No	220,317
====>Grouped by Line: MSD-01.1B_3 MSEP 31B to HDR							
MSD-01.1B-05N	0.250	0.245	0.106	0.106	11,900,515	No	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: MSD-01.1B_3 MSEP 31B to HDR								
MSD-01.1B-06T (BR/SE)	0.000	0.398	0.106	0.106	0.106	31,245,812	No	220,317
MSD-01.1B-06T (D/S)	0.000	0.245	0.106	0.106	0.106	11,900,515	No	220,317
MSD-01.1B-07P	0.250	0.247	0.106	0.106	0.106	20,145,154	No	220,317
====>Grouped by Line: MSD-01.2A MSEP 31A DR HDR								
MSD-01.2A-01T	0.250	0.246	0.106	0.106	0.106	14,615,214	No	220,317
MSD-01.2A-01T (BR/SE)	0.000	0.246	0.106	0.106	0.106	17,720,260	No	220,317
MSD-01.2A-01T (D/S)	0.000	0.242	0.106	0.106	0.106	7,907,170	No	220,317
====>Grouped by Line: MSD-01.2B MSEP 31B DR HDR								
MSD-01.2B-01T	0.250	0.246	0.106	0.106	0.106	14,615,214	No	220,317
MSD-01.2B-01T (BR/SE)	0.000	0.246	0.106	0.106	0.106	17,720,260	No	220,317
MSD-01.2B-01T (D/S)	0.000	0.242	0.106	0.106	0.106	7,907,170	No	220,317
====>Grouped by Line: MSD-01.3A HDR to MSEP TK 31A								
MSD-01.3A-01T (D/S)	0.000	0.415	0.106	0.106	0.106	26,510,582	No	220,317
MSD-01.3A-01T	0.250	0.578	0.106	0.106	0.106	22,436,874	No	220,317
MSD-01.3A-01T (BR/SE)	0.000	0.550	0.106	0.106	0.106	14,867,418	No	220,317
MSD-01.3A-02P	0.250	0.223	0.106	0.106	0.106	7,270,324	Yes	220,317
MSD-01.3A-03E	0.250	0.364	0.106	0.106	0.106	11,706,433	Yes	220,317
MSD-01.3A-04V	0.250	0.236	0.113	0.113	0.113	4,115,594	No	220,317
MSD-01.3A-05P	0.250	0.244	0.106	0.106	0.106	10,516,416	No	220,317
MSD-01.3A-06V	0.250	0.236	0.113	0.113	0.113	4,115,594	No	220,317
MSD-01.3A-07P	0.250	0.244	0.106	0.106	0.106	10,516,416	No	220,317
MSD-01.3A-08N	0.250	0.239	0.106	0.106	0.106	5,574,127	No	220,317
====>Grouped by Line: MSD-01.3B HDR to MSEP TK 31B								
MSD-01.3B-01T (D/S)	0.000	0.245	0.106	0.106	0.106	11,900,515	No	220,317
MSD-01.3B-01T	0.250	0.240	0.106	0.106	0.106	6,399,920	No	220,317
MSD-01.3B-01T (BR/SE)	0.000	0.236	0.106	0.106	0.106	4,366,011	No	220,317
MSD-01.3B-02P	0.250	0.242	0.106	0.106	0.106	8,482,552	No	220,317
MSD-01.3B-03E	0.250	0.319	0.106	0.106	0.106	9,643,766	Yes	220,317
MSD-01.3B-04V	0.250	0.236	0.113	0.113	0.113	4,115,594	No	220,317
MSD-01.3B-05P	0.250	0.244	0.106	0.106	0.106	10,516,416	No	220,317
MSD-01.3B-06V	0.250	0.236	0.113	0.113	0.113	4,115,594	No	220,317
MSD-01.3B-07P	0.250	0.244	0.106	0.106	0.106	10,516,416	No	220,317
MSD-01.3B-08N	0.250	0.233	0.106	0.106	0.106	5,312,173	Yes	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:22:34AM

Run Name: MSD: MS 32 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: MSD-01.6A_1 MSEP 32A to HDR							
MSD-01.6A-01N	0.250	0.245	0.106	0.106	11,900,515	No	220,317
MSD-01.6A-02T (BR/SE)	0.000	0.246	0.106	0.106	14,992,254	No	220,317
MSD-01.6A-02T (D/S)	0.000	0.245	0.106	0.106	11,900,515	No	220,317
MSD-01.6A-03P	0.250	0.247	0.106	0.106	20,145,152	No	220,317
====>Grouped by Line: MSD-01.6A_2 MSEP 32A to HDR							
MSD-01.6A-04N	1.125	1.118	0.106	0.106	65,054,608	No	220,317
MSD-01.6A-08P	0.250	0.247	0.106	0.106	22,435,330	No	220,317
====>Grouped by Line: MSD-01.6A_3 MSEP 32A to HDR							
MSD-01.6A-05N	0.250	0.245	0.106	0.106	11,900,515	No	220,317
MSD-01.6A-06T (BR/SE)	0.000	0.246	0.106	0.106	14,992,254	No	220,317
MSD-01.6A-06T (D/S)	0.000	0.245	0.106	0.106	11,900,515	No	220,317
MSD-01.6A-07P	0.250	0.247	0.106	0.106	20,145,152	No	220,317
====>Grouped by Line: MSD-01.6B_1 MSEP 32B to HDR							
MSD-01.6B-01N	0.250	0.245	0.106	0.106	11,900,515	No	220,317
MSD-01.6B-02T (BR/SE)	0.000	0.246	0.106	0.106	14,992,254	No	220,317
MSD-01.6B-02T (D/S)	0.000	0.245	0.106	0.106	11,900,515	No	220,317
MSD-01.6B-03P	0.312	0.309	0.106	0.106	28,439,512	No	220,317
====>Grouped by Line: MSD-01.6B_2 MSEP 32B to HDR							
MSD-01.6B-04N	1.125	1.118	0.106	0.106	65,054,608	No	220,317
MSD-01.6B-08P	0.312	0.309	0.106	0.106	31,651,284	No	220,317
====>Grouped by Line: MSD-01.6B_3 MSEP 32B to HDR							
MSD-01.6B-05N	0.250	0.245	0.106	0.106	11,900,515	No	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: MSD-01.6B_3 MSEP 32B to HDR								
MSD-01.6B-06T (BR/SE)	0.000	0.246	0.106	0.106	0.106	14,992,254	No	220,317
MSD-01.6B-06T (D/S)	0.000	0.245	0.106	0.106	0.106	11,900,515	No	220,317
MSD-01.6B-07P	0.264	0.261	0.106	0.106	0.106	22,046,740	Yes	220,317
====>Grouped by Line: MSD-01.7A MSEP 32A DR HDR								
MSD-01.7A-01T	0.250	0.328	0.106	0.106	0.106	23,261,676	No	220,317
MSD-01.7A-01T (BR/SE)	0.000	0.515	0.106	0.106	0.106	51,608,120	No	220,317
MSD-01.7A-01T (D/S)	0.000	0.444	0.106	0.106	0.106	19,609,404	Yes	220,317
MSD-01.7A-02P	0.250	0.219	0.106	0.106	0.106	13,533,011	Yes	220,317
====>Grouped by Line: MSD-01.7B MSEP 32B DR HDR								
MSD-01.7B-01T	0.250	0.328	0.106	0.106	0.106	23,261,676	Yes	220,317
MSD-01.7B-01T (BR/SE)	0.000	0.276	0.106	0.106	0.106	21,518,040	No	220,317
MSD-01.7B-01T (D/S)	0.000	0.352	0.106	0.106	0.106	14,276,371	Yes	220,317
MSD-01.7B-02P	0.304	0.300	0.106	0.106	0.106	22,731,316	No	220,317
====>Grouped by Line: MSD-01.8A HDR to MSEP TK 32A								
MSD-01.8A-01T (D/S)	0.000	0.286	0.106	0.106	0.106	15,452,146	Yes	220,317
MSD-01.8A-01T	0.250	0.211	0.106	0.106	0.106	5,025,201	Yes	220,317
MSD-01.8A-01T (BR/SE)	0.000	0.312	0.106	0.106	0.106	6,891,031	No	220,317
MSD-01.8A-02P	0.250	0.235	0.106	0.106	0.106	7,999,248	Yes	220,317
MSD-01.8A-03E	0.250	0.388	0.106	0.106	0.106	12,776,928	Yes	220,317
MSD-01.8A-04V	0.250	0.236	0.113	0.113	0.113	4,115,598	No	220,317
MSD-01.8A-05P	0.250	0.224	0.106	0.106	0.106	8,999,662	Yes	220,317
MSD-01.8A-06V	0.250	0.236	0.113	0.113	0.113	4,115,598	No	220,317
MSD-01.8A-07P	0.250	0.244	0.106	0.106	0.106	10,516,427	No	220,317
MSD-01.8A-08N	0.250	0.180	0.106	0.106	0.106	3,121,502	Yes	220,317
====>Grouped by Line: MSD-01.8B HDR to MSEP TK 32B								
MSD-01.8B-01T (D/S)	0.000	0.338	0.106	0.106	0.106	19,892,594	Yes	220,317
MSD-01.8B-01T	0.250	0.325	0.106	0.106	0.106	10,432,654	Yes	220,317
MSD-01.8B-01T (BR/SE)	0.000	0.345	0.106	0.106	0.106	8,017,074	No	220,317
MSD-01.8B-02P	0.285	0.230	0.106	0.106	0.106	7,657,014	Yes	220,317
MSD-01.8B-03E	0.250	0.249	0.106	0.106	0.106	6,496,635	Yes	220,317
MSD-01.8B-04V	0.250	0.236	0.113	0.113	0.113	4,115,598	No	220,317
MSD-01.8B-05P	0.250	0.244	0.106	0.106	0.106	10,516,427	No	220,317
MSD-01.8B-06V	0.250	0.236	0.113	0.113	0.113	4,115,598	No	220,317

Component Name	Thickness (in)		Tcrit	Inspected	Component Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: MSD-01.8B HDR to MSEP TK 32B						
MSD-01.8B-07P	0.250	0.256	0.106		11,470,234	220,317
MSD-01.8B-08N	0.250	0.275	0.106		7,068,483	220,317

Sorted By:Flow Order

Note:
[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:22:45AM

Run Name: MSD: MS 33 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: MSD-01.11A_1 MSEP 33A to HDR							
MSD-01.11A-01N	0.250	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11A-02T (BR/SE)	0.000	0.246	0.106	0.106	14,992,161	No	220,317
MSD-01.11A-02T (D/S)	0.000	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11A-03P	0.250	0.247	0.106	0.106	20,145,026	No	220,317
====>Grouped by Line: MSD-01.11A_2 MSEP 33A to HDR							
MSD-01.11A-04N	0.250	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11A-08P	0.250	0.247	0.106	0.106	22,435,190	No	220,317
====>Grouped by Line: MSD-01.11A_3 MSEP 33A to HDR							
MSD-01.11A-05N	0.250	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11A-06T (BR/SE)	0.000	0.246	0.106	0.106	14,992,161	No	220,317
MSD-01.11A-06T (D/S)	0.000	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11A-07P	0.250	0.247	0.106	0.106	20,145,026	No	220,317
====>Grouped by Line: MSD-01.11B_1 MSEP 33B to HDR							
MSD-01.11B-01N	0.250	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11B-02T (BR/SE)	0.000	0.246	0.106	0.106	14,992,161	No	220,317
MSD-01.11B-02T (D/S)	0.000	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11B-03P	0.250	0.247	0.106	0.106	20,145,026	No	220,317
====>Grouped by Line: MSD-01.11B_2 MSEP 33B to HDR							
MSD-01.11B-04N	0.250	0.245	0.106	0.106	11,900,440	No	220,317
MSD-01.11B-08P	0.250	0.247	0.106	0.106	22,435,190	No	220,317
====>Grouped by Line: MSD-01.11B_3 MSEP 33B to HDR							
MSD-01.11B-05N	0.250	0.245	0.106	0.106	11,900,440	No	220,317

Component Name	Init.	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	-----					
====> Grouped by Line: MSD-01.11B_3 MSEP 33B to HDR								
MSD-01.11B-06T (BR/SE)	0.000	0.246	0.106	0.106	0.106	14,992,161	No	220,317
MSD-01.11B-06T (D/S)	0.000	0.245	0.106	0.106	0.106	11,900,440	No	220,317
MSD-01.11B-07P	0.250	0.247	0.106	0.106	0.106	20,145,026	No	220,317
====> Grouped by Line: MSD-01.12A MSEP 33A DR HDR								
MSD-01.12A-01T	0.250	0.246	0.106	0.106	0.106	14,615,122	No	220,317
MSD-01.12A-01T (BR/SE)	0.000	0.246	0.106	0.106	0.106	17,720,148	No	220,317
MSD-01.12A-01T (D/S)	0.000	0.242	0.106	0.106	0.106	7,907,208	No	220,317
MSD-01.12A-02P	0.250	0.246	0.106	0.106	0.106	16,699,543	No	220,317
====> Grouped by Line: MSD-01.12B MSEP 33B DR HDR								
MSD-01.12B-01T	0.250	0.246	0.106	0.106	0.106	14,615,122	No	220,317
MSD-01.12B-01T (BR/SE)	0.000	0.246	0.106	0.106	0.106	17,720,148	No	220,317
MSD-01.12B-01T (D/S)	0.000	0.242	0.106	0.106	0.106	7,907,208	No	220,317
MSD-01.12B-02P	0.250	0.246	0.106	0.106	0.106	16,699,543	No	220,317
====> Grouped by Line: MSD-01.13A HDR to MSEP TK 33A								
MSD-01.13A-01T (D/S)	0.000	0.340	0.106	0.106	0.106	20,054,386	No	220,317
MSD-01.13A-01T	0.250	0.364	0.106	0.106	0.106	12,267,702	No	220,317
MSD-01.13A-01T (BR/SE)	0.000	0.321	0.106	0.106	0.106	7,223,591	No	220,317
MSD-01.13A-02P	0.250	0.222	0.106	0.106	0.106	7,217,406	Yes	220,317
MSD-01.13A-03E	0.250	0.361	0.106	0.106	0.106	11,563,105	Yes	220,317
MSD-01.13A-04V	0.250	0.236	0.113	0.113	0.113	4,115,598	No	220,317
MSD-01.13A-05P	0.250	0.244	0.106	0.106	0.106	10,516,427	No	220,317
MSD-01.13A-06V	0.250	0.236	0.113	0.113	0.113	4,115,598	No	220,317
MSD-01.13A-07P	0.268	0.262	0.106	0.106	0.106	11,817,547	Yes	220,317
MSD-01.13A-08E	0.437	0.237	0.106	0.106	0.106	5,618,585	Yes	220,317
MSD-01.13A-09P	0.382	0.230	0.106	0.106	0.106	8,026,640	Yes	220,317
MSD-01.13A-10N	0.250	0.239	0.106	0.106	0.106	5,574,132	No	220,317
====> Grouped by Line: MSD-01.13B HDR to MSEP TK 33B								
MSD-01.13B-01T (D/S)	0.000	0.299	0.106	0.106	0.106	16,564,997	No	220,317
MSD-01.13B-01T	0.250	0.527	0.106	0.106	0.106	20,045,804	Yes	220,317
MSD-01.13B-01T (BR/SE)	0.000	0.290	0.106	0.106	0.106	6,155,055	No	220,317
MSD-01.13B-02P	0.250	0.226	0.106	0.106	0.106	7,441,691	Yes	220,317
MSD-01.13B-03E	0.250	0.330	0.106	0.106	0.106	10,154,904	Yes	220,317
MSD-01.13B-04V	0.250	0.236	0.113	0.113	0.113	4,115,598	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: MSD-01.13B HDR to MSEP TK 33B						
MSD-01.13B-05P	0.250	0.244	0.106	10,516,427	No	220,317
MSD-01.13B-06V	0.250	0.236	0.113	4,115,598	No	220,317
MSD-01.13B-07P	0.250	0.244	0.106	10,516,427	No	220,317
MSD-01.13B-08E	0.250	0.240	0.106	6,063,909	No	220,317
MSD-01.13B-09P	0.250	0.243	0.106	9,198,481	No	220,317
MSD-01.13B-10N	0.250	0.239	0.106	5,563,079	Yes	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:23:11AM

Run Name: MSD: MSDT 31 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====>Grouped by Line: MSD-01.4A TK 31A to HD TK						
MSD-01.4A-01N	0.322	0.291	0.071 0.071	No	3,312,024	220,317
MSD-01.4A-02P	0.322	0.322	0.071 0.071	No	100,000,000	112,406
MSD-01.4A-03T	0.322	0.322	0.071 0.071	No	100,000,000	112,406
MSD-01.4A-03T (D/S)	0.000	0.322	0.071 0.071	No	100,000,000	112,406
MSD-01.4A-04P	0.349	0.349	0.071 0.071	No	100,000,000	112,406
MSD-01.5A-01E	0.000	0.322	0.061 0.061	No	100,000,000	112,406
MSD-01.5A-01E (D/S)	0.000	0.280	0.047 0.047	No	100,000,000	112,406
MSD-01.5A-02P	0.314	0.314	0.055 0.055	No	100,000,000	112,406
MSD-01.5A-03E	0.280	0.280	0.047 0.047	No	100,000,000	112,406
MSD-01.5A-04P	0.349	0.349	0.055 0.055	No	100,000,000	112,406
MSD-01.5A-05E	0.319	0.319	0.047 0.047	No	100,000,000	112,406
MSD-01.5A-06V	0.280	0.280	0.059 0.059	No	100,000,000	112,406
MSD-01.5A-07P	0.289	0.289	0.055 0.055	No	100,000,000	112,406
MSD-01.5A-08E	0.319	0.319	0.047 0.047	No	100,000,000	112,406
MSD-01.5A-09P	0.317	0.317	0.055 0.055	No	100,000,000	112,406
MSD-01.5A-10E	0.280	0.280	0.047 0.047	No	100,000,000	112,406
MSD-01.5A-11P	0.280	0.280	0.055 0.055	No	100,000,000	112,406
MSD-01.5A-12E	0.280	0.280	0.047 0.047	No	100,000,000	112,406
MSD-01.5A-13P	0.280	0.280	0.055 0.055	No	100,000,000	112,406
MSD-01.5A-14E	0.280	0.280	0.047 0.047	No	100,000,000	112,406
MSD-01.5A-15P_1	0.280	0.280	0.055 0.055	No	100,000,000	112,406
MSD-01.5A-15P_2	0.280	0.254	0.055 0.055	No	3,608,182	220,317
MSD-01.5A-28P_1	0.280	0.269	0.055 0.055	No	8,794,078	220,317
MSD-01.5A-28P_2	0.280	0.280	0.055 0.055	No	100,000,000	112,406
MSD-01.5A-16E	0.280	0.280	0.047 0.047	No	100,000,000	112,406
MSD-01.5A-17P	0.280	0.280	0.055 0.055	No	100,000,000	112,406
MSD-01.5A-18E	0.280	0.280	0.047 0.047	No	100,000,000	112,406

Sorted By:Flow Order

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: MSD-01.4A TK 31A to HD TK						
MSD-01.5A-19P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.5A-20E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.5A-21P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.5A-29P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.5A-22E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.5A-23P	0.314	0.314	0.055	0.055	No	112,406
MSD-01.5A-24E	0.302	0.302	0.047	0.047	No	112,406
MSD-01.5A-25P	0.318	0.318	0.055	0.055	No	112,406
MSD-01.5A-26E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.5A-27N	0.280	0.294	0.055	0.055	Yes	220,317
Sorted By:Flow Order						
					2,707,935	
====>Grouped by Line: MSD-01.4B TK 31B to HD TK						
MSD-01.4B-01N	0.322	0.315	0.071	0.071	No	112,406
MSD-01.4B-02P	0.322	0.322	0.071	0.071	No	112,406
MSD-01.4B-03E	0.322	0.322	0.061	0.061	No	112,406
MSD-01.4B-04P	0.322	0.322	0.071	0.071	No	112,406
MSD-01.4B-05E	0.322	0.322	0.061	0.061	No	112,406
MSD-01.4B-07P	0.322	0.322	0.071	0.071	No	112,406
MSD-01.4B-06T	0.322	0.322	0.071	0.071	No	112,406
MSD-01.4B-06T (D/S)	0.000	0.322	0.071	0.071	No	112,406
MSD-01.4B-08P	0.322	0.322	0.071	0.071	No	112,406
MSD-01.5B-01R	0.000	0.322	0.061	0.061	No	112,406
MSD-01.5B-01R (D/S)	0.000	0.280	0.047	0.047	No	112,406
MSD-01.5B-02P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.5B-03E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.5B-04V	0.280	0.280	0.059	0.059	No	112,406
MSD-01.5B-05P	0.307	0.307	0.055	0.055	No	112,406
MSD-01.5B-06E	0.303	0.303	0.047	0.047	No	112,406
MSD-01.5B-07P	0.313	0.313	0.055	0.055	No	112,406
MSD-01.5B-08E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.5B-09P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.5B-10E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.5B-11P_1	0.280	0.280	0.055	0.055	No	112,406
MSD-01.5B-11P_2	0.280	0.258	0.055	0.055	Yes	220,317
MSD-01.5B-29P	0.280	0.269	0.055	0.055	No	220,317
MSD-01.5B-12E	0.280	0.279	0.055	0.055	Yes	220,317
MSD-01.5B-13P	0.280	0.262	0.055	0.055	Yes	220,317
					3,745,548	
Sorted By:Flow Order						
					3,674,344	

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: MSD-01.4B TK 31B to HD TK						
MSD-01.5B-14E	0.280	0.242	0.055	2,286,679	No	220,317
MSD-01.5B-15P	0.280	0.254	0.055	3,608,182	No	220,317
MSD-01.5B-30P_1	0.280	0.269	0.055	8,794,078	No	220,317
MSD-01.5B-30P_2	0.000	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-16E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5B-17P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-18E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5B-19P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-20E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5B-21P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-22E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5B-23P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-31P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-24E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5B-25P	0.302	0.302	0.055	100,000,000	No	112,406
MSD-01.5B-32P	0.302	0.302	0.055	100,000,000	No	112,406
MSD-01.5B-26E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.5B-27P	0.311	0.311	0.055	100,000,000	No	112,406
MSD-01.5B-28N	0.280	0.239	0.055	2,080,195	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:23:36AM

Run Name: MSD: MSDT 32 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====>Grouped by Line: MSD-01.9A TK 32A to HD TK						
MSD-01.9A-01N	0.322	0.291	0.071 0.071	No	3,312,024	220,317
MSD-01.9A-02P	0.322	0.322	0.071 0.071	No	100,000,000	112,406
MSD-01.9A-03T	0.322	0.322	0.071 0.071	No	100,000,000	112,406
MSD-01.9A-03T (D/S)	0.000	0.322	0.071 0.071	No	100,000,000	112,406
MSD-01.9A-04P	0.322	0.322	0.071 0.071	No	100,000,000	112,406
MSD-01.10A-01E	0.000	0.322	0.061 0.061	No	100,000,000	112,406
MSD-01.10A-01E (D/S)	0.000	0.280	0.047 0.047	No	100,000,000	112,406
MSD-01.10A-02P	0.304	0.304	0.055 0.055	No	100,000,000	112,406
MSD-01.10A-03E	0.309	0.309	0.047 0.047	No	100,000,000	112,406
MSD-01.10A-04P	0.280	0.280	0.055 0.055	No	100,000,000	112,406
MSD-01.10A-05E	0.280	0.280	0.047 0.047	No	100,000,000	112,406
MSD-01.10A-06V	0.280	0.280	0.059 0.059	No	100,000,000	112,406
MSD-01.10A-07P	0.293	0.293	0.055 0.055	No	100,000,000	112,406
MSD-01.10A-08E	0.307	0.307	0.047 0.047	No	100,000,000	112,406
MSD-01.10A-09P	0.293	0.293	0.055 0.055	No	100,000,000	112,406
MSD-01.10A-10E	0.280	0.280	0.047 0.047	No	100,000,000	112,406
MSD-01.10A-11P	0.280	0.280	0.055 0.055	No	100,000,000	112,406
MSD-01.10A-12E	0.280	0.280	0.047 0.047	No	100,000,000	112,406
MSD-01.10A-13P	0.280	0.280	0.055 0.055	No	100,000,000	112,406
MSD-01.10A-26P_1	0.280	0.280	0.055 0.055	No	100,000,000	112,406
MSD-01.10A-26P_2	0.280	0.269	0.055 0.055	No	8,794,078	220,317
MSD-01.10A-26P_3	0.280	0.280	0.055 0.055	No	100,000,000	112,406
MSD-01.10A-14E	0.280	0.280	0.047 0.047	No	100,000,000	112,406
MSD-01.10A-15P	0.280	0.280	0.055 0.055	No	100,000,000	112,406
MSD-01.10A-16E	0.280	0.280	0.047 0.047	No	100,000,000	112,406
MSD-01.10A-17P	0.280	0.280	0.055 0.055	No	100,000,000	112,406
MSD-01.10A-18E	0.280	0.280	0.047 0.047	No	100,000,000	112,406

Sorted By:Flow Order

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: MSD-01.9A TK 32A to HD TK						
MSD-01.10A-19P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.10A-27P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.10A-20E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.10A-21P	0.294	0.294	0.055	0.055	No	112,406
MSD-01.10A-22E	0.317	0.317	0.047	0.047	No	112,406
MSD-01.10A-23P	0.289	0.289	0.055	0.055	No	112,406
MSD-01.10A-24E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.10A-25N	0.280	0.249	0.055	0.055	No	220,317
====> Grouped by Line: MSD-01.9B TK 32B to HD TK						
MSD-01.9B-01N	0.322	0.291	0.071	0.071	No	220,317
MSD-01.9B-02P	0.322	0.322	0.071	0.071	No	112,406
MSD-01.9B-03T	0.322	0.322	0.071	0.071	No	112,406
MSD-01.9B-03T (D/S)	0.000	0.322	0.071	0.071	No	112,406
MSD-01.9B-04P	0.322	0.322	0.071	0.071	No	112,406
MSD-01.10B-01E	0.000	0.322	0.061	0.061	No	112,406
MSD-01.10B-01E (D/S)	0.000	0.280	0.047	0.047	No	112,406
MSD-01.10B-02E	0.280	0.252	0.047	0.047	No	112,406
MSD-01.10B-03P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.10B-04E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.10B-05V	0.280	0.280	0.059	0.059	No	112,406
MSD-01.10B-06P	0.299	0.299	0.055	0.055	No	112,406
MSD-01.10B-07E	0.328	0.251	0.047	0.047	No	112,406
MSD-01.10B-08P	0.289	0.289	0.055	0.055	No	112,406
MSD-01.10B-09E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.10B-10P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.10B-28P	0.280	0.269	0.055	0.055	No	220,317
MSD-01.10B-11E	0.280	0.208	0.055	0.055	Yes	220,317
MSD-01.10B-12P	0.280	0.223	0.055	0.055	Yes	220,317
MSD-01.10B-13E	0.280	0.242	0.055	0.055	No	220,317
MSD-01.10B-14P	0.280	0.254	0.055	0.055	No	220,317
MSD-01.10B-29P_1	0.280	0.269	0.055	0.055	No	220,317
MSD-01.10B-29P_2	0.280	0.280	0.055	0.055	No	112,406
MSD-01.10B-15E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.10B-16P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.10B-17E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.10B-18P	0.280	0.280	0.055	0.055	No	112,406

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: MSD-01.9B TK 32B to HD TK						
MSD-01.10B-19E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.10B-20P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.10B-21E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.10B-22P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.10B-30P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.10B-23E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.10B-24P	0.285	0.285	0.055	0.055	No	112,406
MSD-01.10B-25E	0.316	0.316	0.047	0.047	No	112,406
MSD-01.10B-26P	0.290	0.290	0.055	0.055	No	112,406
MSD-01.10B-27N	0.280	0.239	0.055	0.055	No	220,317
				2,080,195		

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:23:59AM

Run Name: MSD: MSDT 33 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====>Grouped by Line: MSD-01.14A TK 33A to HD TK						
MSD-01.14A-01N	0.322	0.291	0.071 0.071	No	3,312,024	220,317
MSD-01.14A-02P	0.322	0.322	0.071 0.071	No	100,000,000	112,406
MSD-01.14A-03T	0.322	0.322	0.071 0.071	No	100,000,000	112,406
MSD-01.14A-03T (D/S)	0.000	0.322	0.071 0.071	No	100,000,000	112,406
MSD-01.14A-04P	0.324	0.324	0.071 0.071	No	100,000,000	112,406
MSD-01.15A-01E	0.000	0.322	0.061 0.061	No	100,000,000	112,406
MSD-01.15A-01E (D/S)	0.000	0.280	0.047 0.047	No	100,000,000	112,406
MSD-01.15A-02V	0.280	0.280	0.059 0.059	No	100,000,000	112,406
MSD-01.15A-03P	0.280	0.280	0.055 0.055	No	100,000,000	112,406
MSD-01.15A-04E	0.341	0.341	0.047 0.047	No	100,000,000	112,406
MSD-01.15A-05E	0.322	0.322	0.047 0.047	No	100,000,000	112,406
MSD-01.15A-06P	0.285	0.285	0.055 0.055	No	100,000,000	112,406
MSD-01.15A-07E	0.280	0.280	0.047 0.047	No	100,000,000	112,406
MSD-01.15A-08P	0.280	0.280	0.055 0.055	No	100,000,000	112,406
MSD-01.15A-21P	0.000	0.280	0.055 0.055	No	100,000,000	112,406
MSD-01.15A-09E	0.302	0.302	0.047 0.047	No	100,000,000	112,406
MSD-01.15A-10P	0.306	0.306	0.055 0.055	No	100,000,000	112,406
MSD-01.15A-11E	0.290	0.290	0.047 0.047	No	100,000,000	112,406
MSD-01.15A-12P	0.272	0.272	0.055 0.055	No	100,000,000	112,406
MSD-01.15A-13E	0.334	0.334	0.047 0.047	No	100,000,000	112,406
MSD-01.15A-14P	0.281	0.281	0.055 0.055	No	100,000,000	112,406
MSD-01.15A-22P	0.281	0.281	0.055 0.055	No	100,000,000	112,406
MSD-01.15A-15E	0.331	0.331	0.047 0.047	No	100,000,000	112,406
MSD-01.15A-16P	0.284	0.284	0.055 0.055	No	100,000,000	112,406
MSD-01.15A-17E	0.280	0.280	0.047 0.047	No	100,000,000	112,406
MSD-01.15A-18P	0.280	0.280	0.055 0.055	No	100,000,000	112,406
MSD-01.15A-19E	0.280	0.280	0.047 0.047	No	100,000,000	112,406

Sorted By:Flow Order

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: MSD-01.14A TK 33A to HD TK	0.280	0.275	0.055	0.055	2,493,035	Yes	220,317
MSD-01.15A-20N							
====>Grouped by Line: MSD-01.14B TK 33B to HD TK	0.322	0.291	0.071	0.071	3,312,024	No	220,317
MSD-01.14B-01N							
MSD-01.14B-02P	0.322	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.14B-03T	0.322	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.14B-03T (D/S)	0.000	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.14B-04P	0.322	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.15B-01E	0.000	0.322	0.061	0.061	100,000,000	No	112,406
MSD-01.15B-01E (D/S)	0.000	0.280	0.047	0.047	100,000,000	No	112,406
MSD-01.15B-02E	0.280	0.280	0.047	0.047	100,000,000	No	112,406
MSD-01.15B-03P	0.280	0.280	0.055	0.055	100,000,000	No	112,406
MSD-01.15B-04E	0.280	0.280	0.047	0.047	100,000,000	No	112,406
MSD-01.15B-05V	0.280	0.280	0.059	0.059	100,000,000	No	112,406
MSD-01.15B-06P	0.265	0.265	0.055	0.055	100,000,000	No	112,406
MSD-01.15B-07E	0.309	0.309	0.047	0.047	100,000,000	No	112,406
MSD-01.15B-08P	0.299	0.299	0.055	0.055	100,000,000	No	112,406
MSD-01.15B-09E	0.280	0.280	0.047	0.047	100,000,000	No	112,406
MSD-01.15B-10P	0.280	0.280	0.055	0.055	100,000,000	No	112,406
MSD-01.15B-11E	0.280	0.280	0.047	0.047	100,000,000	No	112,406
MSD-01.15B-12P_1	0.280	0.280	0.055	0.055	100,000,000	No	112,406
MSD-01.15B-12P_2	0.280	0.254	0.055	0.055	3,608,182	No	220,317
MSD-01.15B-30P	0.280	0.269	0.055	0.055	8,794,078	No	220,317
MSD-01.15B-13E	0.280	0.230	0.055	0.055	2,145,746	Yes	220,317
MSD-01.15B-14P	0.280	0.218	0.055	0.055	2,949,288	Yes	220,317
MSD-01.15B-15E	0.280	0.190	0.055	0.055	1,656,642	Yes	220,317
MSD-01.15B-16P	0.280	0.269	0.055	0.055	3,872,226	Yes	220,317
MSD-01.15B-31P_1	0.280	0.269	0.055	0.055	8,794,078	No	220,317
MSD-01.15B-31P_2	0.280	0.280	0.055	0.055	100,000,000	No	112,406
MSD-01.15B-17E	0.280	0.280	0.047	0.047	100,000,000	No	112,406
MSD-01.15B-18P	0.280	0.280	0.055	0.055	100,000,000	No	112,406
MSD-01.15B-19E	0.280	0.280	0.047	0.047	100,000,000	No	112,406
MSD-01.15B-20P	0.280	0.280	0.055	0.055	100,000,000	No	112,406
MSD-01.15B-21E	0.280	0.280	0.047	0.047	100,000,000	No	112,406
MSD-01.15B-22P	0.280	0.280	0.055	0.055	100,000,000	No	112,406
MSD-01.15B-23E	0.280	0.280	0.047	0.047	100,000,000	No	112,406
MSD-01.15B-24P	0.280	0.280	0.055	0.055	100,000,000	No	112,406

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: MSD-01.14B TK 33B to HD TK						
MSD-01.15B-32P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.15B-25E	0.280	0.280	0.047	100,000,000	No	112,406
MSD-01.15B-26P	0.278	0.278	0.055	100,000,000	No	112,406
MSD-01.15B-27E	0.341	0.341	0.047	100,000,000	No	112,406
MSD-01.15B-28P	0.282	0.282	0.055	100,000,000	No	112,406
MSD-01.15B-29N	0.280	0.278	0.055	2,526,967	Yes	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:24:20AM

Run Name: PD: PRESEPRTR DRAINS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====>Grouped by Line: PD-01.1 PRESEPR 1B DR to HDR						
PD-01.1-01N	0.375	0.375	0.094 0.094	No	100,000,000	171,511
PD-01.2-01R	0.000	0.363	0.116 0.116	No	8,704,913	171,511
PD-01.2-01R (D/S)	0.000	0.346	0.089 0.089	No	5,900,760	171,511
PD-01.2-02B	0.365	0.345	0.089 0.089	No	5,358,505	171,511
PD-01.2-03P	0.365	0.350	0.089 0.089	No	7,672,129	171,511
PD-01.2-04E	0.365	0.344	0.089 0.089	No	5,045,853	171,511
PD-01.2-05P	0.365	0.350	0.089 0.089	No	7,672,129	171,511
PD-01.2-06E	0.365	0.344	0.089 0.089	No	5,045,853	171,511
PD-01.2-07P	0.365	0.350	0.089 0.089	No	7,672,129	171,511
PD-01.2-08E	0.365	0.346	0.089 0.089	No	5,709,054	171,511
PD-01.2-09V	0.365	0.336	0.095 0.095	No	3,530,704	171,511
PD-01.2-10O	0.365	0.341	0.089 0.089	No	897,785	171,511
PD-02.1-01T (BR/SE)	0.000	0.338	0.083 0.083	No	4,052,156	171,511
PD-02.1-01T (D/S)	0.000	0.362	0.132 0.132	No	7,345,406	171,511
====>Grouped by Line: PD-01.3 PRESEPR 1A DR to HDR						
PD-01.3-01N	0.375	0.375	0.094 0.094	No	100,000,000	171,511
PD-01.4-01R	0.000	0.365	0.116 0.116	Yes	8,772,829	171,511
PD-01.4-01R (D/S)	0.000	0.416	0.089 0.089	Yes	7,498,899	171,511
PD-01.4-02B	0.365	0.354	0.089 0.089	Yes	5,547,354	171,511
PD-01.4-03P	0.365	0.339	0.089 0.089	Yes	7,341,269	171,511
PD-01.4-04E	0.365	0.346	0.089 0.089	No	5,709,054	171,511
PD-01.4-05P	0.365	0.352	0.089 0.089	No	8,776,358	171,511
PD-01.4-06E	0.365	0.344	0.089 0.089	No	5,045,853	171,511
PD-01.4-07P	0.365	0.350	0.089 0.089	No	7,672,129	171,511
PD-01.4-08E	0.365	0.346	0.089 0.089	No	5,709,054	171,511
PD-01.4-09V	0.365	0.336	0.095 0.095	No	3,530,704	171,511

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====> Grouped by Line: PD-01.3 PRESEP 1A DR to HDR							
PD-01.4-100	0.380	0.295	0.089	0.089	735,025	No	171,511
====> Grouped by Line: PD-01.5 PRESEP 2B DR to HDR							
PD-01.5-01N	0.375	0.375	0.094	0.094	100,000,000	No	171,511
PD-01.6-01R	0.000	0.363	0.116	0.116	8,704,913	No	171,511
PD-01.6-01R (D/S)	0.000	0.346	0.089	0.089	5,900,760	No	171,511
PD-01.6-02B	0.365	0.345	0.089	0.089	5,358,505	No	171,511
PD-01.6-03P	0.365	0.350	0.089	0.089	7,672,129	No	171,511
PD-01.6-04E	0.365	0.344	0.089	0.089	5,045,853	No	171,511
PD-01.6-05P	0.365	0.350	0.089	0.089	7,672,129	No	171,511
PD-01.6-06E	0.365	0.344	0.089	0.089	5,045,853	No	171,511
PD-01.6-07P	0.365	0.350	0.089	0.089	7,672,129	No	171,511
PD-01.6-08E	0.365	0.344	0.089	0.089	5,045,853	No	171,511
PD-01.6-09P	0.365	0.346	0.089	0.089	5,900,760	No	171,511
PD-01.6-10E	0.365	0.344	0.089	0.089	5,045,853	No	171,511
PD-01.6-11P	0.365	0.346	0.089	0.089	5,900,760	No	171,511
PD-01.6-12E	0.365	0.336	0.089	0.089	5,493,471	Yes	171,511
PD-01.6-13V	0.365	0.336	0.095	0.095	3,530,704	No	171,511
PD-01.6-14O	0.365	0.320	0.089	0.089	824,151	No	171,511
====> Grouped by Line: PD-01.7 PRESEP 2A DR to HDR							
PD-01.7-01N	0.375	0.375	0.094	0.094	100,000,000	No	171,511
PD-01.8-01R	0.000	0.363	0.116	0.116	8,704,913	No	171,511
PD-01.8-01R (D/S)	0.000	0.346	0.089	0.089	5,900,760	No	171,511
PD-01.8-02B	0.365	0.345	0.089	0.089	5,358,505	No	171,511
PD-01.8-03P	0.365	0.350	0.089	0.089	7,672,129	No	171,511
PD-01.8-04E	0.365	0.344	0.089	0.089	5,045,853	No	171,511
PD-01.8-05P	0.365	0.350	0.089	0.089	7,672,129	No	171,511
PD-01.8-06E	0.365	0.344	0.089	0.089	5,045,853	No	171,511
PD-01.8-07P	0.365	0.350	0.089	0.089	7,672,129	No	171,511
PD-01.8-08E	0.365	0.344	0.089	0.089	5,045,853	No	171,511
PD-01.8-09P	0.365	0.350	0.089	0.089	7,672,129	No	171,511
PD-01.8-10E	0.365	0.344	0.089	0.089	5,045,853	No	171,511
PD-01.8-11P	0.365	0.350	0.089	0.089	7,672,129	No	171,511
PD-01.8-12E	0.365	0.346	0.089	0.089	5,709,054	No	171,511
PD-01.8-13V	0.365	0.336	0.095	0.095	3,530,704	No	171,511
PD-01.8-14O	0.365	0.294	0.089	0.089	731,458	No	171,511

Component Name	Init.	Thickness (in)		Tcrit	Inspected	Component Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====> Grouped by Line: PD-02.2 PRESEP HDR to HD TK							
PD-02.2-01T (BR/SE)	0.000	0.305	0.083	0.083	No	4,151,542	171,511
PD-02.2-01T (D/S)	0.000	0.457	0.132	0.132	No	6,995,784	171,511
PD-02.4-22T	0.375	0.361	0.132	0.132	No	6,710,183	171,511
PD-02.4-22T (D/S)	0.000	0.361	0.132	0.132	No	6,710,183	171,511
PD-02.2-01T	0.375	0.441	0.132	0.132	No	12,060,850	171,511
====> Grouped by Line: PD-02.3 PRESEP HDR to HD TK							
PD-02.3-01T (BR/SE)	0.000	0.501	0.083	0.083	No	7,807,619	171,511
PD-02.3-01T (D/S)	0.000	0.440	0.132	0.132	No	4,669,124	171,511
PD-02.3-01T	0.375	0.448	0.132	0.132	No	6,796,723	171,511
====> Grouped by Line: PD-02.4 PRESEP HDR to HD TK							
PD-02.4-01T (BR/SE)	0.000	0.349	0.083	0.083	No	4,972,847	171,511
PD-02.4-01T	0.375	0.409	0.132	0.132	No	4,197,241	171,511
PD-02.4-01T (D/S)	0.000	0.352	0.132	0.132	No	2,605,746	171,511
PD-02.4-02E	0.375	0.368	0.132	0.132	No	3,102,177	83,116
PD-02.4-03P	0.375	0.369	0.132	0.132	No	3,600,250	83,116
PD-02.4-04E	0.375	0.368	0.132	0.132	No	3,102,177	83,116
PD-02.4-05P	0.375	0.371	0.132	0.132	No	4,632,257	83,116
PD-02.4-22E	0.000	0.368	0.132	0.132	No	3,102,177	83,116
PD-02.4-23R	0.000	0.370	0.132	0.132	No	4,126,784	83,116
PD-02.4-23R (D/S)	0.000	0.623	0.248	0.248	No	19,770,038	83,116
PD-02.4-24P	0.000	0.624	0.248	0.248	No	23,741,144	83,116
PD-02.4-25T	0.000	0.622	0.248	0.248	No	11,827,828	83,116
PD-02.4-25T (BR/SE)	0.000	0.366	0.132	0.132	No	2,273,385	83,116
PD-02.4-27P	0.000	0.371	0.132	0.132	No	5,811,693	83,116
PD-02.4-28E	0.000	0.368	0.132	0.132	No	3,102,177	83,116
PD-02.4-06E	0.375	0.368	0.132	0.132	No	3,102,177	83,116
PD-02.4-07P	0.375	0.347	0.132	0.132	No	3,102,177	83,116
PD-02.4-08E	0.375	0.346	0.132	0.132	No	3,260,181	171,511
PD-02.4-09P	0.375	0.356	0.132	0.132	No	3,148,493	171,511
PD-02.4-10E	0.375	0.346	0.132	0.132	No	4,935,517	171,511
PD-02.4-11P	0.375	0.356	0.132	0.132	No	3,148,493	171,511
PD-02.4-12E	0.375	0.343	0.132	0.132	No	4,935,517	171,511
PD-02.4-13P	0.375	0.353	0.132	0.132	No	2,762,109	171,511
PD-02.4-14E	0.375	0.346	0.132	0.132	No	4,292,188	171,511
PD-02.4-15P	0.375	0.356	0.132	0.132	No	3,148,493	171,511
					No	4,935,517	171,511

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
=====> Grouped by Line: PD-02.4 PRESEP HDR to HD TK						
PD-02.4-16E	0.375	0.374	0.132	3,169,590	Yes	171,511
PD-02.4-17P	0.375	0.355	0.132	4,328,530	Yes	171,511
PD-02.4-18E	0.375	0.343	0.132	2,762,109	No	171,511
PD-02.4-19P	0.375	0.353	0.132	4,292,188	No	171,511
PD-02.4-29R	0.000	0.495	0.132	6,847,136	No	83,116
PD-02.4-29R (D/S)	0.000	0.312	0.071	2,063,548	No	83,116
PD-02.4-30V	0.000	0.294	0.076	672,242	No	83,116
PD-02.4-31R	0.000	0.277	0.071	100,000,000	No	83,116
PD-02.4-31R (D/S)	0.000	0.375	0.132	100,000,000	No	83,116
PD-02.4-32P	0.000	0.375	0.132	100,000,000	No	83,116
PD-02.4-20O	0.421	0.304	0.132	297,746	No	171,511
PD-02.4-21N	0.899	0.805	0.114	7,357,731	Yes	171,511
PD-02.4-25T (D/S)	0.000	0.625	0.248	100,000,000	No	0
PD-02.4-26P	0.000	0.625	0.248	100,000,000	No	0

Sorted By:Flow Order

Note:
[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:24:48AM

Run Name: RHD: RH 31 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			
====>Grouped by Line: RHD-01.1A_1 RH 31A to TK 31A						
RHD01.1A-01N	0.432	0.538	0.233	1,882,573	Yes	220,317
RHD01.1A-02P	0.432	0.366	0.233	1,519,475	Yes	220,317
RHD01.1A-03N	0.432	0.374	0.233	1,084,773	Yes	220,317
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR						
RHD01.1A-04N	0.432	0.382	0.233	920,940	No	220,317
RHD01.1A-05P	0.432	0.385	0.233	1,735,051	Yes	220,317
RHD01.1A-06E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.1A-07P_1	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-07P_2	0.432	0.418	0.233	5,172,651	No	220,317
RHD01.1A-08E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.1A-09P_1	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-09P_2	0.432	0.418	0.233	5,172,651	No	220,317
RHD01.1A-10E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.1A-11P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-12E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.1A-13P_1	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-13P_2	0.432	0.418	0.233	5,172,651	No	220,317
RHD01.1A-14E	0.432	0.389	0.233	1,454,164	No	220,317
RHD01.1A-15P	0.432	0.403	0.233	2,383,786	No	220,317
RHD01.1A-16E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.1A-17P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-18E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.1A-19P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.1A-20E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.1A-21P_1	0.432	0.390	0.233	1,512,265	No	220,317
RHD01.1A-21P_2	0.432	0.418	0.233	5,172,651	No	220,317

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			Time to Tcrit (hrs)	Inspected	
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR							
RHD01.1A-22E	0.432	0.389	0.233	0.233	No	1,454,164	220,317
RHD01.1A-23P	0.432	0.403	0.233	0.233	No	2,383,786	220,317
RHD01.1A-24E	0.432	0.389	0.233	0.233	No	1,454,164	220,317
RHD01.1A-25E	0.432	0.386	0.233	0.233	No	1,347,921	220,317
RHD01.1A-26P	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD01.1A-27E	0.432	0.386	0.233	0.233	No	1,347,921	220,317
RHD01.1A-28P_1	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD01.1A-28P_2	0.432	0.418	0.233	0.233	No	5,172,651	220,317
RHD01.1A-29E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.1A-30P	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD01.1A-31E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.1A-32P	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD01.1A-33E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.1A-34P_1	0.475	0.432	0.233	0.233	No	1,861,971	220,317
RHD01.1A-34P_2	0.475	0.460	0.233	0.233	No	6,189,977	220,317
RHD01.1A-35F	0.432	0.352	0.233	0.233	No	603,678	220,317
RHD01.1A-36P	0.462	0.428	0.233	0.233	Yes	4,950,281	220,317
RHD01.1A-37T	0.432	0.393	0.233	0.233	No	1,640,088	220,317
RHD01.1A-37T (D/S)	0.000	0.393	0.233	0.233	No	1,640,088	220,317
RHD01.1A-38P	0.432	0.406	0.233	0.233	No	2,662,672	220,317
RHD01.1A-39E	0.432	0.389	0.233	0.233	No	1,454,164	220,317
RHD01.1A-40P	0.432	0.403	0.233	0.233	No	2,383,786	220,317
RHD01.1A-41E	0.432	0.389	0.233	0.233	No	1,454,164	220,317
RHD01.1A-42P_1	0.432	0.403	0.233	0.233	No	2,383,786	220,317
RHD01.1A-42P_2	0.432	0.418	0.233	0.233	No	5,172,651	220,317
RHD01.1A-43E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.1A-44P_1	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD01.1A-44P_2	0.432	0.418	0.233	0.233	No	5,172,651	220,317
RHD01.1A-45E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.1A-46P	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD01.1A-47E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.1A-48P	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD01.2A-01R	0.000	0.399	0.233	0.233	No	2,049,122	220,317
RHD01.2A-01R (D/S)	0.000	0.290	0.158	0.158	No	1,152,195	220,317
RHD02.1A-01V	0.337	0.501	0.132	0.132	No	100,000,000	220,317
RHD02.1A-02R	0.000	0.331	0.158	0.158	No	972,523	33,725
RHD02.1A-02R (D/S)	0.000	0.429	0.233	0.233	No	2,011,443	33,725

Component Name	----- Thickness (in) -----		Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]		Thoop	Time to Tcrit (hrs)	
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR						
RHD02.2A-01P	0.432	0.398	0.233	0.233	Yes	151,585
RHD02.2A-02E	0.473	0.324	0.233	0.233	Yes	220,317
RHD02.2A-03P	0.432	0.337	0.233	0.233	Yes	220,317
RHD02.2A-04E	0.432	0.379	0.233	0.233	Yes	220,317
RHD02.2A-05P	0.432	0.403	0.233	0.233	No	220,317
====>Grouped by Line: RHD-01.1B_1 RH 31B to TK 31B						
RHD01.1B-01N	0.432	0.366	0.233	0.233	No	220,317
RHD01.1B-02P	0.432	0.397	0.233	0.233	No	220,317
RHD01.1B-03N	0.432	0.379	0.233	0.233	No	220,317
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR						
RHD01.1B-04N	0.432	0.366	0.233	0.233	No	220,317
RHD01.1B-05P	0.432	0.397	0.233	0.233	No	220,317
RHD01.1B-06E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-07P	0.432	0.399	0.233	0.233	No	220,317
RHD01.1B-08E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-09P	0.432	0.399	0.233	0.233	No	220,317
RHD01.1B-10E	0.432	0.389	0.233	0.233	No	220,317
RHD01.1B-11P	0.432	0.403	0.233	0.233	No	220,317
RHD01.1B-12E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-13P	0.432	0.399	0.233	0.233	No	220,317
RHD01.1B-14F	0.432	0.352	0.233	0.233	No	220,317
RHD01.1B-15P	0.432	0.420	0.233	0.233	Yes	220,317
RHD01.1B-16E	0.432	0.363	0.233	0.233	Yes	220,317
RHD01.1B-17P	0.432	0.421	0.233	0.233	Yes	220,317
RHD01.1B-18E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-19P	0.432	0.399	0.233	0.233	No	220,317
RHD01.1B-20E	0.432	0.389	0.233	0.233	No	220,317
RHD01.1B-21P_1	0.432	0.403	0.233	0.233	No	220,317
RHD01.1B-21P_2	0.432	0.418	0.233	0.233	No	220,317
RHD01.1B-22E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-23P	0.432	0.399	0.233	0.233	No	220,317
RHD01.1B-24E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-25P	0.432	0.399	0.233	0.233	No	220,317
RHD01.1B-26E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-27P_1	0.432	0.399	0.233	0.233	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]		Time to Tcrit (hrs)	Inspected	
====> Grouped by Line: RHD-01.1B_2 TK 31B to B HDR						
RHD01.1B-27P_2	0.432	0.418	0.233	0.233	No	220,317
RHD01.1B-28E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-29P	0.473	0.439	0.233	0.233	No	2,476,550
RHD01.1B-30E	0.473	0.367	0.233	0.233	Yes	220,317
RHD01.1B-31P	0.469	0.409	0.233	0.233	Yes	220,317
RHD01.1B-32E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-33P	0.432	0.399	0.233	0.233	No	220,317
RHD01.1B-34T	0.432	0.393	0.233	0.233	No	220,317
RHD01.1B-34T (D/S)	0.000	0.393	0.233	0.233	No	220,317
RHD01.1B-35E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-36P	0.432	0.390	0.233	0.233	No	220,317
RHD01.1B-37E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-38P_1	0.432	0.399	0.233	0.233	No	220,317
RHD01.1B-38P_2	0.432	0.418	0.233	0.233	No	220,317
RHD01.1B-39E	0.432	0.378	0.233	0.233	Yes	220,317
RHD01.1B-40P	0.432	0.414	0.233	0.233	Yes	220,317
RHD01.1B-41E	0.432	0.377	0.233	0.233	Yes	220,317
RHD01.1B-42P_1	0.432	0.429	0.233	0.233	Yes	220,317
RHD01.1B-42P_2	0.432	0.418	0.233	0.233	No	220,317
RHD01.1B-43E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-44P	0.432	0.399	0.233	0.233	No	220,317
RHD01.1B-45E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-46P	0.432	0.399	0.233	0.233	No	220,317
RHD01.1B-47E	0.432	0.389	0.233	0.233	No	220,317
RHD01.1B-48P	0.432	0.403	0.233	0.233	No	220,317
RHD01.1B-49E	0.432	0.383	0.233	0.233	No	220,317
RHD01.1B-50P	0.432	0.399	0.233	0.233	No	220,317
RHD01.1B-51E	0.432	0.409	0.233	0.233	Yes	220,317
RHD01.1B-52P	0.476	0.412	0.233	0.233	Yes	220,317
RHD01.2B-01R	0.000	0.461	0.233	0.233	Yes	220,317
RHD01.2B-01R (D/S)	0.401	0.348	0.158	0.158	Yes	220,317
RHD02.1B-01V	0.337	0.596	0.132	0.132	No	220,317
RHD02.1B-02R	0.000	0.319	0.158	0.158	No	99,292
RHD02.1B-02R (D/S)	0.000	0.422	0.233	0.233	No	99,292
RHD02.2B-01P	0.432	0.407	0.233	0.233	No	151,585
RHD02.2B-02E	0.432	0.371	0.233	0.233	Yes	220,317
RHD02.2B-03P	0.432	0.363	0.233	0.233	Yes	220,317

Sorted By:Flow Order

Component Name	Thickness (in)		Tcrit	Inspected	Component Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: RHD-01.1B_2 TK 31B to B HDR						
RHD02.2B-04E	0.432	0.389	0.233	0.233	No	220,317
RHD02.2B-05P	0.432	0.403	0.233	0.233	No	220,317

Sorted By: Flow Order

1,454,164	No	220,317
2,383,786	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:25:01AM

Run Name: RHD: RH 32A TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			
====>Grouped by Line: RHD-01.3A_1 RH 32A to TK 32A						
RHD01.3A-01N	0.432	0.366	0.233	822,021	No	220,317
RHD01.3A-02P	0.432	0.374	0.233	1,615,923	Yes	220,317
RHD01.3A-03N	0.432	0.379	0.233	1,128,796	No	220,317
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR						
RHD01.3A-04N	0.432	0.389	0.233	963,092	No	220,317
RHD01.3A-05P	0.432	0.423	0.233	2,175,008	Yes	220,317
RHD01.3A-06E	0.432	0.382	0.233	1,241,014	Yes	220,317
RHD01.3A-07P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.3A-08E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.3A-09P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.3A-10E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.3A-11P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.3A-12E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.3A-13P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.3A-14E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.3A-15R	0.000	0.395	0.233	1,786,172	No	220,317
RHD01.3A-15R (D/S)	0.000	0.477	0.303	2,999,983	No	220,317
RHD01.4A-01P_1	0.500	0.480	0.303	3,680,996	No	220,317
RHD01.4A-01P_2	0.500	0.491	0.303	8,881,454	No	220,317
RHD01.5A-01R	0.000	0.463	0.303	3,313,213	No	220,317
RHD01.5A-01R (D/S)	0.000	0.461	0.233	3,902,783	No	220,317
RHD01.5A-02P	0.432	0.371	0.233	2,132,633	Yes	220,317
RHD01.5A-03F	0.432	0.352	0.233	603,678	No	220,317
RHD01.5A-04P	0.432	0.412	0.233	4,525,384	Yes	220,317
RHD01.5A-05R	0.000	0.473	0.233	2,642,628	Yes	220,317
RHD01.5A-05R (D/S)	0.000	0.479	0.303	3,040,460	Yes	220,317

Component Name	----- Thickness (in) -----		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR						
RHD01.6A-01P	0.500	0.465	0.303	0.303	Yes	220,317
RHD01.6A-02T	0.500	0.477	0.303	0.303	No	220,317
RHD01.6A-02T (D/S)	0.000	0.477	0.303	0.303	No	220,317
RHD01.6A-03P_1	0.500	0.484	0.303	0.303	No	220,317
RHD01.6A-03P_2	0.500	0.491	0.303	0.303	No	220,317
RHD01.6A-04E	0.500	0.471	0.303	0.303	No	220,317
RHD01.6A-05P	0.500	0.480	0.303	0.303	No	220,317
RHD01.6A-06E	0.500	0.471	0.303	0.303	No	220,317
RHD01.6A-07P	0.500	0.475	0.303	0.303	No	220,317
RHD01.6A-08E	0.500	0.471	0.303	0.303	No	220,317
RHD01.6A-09P	0.500	0.480	0.303	0.303	No	220,317
RHD01.6A-10E	0.500	0.471	0.303	0.303	No	220,317
RHD01.6A-11P	0.500	0.480	0.303	0.303	No	220,317
RHD01.6A-12E	0.500	0.471	0.303	0.303	No	220,317
RHD01.6A-13P	0.500	0.480	0.303	0.303	No	220,317
RHD01.6A-14E	0.500	0.471	0.303	0.303	No	220,317
RHD01.6A-15P_1	0.500	0.480	0.303	0.303	No	220,317
RHD01.6A-15P_2	0.500	0.491	0.303	0.303	No	220,317
RHD01.7A-01R	0.000	0.480	0.303	0.303	No	220,317
RHD01.7A-01R (D/S)	0.000	0.408	0.233	0.233	No	220,317
RHD01.7A-02E	0.432	0.383	0.233	0.233	No	220,317
RHD01.7A-03P	0.432	0.390	0.233	0.233	No	220,317
RHD01.7A-04E	0.458	0.384	0.233	0.233	Yes	220,317
RHD01.8A-01R	0.000	0.397	0.233	0.233	Yes	220,317
RHD01.8A-01R (D/S)	0.000	0.356	0.158	0.158	Yes	220,317
RHD01.8A-02P	0.376	0.299	0.158	0.158	Yes	220,317
RHD02.3A-01V	0.337	0.318	0.132	0.132	No	220,317
RHD02.3A-02R	0.000	0.369	0.158	0.158	Yes	151,585
RHD02.3A-02R (D/S)	0.000	0.398	0.233	0.233	Yes	151,585
RHD02.4A-01P	0.432	0.385	0.233	0.233	Yes	151,585
RHD02.4A-02E	0.473	0.398	0.233	0.233	No	220,317
RHD02.4A-03P	0.432	0.399	0.233	0.233	No	220,317
RHD02.4A-04E	0.432	0.389	0.233	0.233	No	220,317
RHD02.4A-05P	0.432	0.403	0.233	0.233	No	220,317
RHD02.4A-06L	0.594	0.558	0.378	0.378	Yes	220,317
RHD02.4A-06L (D/S)	0.000	0.568	0.378	0.378	No	220,317
RHD02.7A-01P	0.594	0.579	0.378	0.378	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:25:18AM

Pass 1 Analysis Exclude Measured Wear

Run Name: RHD: RH 32B TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			
====>Grouped by Line: RHD-01.3B_1 RH 32B to TK 32B						
RHD01.3B-01N	0.432	0.779	0.233	3,362,776	Yes	220,317
RHD01.3B-02P	0.432	0.385	0.233	1,734,830	Yes	220,317
RHD01.3B-03N	0.432	0.412	0.233	1,380,294	Yes	220,317
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR						
RHD01.3B-04N	0.432	0.396	0.233	1,003,716	Yes	220,317
RHD01.3B-05P	0.432	0.404	0.233	1,956,363	Yes	220,317
RHD01.3B-06E	0.432	0.340	0.233	891,267	Yes	220,317
RHD01.3B-07P	0.432	0.397	0.233	2,017,651	Yes	220,317
RHD01.3B-08E	0.432	0.394	0.233	1,343,256	Yes	220,317
RHD01.3B-09P	0.432	0.385	0.233	1,870,741	Yes	220,317
RHD01.3B-10E	0.432	0.388	0.233	1,295,627	Yes	220,317
RHD01.3B-11P	0.432	0.398	0.233	2,033,626	Yes	220,317
RHD01.3B-12E	0.432	0.410	0.233	1,478,828	Yes	220,317
RHD01.3B-13P	0.432	0.391	0.233	1,947,356	Yes	220,317
RHD01.3B-14E	0.432	0.393	0.233	1,337,264	Yes	220,317
RHD01.3B-15P	0.432	0.386	0.233	1,885,734	Yes	220,317
RHD01.3B-16E	0.432	0.353	0.233	997,836	Yes	220,317
RHD01.3B-17P	0.432	0.390	0.233	1,932,693	Yes	220,317
RHD01.3B-18E	0.432	0.415	0.233	1,514,129	Yes	220,317
RHD01.3B-19P	0.432	0.378	0.233	1,784,800	Yes	220,317
RHD01.3B-20R	0.000	0.438	0.233	2,253,831	Yes	220,317
RHD01.3B-20R (D/S)	0.000	0.729	0.378	9,257,615	Yes	220,317
RHD01.4B-01P_1	0.594	0.563	0.378	5,531,622	Yes	220,317
RHD01.4B-01P_2	0.594	0.588	0.378	15,131,132	No	220,317
RHD01.5B-01R	0.000	0.581	0.378	6,430,854	No	220,317
RHD01.5B-01R (D/S)	0.000	0.408	0.233	3,003,533	No	220,317

Component Name	----- Thickness (in) -----		Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]		Thoop	Time to Tcrit (hrs)	
====> Grouped by Line: RHD-01.3B_2 TK 32B to B HDR						
RHD01.5B-02P	0.458	0.431	0.233	0.233	No	220,317
RHD01.5B-03F	0.432	0.352	0.233	0.233	No	220,317
RHD01.5B-04P	0.475	0.405	0.233	0.233	Yes	220,317
RHD01.5B-05R	0.000	0.849	0.233	0.233	Yes	220,317
RHD01.5B-05R (D/S)	0.000	0.725	0.378	0.378	Yes	220,317
RHD01.6B-01P	0.634	0.569	0.378	0.378	Yes	220,317
RHD01.6B-02E	0.594	0.574	0.378	0.378	Yes	220,317
RHD01.6B-03P_1	0.594	0.535	0.378	0.378	Yes	220,317
RHD01.6B-03P_2	0.594	0.588	0.378	0.378	No	220,317
RHD01.6B-04E	0.594	0.577	0.378	0.378	No	220,317
RHD01.6B-05P	0.594	0.583	0.378	0.378	No	220,317
RHD01.6B-06E	0.594	0.575	0.378	0.378	No	220,317
RHD01.6B-07P	0.594	0.581	0.378	0.378	No	220,317
RHD01.6B-08E	0.594	0.575	0.378	0.378	No	220,317
RHD01.6B-09P_1	0.594	0.581	0.378	0.378	No	220,317
RHD01.6B-09P_2	0.594	0.588	0.378	0.378	No	220,317
RHD01.6B-10E	0.594	0.575	0.378	0.378	No	220,317
RHD01.6B-11E	0.594	0.575	0.378	0.378	No	220,317
RHD01.6B-12P	0.594	0.578	0.378	0.378	No	220,317
RHD01.6B-13E	0.594	0.575	0.378	0.378	No	220,317
RHD01.6B-14P	0.594	0.581	0.378	0.378	No	220,317
RHD01.6B-15E	0.594	0.575	0.378	0.378	No	220,317
RHD01.6B-16P	0.594	0.581	0.378	0.378	No	220,317
RHD01.6B-17T	0.594	0.579	0.378	0.378	No	220,317
RHD01.6B-17T (D/S)	0.000	0.579	0.378	0.378	No	220,317
RHD01.6B-18P	0.594	0.584	0.378	0.378	No	220,317
RHD01.6B-19E	0.594	0.575	0.378	0.378	No	220,317
RHD01.6B-20P_1	0.594	0.581	0.378	0.378	No	220,317
RHD01.6B-20P_2	0.594	0.588	0.378	0.378	No	220,317
RHD01.6B-21T	0.594	0.579	0.378	0.378	No	220,317
RHD01.6B-21T (D/S)	0.000	0.579	0.378	0.378	No	220,317
RHD01.6B-22P_1	0.594	0.584	0.378	0.378	No	220,317
RHD01.6B-22P_2	0.594	0.588	0.378	0.378	No	220,317
RHD01.7B-01R	0.000	0.581	0.378	0.378	No	220,317
RHD01.7B-01R (D/S)	0.000	0.408	0.233	0.233	No	220,317
RHD01.7B-02P	0.432	0.406	0.233	0.233	No	220,317
RHD01.7B-03R	0.000	0.524	0.233	0.233	Yes	220,317

Sorted By:Flow Order

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: RHD-01.3B_2 TK 32B to B HDR						
RHD01.7B-03R (D/S)	0.000	0.503	0.378	0.378	Yes	220,317
RHD01.8B-01P_1	0.594	0.553	0.378	0.378	Yes	220,317
RHD01.8B-01P_2	0.594	0.588	0.378	0.378	No	220,317
RHD01.8B-02E	0.594	0.577	0.378	0.378	No	220,317
RHD01.8B-03P	0.594	0.583	0.378	0.378	No	220,317
RHD01.8B-04E	0.594	0.575	0.378	0.378	No	220,317
RHD01.8B-05P	0.594	0.581	0.378	0.378	No	220,317
RHD01.8B-06E	0.594	0.692	0.378	0.378	Yes	220,317
RHD01.9B-01R	0.000	0.572	0.378	0.378	Yes	220,317
RHD01.9B-01R (D/S)	0.000	0.325	0.158	0.158	Yes	220,317
RHD02.3B-01V	0.337	0.621	0.132	0.132	No	220,317
RHD02.3B-02R	0.000	0.446	0.158	0.158	No	66,848
RHD02.3B-02R (D/S)	0.000	0.800	0.378	0.378	No	66,848
RHD02.4B-01P	0.594	0.481	0.378	0.378	No	151,585
RHD02.4B-02E	0.000	0.627	0.378	0.378	Yes	220,317
RHD02.4B-03P	0.594	0.565	0.378	0.378	Yes	220,317
RHD02.4B-04E	0.594	0.577	0.378	0.378	No	220,317
RHD02.4B-05P	0.594	0.583	0.378	0.378	No	220,317
RHD02.4B-06E	0.594	0.577	0.378	0.378	No	220,317
RHD02.4B-07P	0.609	0.598	0.378	0.378	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:25:44AM

Pass 1 Analysis Exclude Measured Wear

Run Name: RHD: RH 33 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			
====>Grouped by Line: RHD-01.10A_1 RH 33A to TK 33A						
RHD01.10A-01N	0.432	0.366	0.233	822,021	No	220,317
RHD01.10A-02P	0.432	0.397	0.233	1,867,329	No	220,317
RHD01.10A-03N	0.432	0.379	0.233	1,128,796	No	220,317
====>Grouped by Line: RHD-01.10A_2 TK 33A to A HDR						
RHD01.10A-04N	0.432	0.382	0.233	919,957	No	220,317
RHD01.10A-05P	0.432	0.393	0.233	1,832,664	Yes	220,317
RHD01.10A-06E	0.432	0.371	0.233	1,290,860	Yes	220,317
RHD01.10A-07P	0.432	0.403	0.233	2,383,786	No	220,317
RHD01.10A-08E	0.432	0.389	0.233	1,454,164	No	220,317
RHD01.10A-09P	0.432	0.403	0.233	2,383,786	No	220,317
RHD01.10A-10E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10A-11P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.10A-12E	0.432	0.389	0.233	1,454,164	No	220,317
RHD01.10A-13P	0.432	0.403	0.233	2,383,786	No	220,317
RHD01.10A-14E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10A-15P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.10A-16E	0.432	0.383	0.233	1,253,165	No	220,317
RHD01.10A-17P	0.432	0.399	0.233	2,049,122	No	220,317
RHD01.10A-18F	0.432	0.352	0.233	603,678	No	220,317
RHD01.10A-19P	0.432	0.399	0.233	4,215,750	Yes	220,317
RHD01.10A-20R	0.000	0.470	0.233	2,613,888	No	220,317
RHD01.10A-20R (D/S)	0.000	0.444	0.303	2,436,089	No	220,317
RHD01.11A-01E	0.500	0.444	0.303	1,971,893	Yes	220,317
RHD01.11A-02P	0.500	0.465	0.303	2,623,316	Yes	220,317
RHD01.11A-03E	0.500	0.471	0.303	2,355,782	No	220,317
RHD01.11A-04P	0.500	0.480	0.303	3,680,996	No	220,317

Component Name	----- Thickness (in) -----		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: RHD-01.10A_2 TK 33A to A HDR							
RHD01.12A-01T	0.000	0.450	0.303	0.303	1,383,610	No	220,317
RHD01.12A-01T (D/S)	0.000	0.462	0.303	0.303	1,496,841	No	220,317
RHD01.12A-02P	0.432	0.404	0.233	0.233	2,629,104	No	220,317
RHD01.12A-03E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.12A-04E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.12A-05P	0.432	0.390	0.233	0.233	1,512,265	No	220,317
RHD01.12A-06E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.12A-07P	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD01.12A-08E	0.432	0.382	0.233	0.233	1,243,329	Yes	220,317
RHD01.13A-01R	0.000	0.417	0.233	0.233	1,621,040	No	220,317
RHD01.13A-01R (D/S)	0.000	0.323	0.158	0.158	813,711	No	220,317
RHD02.5A-01V	0.337	0.490	0.132	0.132	100,000,000	No	220,317
RHD02.5A-02R	0.000	0.374	0.158	0.158	1,213,807	No	151,585
RHD02.5A-02R (D/S)	0.000	0.365	0.233	0.233	1,360,076	Yes	151,585
RHD02.6A-01P	0.432	0.396	0.233	0.233	2,006,639	Yes	151,585
RHD02.6A-02E	0.432	0.317	0.233	0.233	698,892	Yes	220,317
RHD02.6A-03P	0.432	0.359	0.233	0.233	1,552,141	Yes	220,317
RHD02.6A-04E	0.432	0.389	0.233	0.233	1,454,164	No	220,317
RHD02.6A-05P	0.000	0.428	0.233	0.233	2,737,189	No	50,194
====>Grouped by Line: RHD-01.10B_1 RH 33B to TK 33B							
RHD01.10B-01N	0.432	0.383	0.233	0.233	927,102	Yes	220,317
RHD01.10B-02P	0.432	0.384	0.233	0.233	1,723,639	Yes	220,317
RHD01.10B-03N	0.432	0.398	0.233	0.233	1,272,391	No	220,317
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR							
RHD01.10B-04N	0.432	0.366	0.233	0.233	822,021	No	220,317
RHD01.10B-05P	0.432	0.397	0.233	0.233	1,867,329	No	220,317
RHD01.10B-06E	0.432	0.389	0.233	0.233	1,454,164	No	220,317
RHD01.10B-07P	0.432	0.403	0.233	0.233	2,383,786	No	220,317
RHD01.10B-08E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.10B-09P	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD01.10B-10E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.10B-11P	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD01.10B-12E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.10B-13P_1	0.432	0.390	0.233	0.233	1,512,265	No	220,317
RHD01.10B-13P_2	0.432	0.418	0.233	0.233	5,172,651	No	220,317

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			Time to Tcrit (hrs)	Inspected	
====> Grouped by Line: RHD-01.10B_2 TK 33B to B HDR							
RHD01.10B-14E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.10B-15E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.10B-16P	0.432	0.390	0.233	0.233	No	1,512,265	220,317
RHD01.10B-17E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.10B-18P	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD01.10B-19E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.10B-20P	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD01.10B-21E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.10B-22E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.10B-23P	0.432	0.390	0.233	0.233	No	1,512,265	220,317
RHD01.10B-24E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.10B-25P_1	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD01.10B-25P_2	0.432	0.418	0.233	0.233	No	5,172,651	220,317
RHD01.10B-26F	0.432	0.352	0.233	0.233	No	603,678	220,317
RHD01.10B-27P	0.432	0.438	0.233	0.233	Yes	5,203,568	220,317
RHD01.10B-28E	0.432	0.465	0.233	0.233	Yes	1,930,249	220,317
RHD01.10B-29P	0.432	0.403	0.233	0.233	Yes	2,101,326	220,317
RHD01.10B-30E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.10B-31P	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD01.10B-32E	0.432	0.389	0.233	0.233	No	1,454,164	220,317
RHD01.10B-33P	0.432	0.403	0.233	0.233	No	2,383,786	220,317
RHD01.10B-34E	0.432	0.389	0.233	0.233	No	1,454,164	220,317
RHD01.10B-35P	0.432	0.403	0.233	0.233	No	2,383,786	220,317
RHD01.10B-36E	0.432	0.389	0.233	0.233	No	1,454,164	220,317
RHD01.10B-37P_1	0.432	0.403	0.233	0.233	No	2,383,786	220,317
RHD01.10B-37P_2	0.432	0.418	0.233	0.233	No	5,172,651	220,317
RHD01.10B-38E	0.432	0.389	0.233	0.233	No	1,454,164	220,317
RHD01.10B-39P	0.432	0.403	0.233	0.233	No	2,383,786	220,317
RHD01.10B-40E	0.432	0.389	0.233	0.233	No	1,454,164	220,317
RHD01.10B-41P	0.432	0.403	0.233	0.233	No	2,383,786	220,317
RHD01.10B-42E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.10B-43P	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD01.10B-44E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.10B-45P	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD01.10B-46E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD01.10B-47P_1	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD01.10B-47P_2	0.432	0.418	0.233	0.233	No	5,172,651	220,317

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			Time to Tcrit (hrs)	Inspected	
====> Grouped by Line: RHD-01.10B_2 TK 33B to B HDR							
RHD01.10B-48E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.10B-49P	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD01.10B-50E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.10B-51P	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD01.10B-52T	0.432	0.501	0.233	0.233	1,654,242	No	220,317
RHD01.10B-52T (D/S)	0.000	0.465	0.233	0.233	1,432,402	Yes	220,317
RHD01.10B-53P	0.432	0.401	0.233	0.233	1,724,628	Yes	220,317
RHD01.10B-54E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.10B-55P	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD01.10B-56E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.10B-57P_1	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD01.10B-57P_2	0.432	0.418	0.233	0.233	5,172,651	No	220,317
RHD01.10B-58E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.10B-59P	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD01.10B-60E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.10B-61P_1	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD01.10B-61P_2	0.432	0.418	0.233	0.233	5,172,651	No	220,317
RHD01.10B-62E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.10B-63E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD01.10B-64R	0.000	0.395	0.233	0.233	1,786,172	No	220,317
RHD01.10B-64R (D/S)	0.000	0.477	0.303	0.303	2,999,983	No	220,317
RHD01.11B-01P_1	0.500	0.480	0.303	0.303	3,680,996	No	220,317
RHD01.11B-01P_2	0.500	0.491	0.303	0.303	8,881,454	No	220,317
RHD01.11B-02E	0.500	0.471	0.303	0.303	2,355,782	No	220,317
RHD01.11B-03P	0.500	0.480	0.303	0.303	3,680,996	No	220,317
RHD01.11B-04E	0.500	0.471	0.303	0.303	2,355,782	No	220,317
RHD01.11B-05P	0.500	0.480	0.303	0.303	3,680,996	No	220,317
RHD01.12B-01R	0.000	0.480	0.303	0.303	3,680,996	No	220,317
RHD01.12B-01R (D/S)	0.000	0.290	0.158	0.158	1,152,195	No	220,317
RHD02.5B-01V	0.337	0.552	0.132	0.132	100,000,000	No	220,317
RHD02.6B-01E	0.559	0.554	0.303	0.303	3,416,399	No	66,848
RHD02.6B-02P	0.528	0.503	0.303	0.303	3,191,616	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 1 Analysis Exclude Measured Wear

Report Date/Time: 7/29/2011 4:23:07PM
 AnalysisDate/Time: 7/22/2011 10:26:21AM

Run Name: RHD: RHD HDR TO HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			

====>Grouped by Line: RHD-02.10A TK A HDR to FWH 36

RHD02.10A-01R	0.000	0.562	0.378	0.378	No	2,292,063	220,317
RHD02.10A-01R (D/S)	0.000	0.455	0.303	0.303	No	1,358,238	220,317
RHD02.10A-02P	0.500	0.465	0.303	0.303	No	1,851,966	220,317
RHD02.10A-03E	0.500	0.453	0.303	0.303	No	1,304,804	220,317
RHD02.10A-04P	0.500	0.469	0.303	0.303	No	2,159,746	220,317
RHD02.10A-05E	0.500	0.453	0.303	0.303	No	1,304,804	220,317
RHD02.10A-06P	0.500	0.469	0.303	0.303	No	2,159,746	220,317
RHD02.10A-07E	0.500	0.453	0.303	0.303	No	1,304,804	220,317
RHD02.10A-08P	0.500	0.469	0.303	0.303	No	2,159,746	220,317
RHD02.10A-09E	0.500	0.453	0.303	0.303	No	1,304,804	220,317
RHD02.10A-10P	0.500	0.469	0.303	0.303	No	2,159,746	220,317
RHD02.10A-11T	0.500	0.584	0.303	0.303	Yes	1,461,868	220,317
RHD02.10A-11T (D/S)	0.000	0.548	0.303	0.303	Yes	2,311,582	220,317
RHD02.10A-11T (BR/SE)	0.000	0.347	0.211	0.211	Yes	964,396	220,317

Sorted By:Flow Order

====>Grouped by Line: RHD-02.10B B HDR to FWH 36A

RHD02.10B-01R	0.000	0.576	0.378	0.378	No	4,477,730	220,317
RHD02.10B-01R (D/S)	0.000	0.390	0.233	0.233	No	1,512,265	220,317
RHD02.10B-02P_1	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD02.10B-02P_2	0.432	0.418	0.233	0.233	No	5,172,651	220,317
RHD02.10B-03E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD02.10B-04P	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD02.10B-05E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD02.10B-06P	0.432	0.390	0.233	0.233	No	1,512,265	220,317
RHD02.10B-07E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD02.10B-08P	0.432	0.399	0.233	0.233	No	2,049,122	220,317
RHD02.10B-09E	0.432	0.383	0.233	0.233	No	1,253,165	220,317

Sorted By:Flow Order

Component Name	Init.	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
		Pred.[1]	-----			Time to Tcrit (hrs)	Inspected	
====>Grouped by Line: RHD-02.10B B HDR to FWH 36A								
RHD02.10B-10P	0.432	0.399	0.233	0.233	0.233	No	2,049,122	220,317
RHD02.10B-11E	0.432	0.383	0.233	0.233	0.233	No	1,253,165	220,317
RHD02.10B-12V	0.432	0.366	0.200	0.200	0.200	No	1,022,056	220,317
RHD02.10B-13P	0.432	0.403	0.233	0.233	0.233	No	2,383,786	220,317
RHD02.10B-14T	0.432	0.549	0.233	0.233	0.233	Yes	1,945,164	220,317
RHD02.10B-14T (BR/SE)	0.000	0.500	0.211	0.211	0.211	Yes	1,439,991	220,317
RHD02.10B-15P	0.432	0.406	0.233	0.233	0.233	No	2,662,672	220,317
RHD02.10B-16T	0.432	0.555	0.233	0.233	0.233	Yes	1,982,137	220,317
RHD02.10B-16T (BR/SE)	0.000	0.491	0.211	0.211	0.211	Yes	1,395,197	220,317
RHD02.10B-17R	0.000	0.320	0.233	0.233	0.233	Yes	955,420	220,317
RHD02.10B-17R (D/S)	0.000	0.638	0.303	0.303	0.303	Yes	5,792,128	220,317
RHD02.11B-01N	0.500	0.469	0.261	0.261	0.261	No	2,697,031	220,317
====>Grouped by Line: RHD-02.11A A HDR to FWH 36A								
RHD02.11A-01R	0.000	0.473	0.303	0.303	0.303	No	2,513,546	220,317
RHD02.11A-01R (D/S)	0.000	0.390	0.233	0.233	0.233	No	1,512,265	220,317
RHD02.11A-02P_1	0.432	0.399	0.233	0.233	0.233	No	2,049,122	220,317
RHD02.11A-02P_2	0.432	0.418	0.233	0.233	0.233	No	5,172,651	220,317
RHD02.11A-03E	0.432	0.383	0.233	0.233	0.233	No	1,253,165	220,317
RHD02.11A-04P	0.432	0.399	0.233	0.233	0.233	No	2,049,122	220,317
RHD02.11A-05E	0.432	0.383	0.233	0.233	0.233	No	1,253,165	220,317
RHD02.11A-06P	0.432	0.390	0.233	0.233	0.233	No	1,512,265	220,317
RHD02.11A-07E	0.432	0.383	0.233	0.233	0.233	No	1,253,165	220,317
RHD02.11A-08E	0.432	0.383	0.233	0.233	0.233	No	1,253,165	220,317
RHD02.11A-09P_1	0.432	0.390	0.233	0.233	0.233	No	1,512,265	220,317
RHD02.11A-09P_2	0.432	0.418	0.233	0.233	0.233	No	5,172,651	220,317
RHD02.11A-10E	0.432	0.383	0.233	0.233	0.233	No	1,253,165	220,317
RHD02.11A-11P	0.432	0.399	0.233	0.233	0.233	No	2,049,122	220,317
RHD02.11A-12E	0.432	0.383	0.233	0.233	0.233	No	1,253,165	220,317
RHD02.11A-13P	0.432	0.399	0.233	0.233	0.233	No	2,049,122	220,317
RHD02.11A-14E	0.432	0.383	0.233	0.233	0.233	No	1,253,165	220,317
RHD02.11A-15V	0.432	0.366	0.200	0.200	0.200	No	1,022,056	220,317
RHD02.11A-16P	0.489	0.459	0.233	0.233	0.233	No	3,051,165	220,317
RHD02.11A-17T	0.432	0.471	0.233	0.233	0.233	Yes	1,464,513	220,317
RHD02.11A-17T (BR/SE)	0.000	0.451	0.211	0.211	0.211	No	1,196,115	220,317
RHD02.11A-18P	0.473	0.446	0.233	0.233	0.233	No	3,196,957	220,317
RHD02.11A-19T	0.432	0.480	0.233	0.233	0.233	Yes	1,519,972	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: RHD-02.11A A HDR to FWH 36A							
RHD02.11A-19T (BR/SE)	0.000	0.416	0.211	0.211	1,021,918	Yes	220,317
RHD02.11A-20R	0.000	0.395	0.233	0.233	1,786,172	No	220,317
RHD02.11A-20R (D/S)	0.000	0.477	0.303	0.303	2,999,983	No	220,317
RHD02.12A-01N	0.500	0.469	0.261	0.261	2,697,031	No	220,317
====>Grouped by Line: RHD-02.12B B HDR to FWH 36B							
RHD02.12B-01P	0.432	0.406	0.233	0.233	2,662,672	No	220,317
RHD02.12B-02E	0.432	0.304	0.233	0.233	590,637	Yes	220,317
RHD02.12B-03P	0.432	0.390	0.233	0.233	1,512,265	No	220,317
RHD02.12B-04E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD02.12B-05P	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD02.12B-06E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD02.12B-07P	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD02.12B-08E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD02.12B-09V	0.432	0.366	0.200	0.200	1,022,056	No	220,317
RHD02.12B-10P	0.432	0.403	0.233	0.233	2,383,786	No	220,317
RHD02.12B-11T	0.432	0.595	0.233	0.233	2,232,506	Yes	220,317
RHD02.12B-11T (BR/SE)	0.000	0.471	0.211	0.211	1,296,930	Yes	220,317
RHD02.12B-12P	0.432	0.406	0.233	0.233	2,662,672	No	220,317
RHD02.12B-13T	0.432	0.516	0.233	0.233	1,741,812	Yes	220,317
RHD02.12B-13T (BR/SE)	0.000	0.356	0.211	0.211	723,295	Yes	220,317
RHD02.12B-14R	0.000	0.395	0.233	0.233	1,786,172	No	220,317
RHD02.12B-14R (D/S)	0.000	0.477	0.303	0.303	2,999,983	No	220,317
RHD02.13B-01N	0.500	1.094	0.261	0.261	10,809,104	No	220,317
====>Grouped by Line: RHD-02.13A A HDR to FWH 36B							
RHD02.13A-01P	0.432	0.346	0.233	0.233	1,737,418	Yes	220,317
RHD02.13A-02E	0.432	0.369	0.233	0.233	1,131,911	Yes	220,317
RHD02.13A-03P	0.432	0.390	0.233	0.233	1,512,265	No	220,317
RHD02.13A-04E	0.432	0.443	0.233	0.233	1,747,293	Yes	220,317
RHD02.13A-05E	0.432	0.330	0.233	0.233	806,308	Yes	220,317
RHD02.13A-06P_1	0.432	0.410	0.233	0.233	1,708,953	Yes	220,317
RHD02.13A-06P_2	0.432	0.418	0.233	0.233	5,172,651	No	220,317
RHD02.13A-07E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD02.13A-08P	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD02.13A-09E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD02.13A-10P	0.432	0.399	0.233	0.233	2,049,122	No	220,317

Component Name	----- Thickness (in) -----		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			Time to Tcrit (hrs)	Inspected	
====> Grouped by Line: RHD-02.13A A HDR to FWH 36B							
RHD02.13A-11E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD02.13A-12V	0.432	0.366	0.200	0.200	No	1,022,056	220,317
RHD02.13A-13P	0.432	0.403	0.233	0.233	No	2,383,786	220,317
RHD02.13A-14T	0.432	0.475	0.233	0.233	Yes	1,489,161	220,317
RHD02.13A-14T (BR/SE)	0.000	0.434	0.211	0.211	Yes	1,111,505	220,317
RHD02.13A-15P	0.432	0.406	0.233	0.233	No	2,662,672	220,317
RHD02.13A-16T	0.432	0.431	0.233	0.233	Yes	1,221,905	220,317
RHD02.13A-16T (BR/SE)	0.000	0.297	0.211	0.211	Yes	430,923	220,317
RHD02.13A-17R	0.000	0.395	0.233	0.233	No	1,786,172	220,317
RHD02.13A-17R (D/S)	0.000	0.477	0.303	0.303	No	2,999,983	220,317
RHD02.14A-01N	0.500	1.067	0.261	0.261	Yes	10,454,029	220,317
====> Grouped by Line: RHD-02.14B B HDR to FWH 36C							
RHD02.14B-01P	0.432	0.406	0.233	0.233	No	2,662,672	220,317
RHD02.14B-02E	0.000	0.426	0.233	0.233	No	1,606,567	50,194
RHD02.14B-03P	0.432	0.390	0.233	0.233	No	1,512,265	220,317
RHD02.14B-04E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD02.14B-05E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD02.14B-06P	0.432	0.390	0.233	0.233	No	1,512,265	220,317
RHD02.14B-07E	0.432	0.383	0.233	0.233	No	1,253,165	220,317
RHD02.14B-08V	0.432	0.366	0.200	0.200	No	1,022,056	220,317
RHD02.14B-09P	0.432	0.403	0.233	0.233	No	2,383,786	220,317
RHD02.14B-10T	0.000	0.427	0.233	0.233	No	1,193,376	33,725
RHD02.14B-10T (BR/SE)	0.000	0.425	0.211	0.211	No	1,066,712	33,725
RHD02.14B-11P	0.432	0.406	0.233	0.233	No	2,662,672	220,317
RHD02.14B-12T	0.432	0.514	0.233	0.233	Yes	1,730,022	220,317
RHD02.14B-12T (BR/SE)	0.000	0.393	0.211	0.211	Yes	904,426	220,317
RHD02.14B-14P	0.000	0.429	0.233	0.233	No	3,016,075	50,194
RHD02.14B-13R	0.000	0.395	0.233	0.233	No	1,786,172	220,317
RHD02.14B-13R (D/S)	0.000	0.477	0.303	0.303	No	2,999,983	220,317
RHD02.15B-01N	0.432	1.094	0.261	0.261	Yes	11,172,170	220,317
====> Grouped by Line: RHD-02.15A A HDR to FWH 36C							
RHD02.15A-01P	0.432	0.406	0.233	0.233	No	2,662,672	220,317
RHD02.15A-02E	0.000	0.439	0.233	0.233	No	1,714,822	50,194
RHD02.15A-03P	0.432	0.345	0.233	0.233	Yes	1,379,599	220,317
RHD02.15A-04E	0.432	0.383	0.233	0.233	No	1,253,165	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: RHD-02.15A A HDR to FWH 36C							
RHD02.15A-05P	0.432	0.399	0.233	0.233	2,049,122	No	220,317
RHD02.15A-06E	0.432	0.383	0.233	0.233	1,253,165	No	220,317
RHD02.15A-07V	0.432	0.366	0.200	0.200	1,022,056	No	220,317
RHD02.15A-08P	0.432	0.403	0.233	0.233	2,383,786	No	220,317
RHD02.15A-09T	0.432	0.534	0.233	0.233	1,852,731	Yes	220,317
RHD02.15A-09T (BR/SE)	0.000	0.449	0.211	0.211	1,186,161	Yes	220,317
RHD02.15A-10P	0.432	0.406	0.233	0.233	2,662,672	No	220,317
RHD02.15A-11T	0.000	0.424	0.233	0.233	1,175,424	No	50,194
RHD02.15A-11T (BR/SE)	0.000	0.422	0.211	0.211	1,048,760	No	50,194
RHD02.15A-13P	0.000	0.429	0.233	0.233	3,016,075	No	50,194
RHD02.15A-12R	0.000	0.395	0.233	0.233	1,786,172	No	220,317
RHD02.15A-12R (D/S)	0.000	0.477	0.303	0.303	2,999,983	No	220,317
RHD02.16A-01N	0.500	1.071	0.261	0.261	10,510,694	Yes	220,317
====>Grouped by Line: RHD-02.7B TK B HDR to FWH 36							
RHD02.2B-06L (BR/SE)	0.000	0.874	0.211	0.211	4,856,246	No	220,317
RHD02.2B-06L (D/S)	0.000	0.476	0.303	0.303	1,209,676	No	220,317
RHD02.7B-01P	0.500	0.472	0.303	0.303	2,416,228	No	220,317
RHD02.7B-02E	0.500	0.448	0.303	0.303	1,119,952	No	220,317
RHD02.7B-03P	0.500	0.465	0.303	0.303	1,851,966	No	220,317
RHD02.7B-04E	0.500	0.453	0.303	0.303	1,304,804	No	220,317
RHD02.7B-05P	0.500	0.469	0.303	0.303	2,159,746	No	220,317
RHD02.7B-06E	0.500	0.453	0.303	0.303	1,304,804	No	220,317
RHD02.7B-07P	0.543	0.511	0.303	0.303	2,654,810	No	220,317
====>Grouped by Line: RHD-02.8A TK A HDR to FWH 36							
RHD02.6A-06L (BR/SE)	0.000	0.223	0.211	0.211	88,135	Yes	220,317
RHD02.6A-06L	0.594	0.556	0.378	0.378	3,441,606	Yes	220,317
RHD02.6A-06L (D/S)	0.000	0.556	0.378	0.378	1,897,359	No	220,317
RHD02.8A-01P	0.000	0.575	0.378	0.378	4,314,920	No	220,317
RHD02.8A-02E	0.594	0.563	0.378	0.378	2,455,526	No	220,317
RHD02.8A-03P	0.594	0.574	0.378	0.378	3,885,829	No	220,317
====>Grouped by Line: RHD-02.8B TK B HDR to FWH 36							
RHD02.7B-08L	0.605	0.550	0.378	0.378	3,311,932	Yes	220,317
RHD02.8B-06T (BR/SE)	0.000	0.584	0.211	0.211	2,650,879	Yes	220,317
RHD02.7B-08L (BR/SE)	0.000	1.157	0.281	0.281	6,297,294	No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Inspected	Component Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====> Grouped by Line: RHD-02.8B TK B HDR to FWH 36							
RHD02.7B-08L (D/S)	0.000	0.529	0.378	0.378	Yes	1,133,871	220,317
RHD02.8B-01P	0.609	0.540	0.378	0.378	Yes	2,483,636	220,317
RHD02.8B-02E	0.594	0.545	0.378	0.378	No	1,393,618	220,317
RHD02.8B-03P	0.594	0.561	0.378	0.378	No	2,256,992	220,317
RHD02.8B-04E	0.594	0.545	0.378	0.378	No	1,393,618	220,317
RHD02.8B-05P	0.594	0.552	0.378	0.378	No	1,674,664	220,317
RHD02.8B-06T	0.594	0.597	0.378	0.378	Yes	1,225,536	220,317
RHD02.8B-06T (D/S)	0.000	0.543	0.378	0.378	No	1,311,284	220,317
====> Grouped by Line: RHD-02.9A TK A HDR to FWH 36							
RHD02.2A-06L (BR/SE)	0.000	0.377	0.211	0.211	No	1,213,210	220,317
RHD02.9A-11T (D/S)	0.000	0.543	0.378	0.378	No	1,311,284	220,317
RHD02.9A-11T (BR/SE)	0.000	0.496	0.211	0.211	Yes	2,025,192	220,317
RHD02.2A-06L	0.594	0.556	0.378	0.378	No	1,897,359	220,317
RHD02.2A-06L (D/S)	0.000	0.540	0.378	0.378	No	1,218,135	220,317
RHD02.9A-01P	0.594	0.568	0.378	0.378	No	2,922,510	220,317
RHD02.9A-02E	0.594	0.551	0.378	0.378	No	1,611,642	220,317
RHD02.9A-03P	0.594	0.565	0.378	0.378	No	2,620,002	220,317
RHD02.9A-04E	0.594	0.551	0.378	0.378	No	1,611,642	220,317
RHD02.9A-05P	0.594	0.565	0.378	0.378	No	2,620,002	220,317
RHD02.9A-06E	0.594	0.551	0.378	0.378	No	1,611,642	220,317
RHD02.9A-07E	0.594	0.548	0.378	0.378	No	1,496,400	220,317
RHD02.9A-08P	0.594	0.561	0.378	0.378	No	2,256,992	220,317
RHD02.9A-09E	0.594	0.548	0.378	0.378	No	1,496,400	220,317
RHD02.9A-10P	0.594	0.561	0.378	0.378	No	2,256,992	220,317
RHD02.9A-11T	0.594	0.641	0.378	0.378	Yes	1,471,864	220,317
====> Grouped by Line: RHD-02.9B TK B HDR to FWH 36							
RHD02.9B-02T (D/S)	0.000	0.566	0.378	0.378	No	2,702,163	220,317
RHD02.9B-02T (BR/SE)	0.000	0.375	0.211	0.211	No	1,166,973	220,317
RHD02.9B-01P	0.594	0.575	0.378	0.378	No	4,314,920	220,317
RHD02.9B-02T	0.594	0.543	0.378	0.378	No	1,311,284	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Appendix I

Pass 2 Wear Rate Analysis Reports

Wear Rate Analysis Run	Wear Rate by Average Wear Rate	Wear Rate by Flow Order	Service Life by Remaining Life	Service Life by Flow Order	Wear Report
CD: HDR TO BFP	I-3	I-121	I-240	I-360	I-482
CD: HDR TO HTR 33	I-6	I-124	I-243	I-363	I-484
CD: HTR 31 TO HTR 32	I-8	I-126	I-245	I-365	I-486*
CD: HTR 32 TO 33 HDR	I-10	I-128	I-247	I-367	I-487
CD: HTR 32 TO HDR	I-12	I-130	I-249	I-369	I-489
CD: HTR 33 TO HTR 34	I-14	I-132	I-251	I-371	I-490
CD: HTR 34 TO HTR 35	I-16	I-134	I-253	I-373	I-491
CD: HTR 35 TO BFP HDR	I-18	I-136	I-255	I-375	I-492
CD: HTR 35 TO HDR	I-19	I-137	I-256	I-376	I-493
CD: S/G BLWDN HX IN	I-21	I-139	I-258	I-378	I-494
CD: S/G BLWDN HX OUT	I-22	I-141	I-260	I-380	I-495
ES: BFPT DRN TO COND	I-23	I-142	I-261	I-381	I-496*
ES: HDR TO 35 HTRS	I-24	I-143	I-263	I-383	I-497
ES: HDR TO 36 HTRS	I-25	I-144	I-264	I-385	I-499
ES: HTR 36 HEADER	I-27	I-146	I-266	I-387	I-501
ES: LP TO 31 HEATERS	I-29	I-148	I-268	I-389	I-503
ES: LP TO 32 HEATERS	I-32	I-151	I-271	I-392	I-504
ES: LP TO 33 HEATERS	I-34	I-153	I-273	I-394	I-505
ES: PRESEP TO 35 HDR	I-40	I-159	I-279	I-400	I-507
FW: 36 HTR TO SG HDR	I-44	I-163	I-283	I-404	I-509
FW: BFP TO 36 HTR	I-46	I-165	I-285	I-406	I-511
FW: FW RECIRC	I-50	I-169	I-289	I-410	I-514*
FW: SG HEADERS	I-53	I-172	I-292	I-413	I-515
HD: HD PMP TO BFP HDR	I-60	I-179	I-299	I-420	I-518
HD: HTR 31 TO COND	I-62	I-181	I-301	I-422	I-520*
HD: HTR 32 TO HTR 31	I-65	I-184	I-304	I-425	I-521

Wear Rate Analysis Run	Wear Rate by Average Wear Rate	Wear Rate by Flow Order	Service Life by Remaining Life	Service Life by Flow Order	Wear Report
HD: HTR 33 TO HTR 32	I-68	I-187	I-307	I-428	I-522
HD: HTR 34 TO HTR 33	I-73	I-192	I-312	I-433	I-524
HD: HTR 35 TO HDT	I-77	I-196	I-316	I-437	I-526
HD: HTR 36 TO HDT	I-79	I-198	I-318	I-439	I-527
HD: HTR DN TO PUMPS	I-81	I-200	I-320	I-441	I-529
MSD: MS 31 TO MSDT	I-82	I-201	I-321	I-442	I-530
MSD: MS 32 TO MSDT	I-84	I-203	I-323	I-444	I-531
MSD: MS 33 TO MSDT	I-86	I-205	I-325	I-446	I-533
MSD: MSDT 31 TO HDT	I-88	I-207	I-328	I-449	I-534
MSD: MSDT 32 TO HDT	I-91	I-210	I-331	I-452	I-535
MSD: MSDT 33 TO HDT	I-94	I-213	I-334	I-455	I-537
PD: PRESEPRTR DRAINS	I-97	I-216	I-337	I-458	I-539
RHD: RH 31 TO HDR	I-101	I-220	I-341	I-462	I-540
RHD: RH 32A TO HDR	I-106	I-225	I-345	I-466	I-542
RHD: RH 32B TO HDR	I-108	I-227	I-347	I-469	I-544
RHD: RH 33 TO HDR	I-111	I-230	I-350	I-472	I-546
RHD: RHD HDR TO HTRS	I-115	I-234	I-354	I-476	I-548

*No inspections exist in this run, so the Wear Report is empty.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:22:58PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HDR TO BFP
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.119

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-06.1 FWH 35 OUT HDR											
CD-06.1-03T	14	8.346	5.240	375.7	15.783	0.0	30.000	6.903	0.000	69.01	ARD
CD-06.1-01T (D/S)	12	6.198	3.891	375.7	15.688	0.0	30.000	6.903	0.000	69.01	ARD
CD-06.1-01T (BR/SE)	12	6.113	3.684	370.3	16.286	0.0	16.000	6.928	0.000	69.01	ARD
CD-06.1-03T (D/S)	14	5.665	3.557	375.7	7.891	0.0	30.000	6.903	0.000	69.01	ARD
CD-06.1-01T	12	5.508	3.246	377.3	11.388	0.0	30.000	6.893	0.000	69.01	ARD
CD-06.1-03T (BR/SE)	14	4.858	3.050	375.7	12.681	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.1-02P	62	3.313	2.080	375.7	18.139	0.0	28.000	6.903	0.000	69.01	ARD
====>Grouped by Line: CD-06.2A HDR to BFP 31											
CD-06.2A-24O	6	10.980	6.893	375.7	26.293	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3A-02N	30	7.999	5.022	375.7	22.658	0.0	18.000	6.903	0.000	69.01	ARD
CD-06.2A-07V	22	6.915	4.341	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-02E	2	5.141	3.227	375.7	12.699	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-04E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-06E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-09E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-11E	4	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-13E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-15E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-17E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-19E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-20E	4	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-26E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-28E	4	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-33E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-31E	3	4.841	3.039	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-30E	1	4.564	2.865	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-12P	54	4.426	2.778	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-06.2A HDR to BFP 31											
CD-06.2A-21P	54	4.426	2.778	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-29P	54	4.426	2.778	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3A-01R (D/S)	17	3.600	2.260	375.7	22.658	0.0	18.000	6.903	0.000	69.01	ARD
CD-06.2A-03P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-05P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-10P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-14P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-16P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-18P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-27P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-32P	53	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-34P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3A-01R	17	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-08P	58	3.043	1.910	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-01P	64	2.776	1.743	375.7	12.681	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-25P	56	2.196	1.379	375.7	26.293	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-22P	9	1.771	1.128	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-23P	9	1.771	1.128	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
====>Grouped by Line: CD-06.2B HDR to BFP 32											
CD-06.2B-08O	6	10.980	6.893	375.7	26.293	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3B-02N	30	7.999	5.022	375.7	22.658	0.0	18.000	6.903	0.000	69.01	ARD
CD-06.2B-04T (BR/SE)	13	6.915	4.341	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-04T	13	6.915	4.341	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-05V	22	6.915	4.341	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-06E	4	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-10E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-12E	4	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-14E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-01R (D/S)	7	4.426	2.778	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-07P	54	4.426	2.778	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-13P	54	4.426	2.778	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-03T (D/S)	15	4.149	2.605	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-03T	15	4.149	2.605	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3B-01R (D/S)	17	3.600	2.260	375.7	22.658	0.0	18.000	6.903	0.000	69.01	ARD
CD-06.2B-01R	7	3.581	2.248	375.7	7.807	0.0	30.000	6.903	0.000	69.01	ARD
CD-06.2B-02P	57	3.463	2.174	375.7	12.639	0.0	24.000	6.903	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-06.2B HDR to BFP 32											
CD-06.2B-11P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-15P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3B-01R	17	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-09P	56	2.196	1.379	375.7	26.293	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-35P	9	1.771	1.128	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-36P	9	1.771	1.128	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:23:04PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HDR TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.090

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.8A HDR to FWH 33A											
CD-02.8A-04V	22	6.141	3.975	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-08N	30	4.913	3.180	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-02E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-05E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-07E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.7-02T (BR/SE)	14	4.299	2.783	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-03P	54	3.930	2.544	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-06P	54	3.930	2.544	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.7-02T	14	3.095	2.032	198.0	5.527	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.8A-01P	64	2.456	1.590	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.7-01P	64	1.123	0.737	198.0	5.515	0.0	24.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.8B HDR to FWH 33B											
CD-02.8B-04V	22	6.141	3.975	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-08N	30	4.913	3.180	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-02E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-05E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-07E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-03P	54	3.930	2.544	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-06P	54	3.930	2.544	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-01P	64	2.460	1.592	198.0	16.461	0.0	14.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.8C HDR to FWH 33C											
CD-02.8C-04V	22	6.141	3.975	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-08N	30	4.913	3.180	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-02E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-05E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-07E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-03P	54	4.051	2.622	198.0	17.235	0.0	14.000	7.096	0.000	89.94	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.8C HDR to FWH 33C											
CD-02.8C-06P	54	3.930	2.544	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-01P	64	2.549	1.650	198.0	17.425	0.0	14.000	7.096	0.000	89.94	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:23:12PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 31 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-01.1A FWH 31A to FWH 32A											
CD-01.1A-01N	31	4.042	2.544	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-13N	30	3.234	2.035	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-03E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-05E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-06E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-07E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-09E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-11E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-08P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-12P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-02P	61	2.183	1.374	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-04P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-10P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
====>Grouped by Line: CD-01.1B FWH 31B to FWH 32B											
CD-01.1B-01N	31	4.042	2.544	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-13N	30	3.234	2.035	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-03E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-05E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-06E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-07E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-09E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-11E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-08P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-12P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-02P	61	2.183	1.374	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-04P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-10P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Average Wear Rate											
====>Grouped by Line: CD-01.1C FWH 31C to FWH 32C											
CD-01.1C-01N	31	4.042	2.544	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-13N	30	3.234	2.035	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-03E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-05E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-06E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-07E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-09E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-11E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-08P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-12P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-02P	61	2.183	1.374	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-04P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-10P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:23:21PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 32 TO 33 HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.808

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.2 FWH 32 OUT HDR											
CD-02.1B-11T (D/S)	12	3.512	2.274	198.0	16.115	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.1B-11T (BR/SE)	12	3.095	2.003	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.2-02R	18	2.389	1.546	198.0	16.013	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.1B-11T	12	2.382	1.542	198.0	8.046	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.2-02R (D/S)	18	2.030	1.314	198.0	11.071	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.2-01P	62	1.707	1.105	198.0	16.013	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.2-03P	9	1.175	0.771	198.0	16.013	0.0	20.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.3 FWH 32 OUT HDR											
CD-02.3-15T	14	4.666	3.020	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-15T (D/S)	14	4.566	2.956	198.0	15.968	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.1C-12T (D/S)	12	3.480	2.253	198.0	16.610	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-04E	2	3.139	2.032	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-07E	2	3.139	2.032	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-11E	2	3.139	2.032	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-13E	4	3.139	2.032	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.1C-12T (BR/SE)	12	3.095	2.003	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.3-05E	3	2.969	1.922	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-09E	1	2.800	1.812	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.1C-12T	12	2.775	1.796	198.0	11.079	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-14P	54	2.715	1.757	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-02T (D/S)	15	2.545	1.647	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-02T	15	2.545	1.647	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-06P	53	2.121	1.373	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-08P	52	2.121	1.373	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-12P	52	2.121	1.373	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-10P	51	1.866	1.208	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-01P	62	1.706	1.104	198.0	16.740	0.0	24.000	7.096	0.000	89.94	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.3 FWH 32 OUT HDR											
CD-02.3-03P	65	1.697	1.098	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-16P	9	1.181	0.775	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-15T (BR/SE)	14	0.384	0.252	198.0	1.117	0.0	18.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.4 FWH 32 OUT HDR											
CD-02.4-02V	23	5.236	3.389	198.0	23.095	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.4-04E	19	4.345	2.812	198.0	24.480	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.4-04E (D/S)	19	3.387	2.192	198.0	16.477	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.4-01R (D/S)	7	3.351	2.169	198.0	23.095	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.5-02E	2	3.180	2.058	198.0	16.868	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.4-01R	7	2.906	1.881	198.0	15.968	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.4-03P	58	2.304	1.491	198.0	23.095	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.5-01P	69	2.091	1.353	198.0	16.156	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-17P	62	1.660	1.075	198.0	15.968	0.0	24.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.5 FWH 32 OUT HDR											
CD-02.5-04T	14	4.688	3.035	198.0	16.723	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-04T (D/S)	14	3.738	2.420	198.0	11.154	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-03T (D/S)	12	3.478	2.252	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-03T	12	3.404	2.203	198.0	15.968	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-04T (BR/SE)	14	3.186	2.062	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.5-03T (BR/SE)	12	0.378	0.248	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.6 FWH 32 OUT HDR											
CD-02.6-03T	14	3.723	2.410	198.0	11.083	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.6-03T (BR/SE)	14	3.186	2.062	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.6-03T (D/S)	14	2.296	1.507	198.0	5.533	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.6-01T (D/S)	15	2.031	1.314	198.0	11.081	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.6-01T	15	2.031	1.314	198.0	11.081	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.6-02P	65	1.354	0.876	198.0	11.081	0.0	24.000	7.096	0.000	89.94	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:23:29PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 32 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.990

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
=====>Grouped by Line: CD-02.1A FWH 32A to HDR											
CD-02.1A-06E	5	6.692	4.331	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-01N	31	5.576	3.610	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-05V	22	5.576	3.610	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-03E	2	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-09E	2	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-11E	4	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-08P	55	3.903	2.527	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-12P	54	3.569	2.310	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-13R	18	3.123	2.021	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-02P	61	3.011	1.949	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-04P	52	2.788	1.805	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-10P	52	2.788	1.805	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-13R (D/S)	18	2.127	1.377	198.0	7.994	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.1A-14P	9	1.548	1.016	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
=====>Grouped by Line: CD-02.1B FWH 32B to HDR											
CD-02.1B-01N	31	5.576	3.610	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-07V	22	5.576	3.610	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-03E	2	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-05E	2	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-06E	4	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-09E	2	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-02P	61	3.011	1.949	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-10P	52	2.912	1.885	198.0	17.602	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-04P	52	2.788	1.805	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-08P	58	2.454	1.588	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
=====>Grouped by Line: CD-02.1C FWH 32C to HDR											
CD-02.1C-01N	31	5.576	3.610	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.1C FWH 32C to HDR											
CD-02.1C-08V	22	5.576	3.610	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-10E	2	4.237	2.743	198.0	17.134	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-03E	2	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-05E	2	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-06E	4	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-07P	54	3.569	2.310	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-02P	61	3.011	1.949	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-04P	52	2.788	1.805	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-11P	52	2.788	1.805	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-09P	58	2.454	1.588	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:23:36PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 33 TO HTR 34
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.601

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-03.1A FWH 33A to FWH 34A											
CD-03.1A-01N	31	5.101	3.218	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-13N	30	4.081	2.575	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-02E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-03E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-06E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-10E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-05E	1	3.367	2.124	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-08E	1	3.367	2.124	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-12E	1	3.367	2.124	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-04P	54	3.265	2.060	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-07P	54	3.265	2.060	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-11P	54	3.265	2.060	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-15P	51	2.245	1.416	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-09P	51	2.245	1.416	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-14P	9	1.425	0.911	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
====>Grouped by Line: CD-03.1B FWH 33B to FWH 34B											
CD-03.1B-01N	31	5.101	3.218	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-11N	30	4.081	2.575	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-06E	4	3.861	2.436	245.2	17.379	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-05E	2	3.855	2.432	245.2	17.336	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-02E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-03E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-08E	2	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-10E	1	3.367	2.124	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-07P	54	3.289	2.075	245.2	16.966	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-04P	54	3.265	2.060	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-09P	52	2.551	1.609	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-03.1B FWH 33B to FWH 34B											
CD-03.1B-12P	9	1.425	0.911	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
====>Grouped by Line: CD-03.1C FWH 33C to FWH 34C											
CD-03.1C-01N	31	5.101	3.218	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-11N	30	4.081	2.575	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-02E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-03E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-05E	2	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-06E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-08E	2	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-10E	1	3.367	2.124	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-04P	54	3.265	2.060	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-07P	54	3.265	2.060	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-09P	52	2.551	1.609	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-12P	9	1.425	0.911	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:23:45PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 34 TO HTR 35
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.452

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-04.1A FWH 34A to FWH 35A											
CD-04.1A-01N	31	5.007	3.154	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-14N	30	4.006	2.523	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-02E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-03E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-05E	2	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-07E	2	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-09E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-11E	2	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-13E	1	3.305	2.082	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-04P	54	3.204	2.019	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-10P	54	3.204	2.019	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-06P	52	2.504	1.577	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-08P	52	2.504	1.577	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-12P	52	2.504	1.577	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-15P	9	1.410	0.901	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
====>Grouped by Line: CD-04.1B FWH 34B to FWH 35B											
CD-04.1B-01N	31	5.007	3.154	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-16N	30	4.006	2.523	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-02E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-03E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-05E	2	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-08E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-10E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-13E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-06E	3	3.505	2.208	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-12E	1	3.305	2.082	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-15E	1	3.305	2.082	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-04.1B FWH 34B to FWH 35B											
CD-04.1B-04P	54	3.204	2.019	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-09P	54	3.204	2.019	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-11P	54	3.204	2.019	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-14P	54	3.204	2.019	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-07P	53	2.504	1.577	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-17P	9	1.410	0.901	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
====>Grouped by Line: CD-04.1C FWH 34C to FWH 35C											
CD-04.1C-01N	31	5.007	3.154	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-13N	30	4.006	2.523	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-02E	4	3.819	2.406	298.3	18.078	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-03E	4	3.801	2.394	298.3	17.943	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-05E	2	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-07E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-08E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-10E	2	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-12E	1	3.305	2.082	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-04P	54	3.204	2.019	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-09P	54	3.204	2.019	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-06P	52	2.504	1.577	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-11P	52	2.504	1.577	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-14P	9	1.410	0.901	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:23:49PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 35 TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.422

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-05.3 FWH 35 OUT HDR											
CD-05.1B-09T (BR/SE)	12	2.453	1.506	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-09T (D/S)	12	2.207	1.355	377.3	12.287	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.1B-09T	12	1.403	0.874	377.3	6.134	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.3-01P	62	1.077	0.661	377.3	12.287	0.0	24.000	6.880	0.000	82.05	HBD
====>Grouped by Line: CD-05.4 FWH 35 OUT HDR											
CD-05.1C-10T (D/S)	12	2.757	1.693	377.3	18.304	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-03T (BR/SE)	10	2.692	1.653	377.3	18.329	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-03T (D/S)	10	2.502	1.536	377.3	11.447	0.0	30.000	6.880	0.000	82.05	HBD
CD-05.4-01E	4	2.488	1.527	377.3	18.304	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.1C-10T (BR/SE)	12	2.453	1.506	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-10T	12	2.198	1.350	377.3	12.208	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-02P	54	2.160	1.326	377.3	18.414	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-05P	60	1.492	0.916	377.3	11.334	0.0	30.000	6.880	0.000	82.05	HBD
CD-05.4-04P	62	1.345	0.826	377.3	18.304	0.0	24.000	6.880	0.000	82.05	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:23:54PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 35 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.655

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-05.1A FWH 35A to HDR											
CD-05.1A-01N	31	5.594	3.435	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-05V	22	5.594	3.435	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-02E	4	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-03E	4	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-07E	2	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-09E	4	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-04P	54	3.580	2.198	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-10P	54	3.580	2.198	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-11R	18	3.133	1.924	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-08P	52	2.797	1.717	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-06P	58	2.462	1.511	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-11R (D/S)	18	1.583	0.986	377.3	6.095	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.2-01P	68	1.319	0.822	377.3	6.095	0.0	24.000	6.880	0.000	82.05	HBD
====>Grouped by Line: CD-05.1B FWH 35B to HDR											
CD-05.1B-01N	31	5.594	3.435	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-05V	22	5.594	3.435	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-07E	2	4.251	2.610	377.3	18.894	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-02E	4	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-03E	4	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-04P	54	3.580	2.198	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-06P	58	2.462	1.511	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
====>Grouped by Line: CD-05.1C FWH 35C to HDR											
CD-05.1C-01N	31	5.594	3.435	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-05V	22	5.594	3.435	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-02E	4	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-03E	4	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-07E	2	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-05.1C FWH 35C to HDR											
CD-05.1C-08E	4	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-09P	54	3.622	2.224	377.3	18.449	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-04P	54	3.580	2.198	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-06P	58	2.462	1.511	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:24:00PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: S/G BLWDN HX IN
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.754

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.9 FWH HDR to SGBD HX3											
CD-02.10-11N	30	4.963	3.258	198.0	6.587	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.9-17T (BR/SE)	14	3.961	2.600	198.0	5.966	0.0	8.000	7.096	0.000	89.94	HBD
CD-02.10-04E	2	3.598	2.362	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-06E	2	3.598	2.362	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-08E	2	3.598	2.362	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-10E	4	3.598	2.362	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-05P	52	2.431	1.596	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-07P	52	2.431	1.596	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-09P	52	2.431	1.596	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-03P	56	2.082	1.348	198.0	14.012	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-01P	64	1.945	1.277	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.9-17T	14	1.328	0.872	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-04V	22	1.208	0.793	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-02E	4	0.894	0.587	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-06E	2	0.894	0.587	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-08E	4	0.894	0.587	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-11E	2	0.894	0.587	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-13E	2	0.894	0.587	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-16E	2	0.894	0.587	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-03P	54	0.773	0.507	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-09P	54	0.773	0.507	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-07P	52	0.604	0.396	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-12P	52	0.604	0.396	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-14P	52	0.604	0.396	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-05P	58	0.531	0.349	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-01P	63	0.483	0.317	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-10P	9	0.266	0.174	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-15P	9	0.266	0.174	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:24:20PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: S/G BLWDN HX OUT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.247

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.11 SGBD HX3 to FWH HDR											
CD-02.11-01N	31	11.487	7.540	198.0	6.587	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-13T (BR/SE)	10	8.382	5.502	198.0	5.966	0.0	8.000	7.096	0.000	89.94	HBD
CD-02.11-03E	2	6.662	4.373	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-07E	2	6.662	4.373	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-10E	2	6.662	4.373	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-12E	2	6.662	4.373	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-05E	1	5.942	3.900	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-02P	61	4.862	3.191	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-04P	52	4.501	2.955	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-08P	52	4.501	2.955	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-11P	52	4.501	2.955	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-06P	51	3.961	2.600	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-13T (D/S)	10	2.236	1.468	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-04V	22	2.236	1.468	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.11-09P	9	1.981	1.300	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.12-02E	2	1.655	1.086	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-06E	2	1.655	1.086	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-08E	2	1.655	1.086	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-10E	2	1.655	1.086	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-01P	60	1.342	0.881	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-03P	52	1.118	0.734	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-07P	52	1.118	0.734	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-09P	52	1.118	0.734	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-11P	52	1.118	0.734	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-05P	58	0.984	0.646	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:24:26PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: BFPT DRN TO COND
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-07.1 BFPT 31 Drain to Cond											
EX-07.1-01N	31	0.285	0.291	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-03EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-08EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-10EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-06P	53	0.183	0.186	101.7	0.046	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-02E	4	0.177	0.181	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-05E	3	0.162	0.164	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-07E	1	0.152	0.155	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-11R	18	0.120	0.122	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-12N	30	0.102	0.101	101.7	0.020	87.3	54.000	7.276	0.000	68.22	HBD
EX-07.1-04P	56	0.069	0.072	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-09P	56	0.069	0.072	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-11R (D/S)	18	0.068	0.068	101.7	0.020	87.3	54.000	7.276	0.000	68.22	HBD
====>Grouped by Line: EX-07.2 BFPT 32 Drain to Cond											
EX-07.2-01N	31	0.285	0.291	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-03EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-08EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-10EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-06P	53	0.183	0.186	101.7	0.046	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-02E	4	0.177	0.181	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-05E	3	0.162	0.164	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-07E	1	0.152	0.155	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-11R	18	0.120	0.122	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-12N	30	0.102	0.101	101.7	0.020	87.3	54.000	7.276	0.000	68.22	HBD
EX-07.2-04P	56	0.069	0.072	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-09P	56	0.069	0.072	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-11R (D/S)	18	0.068	0.068	101.7	0.020	87.3	54.000	7.276	0.000	68.22	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:24:33PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: HDR TO 35 HTRS
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.988

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.16 HDR 35 to FWH 35A											
EX-02.16-05V	22	23.091	27.255	385.2	29.945	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-08E	2	22.976	26.455	385.2	35.427	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-09N	30	21.055	24.874	385.2	29.549	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-07P	54	0.093	0.095	385.2	30.292	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-03E	2	0.090	0.092	385.2	30.943	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-06E	4	0.089	0.091	385.2	30.250	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-01R (D/S)	7	0.074	0.082	385.2	29.715	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-02P	57	0.072	0.073	385.2	29.474	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-04P	52	0.060	0.061	385.2	30.232	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-01R	7	0.059	0.065	385.2	7.029	93.8	28.000	0.000	0.000	0.00	ARD
EX-02.19-01P	64	0.027	0.030	385.2	7.029	93.8	28.000	0.000	0.000	0.00	ARD
====>Grouped by Line: EX-02.17 HDR 35 to FWH 35B											
EX-02.17-05E	2	23.097	26.598	385.2	35.888	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-02V	22	23.091	27.255	385.2	29.945	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-06N	30	21.055	24.874	385.2	29.549	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-04P	54	0.093	0.095	385.2	30.276	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-03E	4	0.089	0.091	385.2	30.250	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-01P	64	0.032	0.035	385.2	30.483	93.8	18.000	0.000	0.000	0.00	ARD
====>Grouped by Line: EX-02.18 HDR 35 to FWH 35C											
EX-02.18-02V	22	23.091	27.255	385.2	29.945	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-05E	2	21.477	24.681	385.2	29.715	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-06N	30	21.055	24.874	385.2	29.549	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-03E	4	0.083	0.091	385.2	30.250	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-04P	54	0.077	0.085	385.2	30.250	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-01P	64	0.032	0.035	385.2	30.483	93.8	18.000	0.000	0.000	0.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:24:54PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: HDR TO 36 HTRS
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.686

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-01.5A HP EX HDR to FWH 36A											
EX-01.5A-11V	22	9.129	4.258	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-07L (D/S)	12	0.009	0.006	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-16L (D/S)	12	0.009	0.006	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-07L	12	0.009	0.006	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-16L	12	0.009	0.006	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-09E	102	0.007	0.005	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-03E	102	0.007	0.005	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-14E	4	0.005	0.004	441.8	38.106	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-15N	30	0.005	0.004	441.8	35.935	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-06P	54	0.005	0.004	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-13E	2	0.005	0.004	441.8	37.496	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-05E	4	0.005	0.004	441.8	37.401	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-01R (D/S)	7	0.004	0.003	441.8	35.727	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-02P	57	0.004	0.003	441.8	36.793	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-17P	52	0.003	0.002	441.8	36.275	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-10P	52	0.003	0.002	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-01R	7	0.003	0.002	441.8	15.740	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.5A-04P	52	0.003	0.002	441.8	53.650	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-12P	58	0.002	0.002	441.8	37.331	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-08P	62	0.002	0.001	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.7-01P	63	0.001	0.001	441.8	15.740	93.7	18.000	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.5B HP EX HDR to FWH 36B											
EX-01.5B-09V	22	9.129	4.258	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-04L (D/S)	12	0.009	0.006	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-14L (D/S)	12	0.009	0.006	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-04L	12	0.009	0.006	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-14L	12	0.009	0.006	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-01.5B HP EX HDR to FWH 36B											
EX-01.5B-12E	4	0.006	0.004	441.8	39.151	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-13N	30	0.005	0.004	441.8	35.935	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-08P	54	0.005	0.004	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-02E	2	0.005	0.004	441.8	38.209	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-11E	2	0.005	0.004	441.8	37.854	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-07E	4	0.005	0.004	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-06E	1	0.004	0.003	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-15P	52	0.003	0.002	441.8	36.954	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-03P	52	0.003	0.002	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-10P	58	0.002	0.002	441.8	37.153	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-05P	62	0.002	0.001	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-01P	64	0.002	0.001	441.8	53.069	93.7	12.750	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.5C HP EX HDR to FWH 36C											
EX-01.5C-09V	22	9.129	4.258	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-14L (D/S)	12	0.009	0.006	441.8	36.778	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-14L	12	0.009	0.006	441.8	36.778	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-04L	12	0.009	0.006	441.8	36.659	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-04L (D/S)	12	0.009	0.006	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-12E	4	0.005	0.004	441.8	38.321	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-13N	30	0.005	0.004	441.8	35.935	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-08P	54	0.005	0.004	441.8	36.913	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-11E	2	0.005	0.004	441.8	37.800	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-02E	2	0.005	0.004	441.8	37.455	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-07E	4	0.005	0.004	441.8	37.360	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-06E	1	0.004	0.003	441.8	37.564	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-03P	52	0.003	0.002	441.8	36.831	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-15P	52	0.003	0.002	441.8	36.301	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-10P	58	0.002	0.002	441.8	36.939	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-01P	64	0.002	0.001	441.8	54.131	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-05P	62	0.002	0.001	441.8	36.778	93.7	12.750	6.679	0.000	196.44	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:25:13PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: HTR 36 HEADER
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.751

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-01.1 HP EXT to FWH 36 HDR											
EX-01.1-01N	31	17.040	7.928	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-06E	2	0.007	0.005	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-03P	54	0.007	0.005	441.8	55.741	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-04E	4	0.007	0.005	441.8	57.672	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-02E	4	0.007	0.005	441.8	57.590	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-05P	54	0.006	0.004	441.8	75.097	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-07P	52	0.005	0.003	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-08R	18	0.004	0.003	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-08R (D/S)	18	0.003	0.002	441.8	26.318	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.6-01P	68	0.002	0.002	441.8	25.914	93.7	18.000	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.2 HP EXT to FWH 36 HDR											
EX-01.2-01N	31	17.040	7.928	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-02E	4	0.007	0.005	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-03P	54	0.007	0.005	441.8	56.380	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-06E	4	0.007	0.005	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-04E	3	0.006	0.004	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-08E	1	0.006	0.004	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-07P	54	0.005	0.004	441.8	74.401	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-05P	53	0.005	0.004	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-09P	51	0.003	0.002	441.8	74.893	93.7	12.750	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER											
EX-01.3-07V	25	13.059	6.072	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-08V	25	13.059	6.072	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-06V	22	11.973	5.567	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-23T	14	0.014	0.010	441.8	56.075	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.2-10L (D/S)	12	0.012	0.008	441.8	55.283	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-23T (D/S)	14	0.011	0.008	441.8	36.716	93.7	18.000	6.679	0.000	196.44	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER											
EX-01.2-10L	12	0.008	0.006	441.8	26.618	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.2-10L (BR/SE)	12	0.008	0.006	441.8	56.495	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.3-19E	4	0.007	0.005	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-21E	2	0.007	0.005	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-20P	54	0.007	0.005	441.8	55.224	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-02E	2	0.006	0.005	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-13E	2	0.006	0.005	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-15E	2	0.006	0.005	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-09E	4	0.006	0.005	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-17T	15	0.005	0.004	441.8	55.547	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-04T	15	0.005	0.004	441.8	55.094	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-05P	65	0.005	0.004	441.8	55.038	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-10P	54	0.005	0.003	441.8	83.334	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-17T (D/S)	15	0.005	0.003	441.8	55.547	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-04T (D/S)	15	0.005	0.003	441.8	55.094	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-22P	52	0.004	0.003	441.8	55.924	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-16P	52	0.004	0.003	441.8	54.987	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-03P	52	0.004	0.003	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-14P	52	0.004	0.003	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-23T (BR/SE)	14	0.004	0.003	441.8	39.487	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.3-11T	15	0.004	0.003	441.8	83.334	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-12P	65	0.004	0.003	441.8	83.334	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-11T (D/S)	15	0.003	0.002	441.8	83.334	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-01P	62	0.002	0.001	441.8	54.933	93.7	18.000	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.4 HP EXT FWH 36 HEADER											
EX-01.4-02T	14	0.011	0.008	441.8	35.801	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.4-02T (D/S)	14	0.008	0.006	441.8	15.745	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.4-02T (BR/SE)	14	0.004	0.003	441.8	36.644	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.4-01P	63	0.002	0.001	441.8	36.616	93.7	18.000	6.679	0.000	196.44	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:25:25PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: LP TO 31 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.811

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-06.1A LP EXT 19 to FWH 31A											
EX-06.1A-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1A-04N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1A-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1A-03E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.1B LP EXT 19 to FWH 31B											
EX-06.1B-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1B-04N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1B-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1B-03E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.1C LP EXT 19 to FWH 31C											
EX-06.1C-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1C-04N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1C-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1C-03E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.2A LP EXT 17 to FWH 31A											
EX-06.2A-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2A-04N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2A-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2A-03E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.2B LP EXT 17 to FWH 31B											
EX-06.2B-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2B-04N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2B-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2B-03E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.2C LP EXT 17 to FWH 31C											
EX-06.2C-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-06.2C LP EXT 17 to FWH 31C											
EX-06.2C-04N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2C-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2C-03E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.3A LP EXT 20 to FWH 31A											
EX-06.3A-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3A-05N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3A-03P	54	3.872	3.340	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3A-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3A-04E	1	3.187	2.747	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.3B LP EXT 20 to FWH 31B											
EX-06.3B-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3B-05N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3B-03P	54	3.872	3.340	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3B-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3B-04E	2	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.3C LP EXT 20 to FWH 31C											
EX-06.3C-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3C-05N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3C-03P	54	3.872	3.340	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3C-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3C-04E	2	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.4A LP EXT 18 to FWH 31A											
EX-06.4A-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4A-05N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4A-04E	2	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4A-02E	3	3.380	2.914	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4A-03P	53	1.166	0.848	168.3	19.532	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.4B LP EXT 18 to FWH 31B											
EX-06.4B-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4B-05N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4B-04E	2	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4B-02E	3	3.380	2.914	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4B-03P	53	1.166	0.848	168.3	19.532	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.4C LP EXT 18 to FWH 31C											

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-06.4C LP EXT 18 to FWH 31C											
EX-06.4C-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4C-05N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4C-04E	2	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4C-02E	3	3.380	2.914	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4C-03P	53	1.166	0.848	168.3	19.532	77.1	26.000	7.141	0.000	37.64	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:25:32PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: LP TO 32 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.318

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-05.1A LP EXT 16 to FWH 32A											
EX-05.1A-01N	31	7.732	4.085	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1A-04N	30	5.178	2.742	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1A-03E	3	4.424	2.367	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1A-02P	61	1.375	0.977	206.9	36.385	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.1B LP EXT 16 to FWH 32B											
EX-05.1B-01N	31	7.732	4.085	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1B-04N	30	5.178	2.742	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1B-03E	3	4.424	2.367	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1B-02P	61	1.375	0.977	206.9	36.385	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.1C LP EXT 16 to FWH 32C											
EX-05.1C-01N	31	7.732	4.085	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1C-04N	30	5.178	2.742	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1C-03E	3	4.424	2.367	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1C-02P	61	1.375	0.977	206.9	36.385	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.2A LP EXT 15 to FWH 32A											
EX-05.2A-01N	31	7.732	4.085	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-06N	30	5.178	2.742	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-02E	4	4.870	2.607	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-03E	3	4.424	2.367	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-05E	1	4.171	2.232	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-04P	53	3.966	2.123	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B											
EX-05.2B-01N	31	7.732	4.085	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2B-06N	30	5.178	2.742	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2B-02E	4	4.870	2.607	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2B-03E	3	4.424	2.367	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B											
EX-05.2B-05E	1	4.171	2.232	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2B-04P	53	3.966	2.123	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.2C LP EXT 15 to FWH 32C											
EX-05.2C-01N	31	7.732	4.085	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-06N	30	5.178	2.742	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-02E	4	4.870	2.607	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-03E	3	4.424	2.367	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-05E	1	4.171	2.232	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-04P	53	3.966	2.123	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:26:09PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: LP TO 33 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.383

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.1 LPEX14 to FWH33A HDR											
EX-04.1-01N	31	7.669	9.240	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-06T (BR/SE)	10	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-05E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-06T (D/S)	10	4.765	5.014	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.1-02E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-03E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-04P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-08X	6	3.017	2.810	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-07P	52	2.201	2.051	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.3-01P	60	1.729	1.820	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR											
EX-04.11-19T	14	11.395	13.160	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.9-09T (D/S)	12	9.707	11.210	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-19T (D/S)	14	7.314	7.694	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-06V	25	7.106	8.207	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.9-09T	12	6.226	6.549	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-08E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-13E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-15E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.9-09T (BR/SE)	12	5.638	6.838	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.11-04V	22	5.314	6.236	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-09E	3	4.952	5.719	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-11E	3	4.952	5.719	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-02T	15	4.441	5.129	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-17T	15	4.441	5.129	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-12P	53	4.440	5.128	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-03P	65	4.380	5.059	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR											
EX-04.11-18P	65	4.380	5.059	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-02T (D/S)	15	3.909	4.514	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-17T (D/S)	15	3.909	4.514	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-16P	52	3.701	4.274	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-19T (BR/SE)	14	3.627	4.401	254.8	7.012	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.11-07P	58	2.606	3.010	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-10P	53	2.535	2.362	254.8	17.234	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-05P	58	2.126	2.495	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-14P	52	2.113	1.968	254.8	17.234	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-01P	62	1.778	2.053	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-20P	9	1.302	1.504	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.13 LP EXT 32 to FWH 33B											
EX-04.13-06N	30	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-03E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-05E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-01R (D/S)	7	4.312	5.230	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-07T	15	3.887	4.715	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-02P	57	3.886	4.714	254.8	6.994	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-07T (D/S)	15	3.421	4.149	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-04P	52	3.204	3.880	254.8	7.164	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-01R	7	2.940	3.093	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.12-01P	64	1.529	1.609	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.14 LP EXT 32 to FWH 33B											
EX-04.14-03N	30	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.14-02E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.14-01P	64	2.047	2.479	254.8	7.285	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.15 LPEX14 to FWH33C HDR											
EX-04.15-01N	31	7.669	9.240	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-06T (BR/SE)	10	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-05E	2	4.772	5.787	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-06T (D/S)	10	4.765	5.014	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.15-02E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-03E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-04P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-07P	52	3.239	3.929	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.15 LPEX14 to FWH33C HDR											
EX-04.15-08X	6	3.017	2.810	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.17-01P	60	1.729	1.820	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.16 LPEX13 to FWH33C HDR											
EX-04.16-01N	31	7.669	9.240	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-07E	2	4.772	5.787	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-02E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-03E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-05E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-04P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-06P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-10X	6	3.017	2.810	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-08P	52	2.201	2.051	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.18 LPEX FWH 33C IN HDR											
EX-04.20-16T	14	11.317	13.101	254.8	5.676	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.16-09T (D/S)	12	9.707	11.210	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-16T (D/S)	14	7.516	7.904	254.8	0.304	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-06V	25	7.106	8.207	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.16-09T	12	6.226	6.549	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-02E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-04E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-06E	4	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-08E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-10E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-12E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-07P	54	5.684	6.564	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.16-09T (BR/SE)	12	5.638	6.838	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.18-04V	22	5.314	6.236	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.19-01R	7	4.560	5.267	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-02T	15	4.441	5.129	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-14T	15	4.441	5.129	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-03P	65	4.380	5.059	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-15P	65	4.380	5.059	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.19-01R (D/S)	7	3.989	4.609	254.8	14.052	90.5	24.000	7.255	0.000	69.67	HBD
EX-04.20-14T (D/S)	15	3.909	4.514	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-02T (D/S)	15	3.909	4.514	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.19-03R (D/S)	18	3.909	4.514	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.18 LPEX FWH 33C IN HDR											
EX-04.20-05P	52	3.701	4.274	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-09P	52	3.701	4.274	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-13P	52	3.701	4.274	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-16T (BR/SE)	14	3.629	4.401	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.19-02V	23	3.602	4.137	254.8	14.424	90.5	24.000	7.255	0.000	69.67	HBD
EX-04.20-01P	68	2.962	3.420	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.19-03R	18	2.954	3.413	254.8	14.052	90.5	24.000	7.255	0.000	69.67	HBD
EX-04.18-05P	58	2.126	2.495	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-03P	52	2.113	1.968	254.8	17.234	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-11P	52	2.113	1.968	254.8	17.234	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-01P	62	1.778	2.053	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.2 LPEX13 to FWH33A HDR											
EX-04.2-01N	31	7.669	9.240	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-07E	2	4.772	5.787	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-02E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-03E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-05E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-04P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-06P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-10X	6	3.017	2.810	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-08P	52	2.201	2.051	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.21 LP EXT 31 to FWH 33C											
EX-04.21-06N	30	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-03E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-05E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-01R (D/S)	7	4.312	5.230	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-07T	15	3.887	4.715	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-02P	57	3.882	4.712	254.8	7.050	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-07T (D/S)	15	3.421	4.149	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-04P	52	3.204	3.880	254.8	7.164	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-01R	7	2.940	3.093	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-17P	64	1.529	1.609	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.22 LP EXT 31 to FWH 33C											
EX-04.22-03N	30	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.22-02E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.22 LP EXT 31 to FWH 33C											
EX-04.22-01P	64	2.049	2.482	254.8	7.260	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.4 LPEX FWH 33A IN HDR											
EX-04.4-22T	14	11.351	13.127	254.8	5.575	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.2-09T (D/S)	12	9.707	11.210	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-22T (D/S)	14	7.424	7.809	254.8	0.297	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-06V	25	7.106	8.207	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.2-09T	12	6.226	6.549	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-08E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-10E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-12E	4	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-14E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-16E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-18E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-13P	54	5.683	6.564	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.2-09T (BR/SE)	12	5.638	6.838	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.4-04V	22	5.314	6.236	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-02T	15	4.441	5.129	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-20T	15	4.441	5.129	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-03P	65	4.380	5.059	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-21P	65	4.380	5.059	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-20T (D/S)	15	3.909	4.514	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-02T (D/S)	15	3.909	4.514	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-11P	52	3.701	4.274	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-15P	52	3.701	4.274	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-19P	52	3.701	4.274	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-22T (BR/SE)	14	3.627	4.401	254.8	7.012	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.4-07P	58	2.606	3.010	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-05P	58	2.126	2.495	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-09P	52	2.113	1.968	254.8	17.235	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-17P	52	2.113	1.968	254.8	17.235	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-01P	62	1.778	2.053	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-23P	9	1.302	1.504	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.6 LP EXT to FWH 33A											
EX-04.6-06N	30	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-05E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-03E	2	5.032	6.030	254.8	7.997	90.5	20.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.6 LP EXT to FWH 33A											
EX-04.6-01R (D/S)	7	4.312	5.230	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-07T	15	3.884	4.714	254.8	7.025	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-02P	57	3.883	4.713	254.8	7.033	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-07T (D/S)	15	3.419	4.149	254.8	7.025	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-04P	52	3.197	3.870	254.8	7.299	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-01R	7	2.940	3.093	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.5-01P	64	1.530	1.610	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.7 LP EXT to FWH 33A											
EX-04.7-03N	30	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.7-02E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.7-01P	64	2.050	2.483	254.8	7.229	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.8 LPEX14 to FWH33B HDR											
EX-04.8-01N	31	7.669	9.240	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-06T (BR/SE)	10	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-05E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-06T (D/S)	10	4.765	5.014	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.8-02E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-03E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-04P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-08X	6	3.017	2.810	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-07P	52	2.201	2.051	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.10-01P	60	1.729	1.820	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.9 LPEX13 to FWH33B HDR											
EX-04.9-01N	31	7.669	9.240	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-07E	2	4.772	5.787	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-02E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-03E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-05E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-04P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-06P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-10X	6	3.017	2.810	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-08P	52	2.201	2.051	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:26:45PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: PRESEP TO 35 HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.229

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.1 PSEP 2A 10" to 35 HDR											
EX-02.1-01N	31	0.020	0.022	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-02P	61	0.016	0.016	385.2	23.337	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-06T (D/S)	10	0.015	0.015	385.2	3.409	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.1-06T (BR/SE)	10	0.015	0.015	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-05O	6	0.015	0.015	385.2	45.863	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-04P	54	0.014	0.014	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-03E	4	0.014	0.014	385.2	23.905	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.5-01P	60	0.002	0.002	385.2	17.778	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.11 PSEP1B 14" to 35 HDR											
EX-02.11-06O	6	0.020	0.020	385.2	95.761	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-04P	54	0.019	0.018	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-03E	4	0.018	0.018	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-02P	64	0.006	0.006	385.2	73.301	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-07P	56	0.005	0.005	385.2	95.761	93.8	14.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.12 PSEP 1B&2B to 35 HDR											
EX-02.9-10T (D/S)	12	0.030	0.029	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.9-10T	12	0.020	0.019	385.2	3.409	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.9-10T (BR/SE)	12	0.016	0.016	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.12-01P	62	0.004	0.004	385.2	75.930	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR											
EX-02.13-06R	18	0.041	0.043	385.2	47.982	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-06R (D/S)	18	0.031	0.032	385.2	15.155	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.11-05T (D/S)	12	0.030	0.029	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.11-05T	12	0.030	0.029	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.11-05T (BR/SE)	12	0.021	0.021	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.13-03E	4	0.018	0.017	385.2	48.757	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-04E	3	0.016	0.016	385.2	48.757	93.8	18.000	6.854	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR											
EX-02.13-02B	1	0.014	0.014	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-05P	53	0.013	0.013	385.2	48.757	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-03P	54	0.013	0.013	385.2	75.933	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-01P	62	0.004	0.004	385.2	75.930	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.14 FWH 35 HEADER											
EX-02.14-10V	22	19.372	20.360	385.2	54.705	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-11V	25	17.635	18.374	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-13V	25	17.635	18.374	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-25E	4	15.165	15.165	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-16E	2	14.555	15.165	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-24E	2	14.555	15.165	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-18E	2	14.555	15.165	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-20E	4	14.555	15.165	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-27E	2	14.555	15.165	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-21P	54	14.106	14.697	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-06E	2	14.096	14.096	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-08E	2	14.096	14.096	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-26P	54	14.044	14.616	385.2	38.039	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-02E	2	13.302	14.096	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-14E	3	12.288	12.803	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-04T	15	11.022	11.483	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-32T	15	11.022	11.483	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-05P	65	10.872	11.327	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-32T (D/S)	15	9.700	10.107	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-04T (D/S)	15	9.700	10.107	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-03P	52	9.185	9.570	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-19P	52	9.185	9.570	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-09P	52	9.185	9.570	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-07P	52	9.144	9.517	385.2	38.039	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-17P	52	6.501	5.685	385.2	76.600	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-12P	58	6.467	6.738	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-31P	58	6.467	6.738	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-01P	62	4.411	4.596	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-29T	14	0.098	0.104	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-29T (D/S)	14	0.084	0.088	385.2	23.240	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.7-02T (D/S)	12	0.083	0.089	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.14 FWH 35 HEADER											
EX-02.7-02T	12	0.068	0.071	385.2	15.155	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.7-02T (BR/SE)	12	0.065	0.069	385.2	48.757	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.14-22T	15	0.038	0.041	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-23P	65	0.038	0.040	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-29T (BR/SE)	14	0.035	0.037	385.2	29.715	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.14-22T (D/S)	15	0.033	0.036	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-28P	52	0.032	0.034	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-33P	9	0.019	0.020	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.15 FWH 35 HEADER											
EX-02.15-02T	14	0.085	0.090	385.2	24.551	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.15-02T (D/S)	14	0.082	0.087	385.2	7.714	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.15-02T (BR/SE)	14	0.035	0.037	385.2	29.715	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.15-01P	64	0.018	0.019	385.2	24.405	93.8	28.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.2 PSEP 1A 10" to 35 HDR											
EX-02.2-02P	61	0.016	0.016	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-03E	2	0.014	0.013	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-05E	2	0.014	0.013	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-08O	6	0.011	0.011	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-06P	52	0.009	0.009	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-04P	52	0.006	0.006	385.2	38.302	93.8	10.750	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.4 PSEP2A 14" to 35 HDR											
EX-02.4-06O	6	0.020	0.020	385.2	95.761	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-04P	54	0.019	0.018	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-03E	4	0.018	0.018	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-02P	64	0.006	0.006	385.2	73.301	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-07P	56	0.005	0.005	385.2	95.761	93.8	14.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.6 PSEP 1A&2A to 35 HDR											
EX-02.2-07T (D/S)	12	0.030	0.029	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.2-07T	12	0.020	0.019	385.2	3.409	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.2-07T (BR/SE)	12	0.016	0.016	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.6-01P	62	0.004	0.004	385.2	75.930	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.7 PSEP 1A&2A to 35 HDR											
EX-02.4-05T (D/S)	12	0.030	0.029	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.4-05T	12	0.030	0.029	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.4-05T (BR/SE)	12	0.021	0.021	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.7 PSEP 1A&2A to 35 HDR											
EX-02.7-01P	62	0.004	0.004	385.2	75.930	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.8 PSEP 2B 10" to 35 HDR											
EX-02.8-01N	31	0.020	0.022	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-08T (D/S)	10	0.015	0.015	385.2	3.409	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.8-08T (BR/SE)	10	0.015	0.015	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-07O	6	0.015	0.015	385.2	45.863	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-02E	3	0.012	0.012	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-06E	3	0.012	0.012	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-04E	1	0.012	0.012	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-09P	53	0.011	0.011	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-05P	51	0.008	0.008	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-03P	53	0.008	0.008	385.2	38.302	93.8	10.750	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.9 PSEP 1B 10" to 35 HDR											
EX-02.9-01N	31	0.020	0.022	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-02P	61	0.016	0.016	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-08P	54	0.014	0.014	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-10P	54	0.014	0.014	385.2	23.379	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-03E	2	0.014	0.013	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-05E	2	0.014	0.013	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-07E	4	0.014	0.013	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-09E	4	0.014	0.013	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-11O	6	0.011	0.011	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-06P	52	0.009	0.009	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-04P	52	0.006	0.006	385.2	38.302	93.8	10.750	6.854	0.000	41.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:26:54PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: FW: 36 HTR TO SG HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.451

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.1A FWH 36A to SG HDR											
FW-02.1A-05V	22	15.025	8.984	430.4	29.883	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-01N	31	10.634	6.358	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-02E	4	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-04E	4	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-07E	2	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-09E	2	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-11E	2	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-03P	54	6.806	4.069	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-13R	18	5.955	3.561	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-08P	52	5.317	3.179	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-10P	52	5.317	3.179	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-12P	52	5.317	3.179	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-06P	58	4.679	2.798	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-13R (D/S)	18	3.029	1.837	430.4	5.938	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.1B FWH 36B to SG HDR											
FW-02.1B-05V	22	15.025	8.984	430.4	29.883	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-01N	31	10.634	6.358	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-02E	4	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-04E	4	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-07E	2	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-09E	2	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-03P	54	6.806	4.069	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-10P	52	5.340	3.193	430.4	17.364	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-08P	52	5.317	3.179	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-06P	58	4.679	2.798	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.1C FWH 36C to SG HDR											
FW-02.1C-05V	22	15.025	8.984	430.4	29.883	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.1C FWH 36C to SG HDR											
FW-02.1C-01N	31	10.634	6.358	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-02E	4	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-04E	4	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-07E	2	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-09E	2	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-03P	54	6.806	4.069	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-10P	52	5.367	3.209	430.4	17.508	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-08P	52	5.317	3.179	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-06P	58	4.679	2.798	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:27:17PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: FW: BFP TO 36 HTR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.893

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.1A BFP 31 to RCIRC T											
FW-01.2A-03T (BR/SE)	15	35.827	20.521	378.8	539.374	0.0	6.625	6.892	0.000	69.01	ARD
FW-01.1A-03R	18	6.159	3.528	378.8	33.910	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.1A-02P	61	5.918	3.390	378.8	33.715	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.2A-01E	4	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-02P	54	5.074	2.906	378.8	20.153	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.1A-03R (D/S)	18	4.792	2.745	378.8	20.389	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-03T (D/S)	15	4.754	2.723	378.8	20.135	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-03T	15	4.754	2.723	378.8	20.135	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.1A-01N	31	0.020	0.011	378.8	33.290	0.0	16.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.1B BFP 32 to RCIRC T											
FW-01.2B-05T (BR/SE)	15	35.827	20.521	378.8	539.374	0.0	6.625	6.892	0.000	69.01	ARD
FW-01.1B-03R	18	6.159	3.528	378.8	33.910	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.1B-02P	61	6.028	3.453	378.8	34.720	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.2B-01E	4	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-03E	1	5.390	3.087	378.8	21.122	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-02P	54	5.066	2.902	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.1B-03R (D/S)	18	4.792	2.745	378.8	20.389	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-05T (D/S)	15	4.752	2.722	378.8	20.121	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-05T	15	4.752	2.722	378.8	20.121	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-04P	51	3.483	1.995	378.8	20.103	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.1B-01N	31	0.020	0.011	378.8	33.290	0.0	16.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR											
FW-01.2A-06V	22	11.059	6.335	378.8	34.207	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-05V	25	8.877	5.085	378.8	24.119	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-10E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-12E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-07E	4	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR											
FW-01.2A-14E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-16E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-18E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-20E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-22E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-08T (D/S)	15	4.749	2.720	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-08T	15	4.749	2.720	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-23P	52	3.970	2.274	378.8	20.198	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-11P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-13P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-15P_1	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-17P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-19P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-21P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-04P	65	3.170	1.816	378.8	20.135	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-09P	65	3.166	1.813	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-15P_2	9	2.328	1.356	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR											
FW-01.2B-08V	22	11.059	6.335	378.8	34.207	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-07V	25	8.877	5.085	378.8	24.119	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-13E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-15E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-09E	4	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-17E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-19E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-21E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-23E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-25E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-10P	54	5.066	2.902	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-11T (D/S)	15	4.749	2.720	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-11T	15	4.749	2.720	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-27R	18	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-14P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-16P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-18P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-20P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR											
FW-01.2B-22P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-24P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-26P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-06P	65	3.178	1.820	378.8	20.216	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-12P	65	3.166	1.813	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-27R (D/S)	18	2.777	1.591	378.8	8.564	0.0	30.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.3 BFP DISCHARGE HDR											
FW-01.4-01T	14	7.564	4.332	378.8	17.358	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.4-01T (D/S)	14	6.031	3.455	378.8	11.577	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-01T (D/S)	12	5.651	3.237	378.8	17.419	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-01T (BR/SE)	12	5.391	3.088	378.8	20.148	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.3-04E	4	5.226	2.993	378.8	18.111	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-03E	4	5.166	2.959	378.8	17.780	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.4-01T (BR/SE)	14	5.113	2.928	378.8	16.905	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.3-06E	2	5.046	2.890	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-08E	4	5.046	2.890	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-10E	2	5.046	2.890	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-12E	2	5.046	2.890	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-14E	2	5.046	2.890	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-15E	4	5.046	2.890	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-05P	54	4.364	2.500	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-09P	54	4.364	2.500	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-16P	54	4.364	2.500	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-17T (D/S)	15	4.091	2.343	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-17T	15	4.091	2.343	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-01T	12	3.836	2.197	378.8	8.709	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-07P	52	3.409	1.953	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-11P	52	3.409	1.953	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-13P	52	3.409	1.953	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-02P	62	2.755	1.578	378.8	17.409	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-18P	65	2.750	1.575	378.8	17.350	0.0	30.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.4 BFP DISCHARGE HDR											
FW-01.5-01T	14	6.050	3.466	378.8	11.635	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.5-01T (BR/SE)	14	5.109	2.927	378.8	16.888	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.5-01T (D/S)	14	3.776	2.199	378.8	5.809	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.4-02P	63	2.191	1.255	378.8	11.561	0.0	30.000	6.892	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.6A BFP HDR to FWH 36A											
FW-01.6A-07V	22	10.190	5.836	378.8	28.703	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-12N	30	5.769	3.305	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-03E	2	5.337	3.057	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-05E	2	5.337	3.057	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-08E	4	5.337	3.057	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-10E	3	5.048	2.891	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-01R (D/S)	7	4.615	2.644	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-09P	54	4.615	2.644	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-02P	57	3.646	2.088	378.8	16.863	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-04P	52	3.606	2.065	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-06P	52	3.606	2.065	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-11P	53	3.606	2.065	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-01R	7	2.362	1.376	378.8	5.704	0.0	30.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.6B BFP HDR to FWH 36B											
FW-01.6B-05V	22	10.190	5.836	378.8	28.703	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-10N	30	5.769	3.305	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-03E	2	5.337	3.057	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-06E	4	5.337	3.057	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-08E	3	5.048	2.891	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-07P	54	4.615	2.644	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-04P	52	3.606	2.065	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-02P	64	2.881	1.650	378.8	16.534	0.0	18.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.6C BFP HDR to FWH 36C											
FW-01.6C-05V	22	10.190	5.836	378.8	28.703	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-10N	30	5.769	3.305	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-03E	2	5.337	3.057	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-06E	4	5.337	3.057	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-08E	3	5.048	2.891	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-04P	52	3.606	2.065	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-02P	64	2.885	1.652	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:27:35PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 0.020

Run Name: FW: FW RECIRC
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
=====>Grouped by Line: FW-04.1A BFP 31 RECIRC											
FW-05.1A-01V	24	0.574	0.288	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-03V	22	0.574	0.288	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2A-07P_2	9	0.505	0.257	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-09P_2	9	0.505	0.257	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-22B	2	0.396	0.198	378.8	1,500.508	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-03B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-08B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-10B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-12B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-14B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-16B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-18B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-20B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-04E	3	0.343	0.172	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-06E	1	0.323	0.162	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-24R	18	0.274	0.137	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-23P	52	0.255	0.128	378.8	1,388.613	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-21P	52	0.250	0.125	378.8	1,345.944	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-05P	53	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-09P_1	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-11P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-13P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-15P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-17P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-19P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.1A-04P_2	9	0.223	0.113	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-06P_2	9	0.223	0.113	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-01E	4	0.218	0.109	378.8	581.324	0.0	6.625	6.927	2.860	98.41	ARD

Sorted By: Average Wear Rate

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-04.1A BFP 31 RECIRC											
FW-04.2A-07P_1	51	0.215	0.108	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.1A-03E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-05E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-07E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-08E	4	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2A-02P	67	0.201	0.101	378.8	1,361.711	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.1A-09P	54	0.183	0.092	378.8	553.754	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-02P	54	0.180	0.090	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2A-01R (D/S)	17	0.176	0.088	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-24R (D/S)	18	0.169	0.084	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-04R	18	0.157	0.079	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.2A-01N	30	0.147	0.074	378.8	273.656	0.0	8.625	6.927	2.860	98.41	ARD
FW-04.1A-04P_1	52	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-06P_1	52	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2A-01R	17	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-02P	58	0.125	0.063	378.8	549.199	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-10P	64	0.112	0.056	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-04R (D/S)	18	0.110	0.055	378.8	273.656	0.0	8.625	6.927	2.860	98.41	ARD
====>Grouped by Line: FW-04.1B BFP 32 RECIRC											
FW-05.1B-01V	24	0.574	0.288	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1B-03V	22	0.574	0.288	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2B-08P_2	9	0.505	0.257	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-10P_2	9	0.505	0.257	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-03B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-09B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-11B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-13B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-15B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-17B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-19B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-21B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-05E	1	0.323	0.162	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-07E	1	0.323	0.162	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-23R	18	0.274	0.137	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-22P	52	0.253	0.127	378.8	1,374.167	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-04P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-04.1B BFP 32 RECIRC											
FW-04.2B-10P_1	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-12P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-14P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-16P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-18P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-20P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.1B-03E	4	0.234	0.117	378.8	650.542	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-04P_2	9	0.223	0.113	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-06P_2	9	0.223	0.113	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-01E	4	0.221	0.111	378.8	593.847	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2B-06P	51	0.215	0.108	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-08P_1	51	0.215	0.108	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.1B-05E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-07E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-08E	4	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2B-02P	67	0.196	0.098	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.1B-02P	54	0.185	0.092	378.8	561.160	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-04P_1	54	0.180	0.090	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-09P	54	0.180	0.090	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2B-23R (D/S)	18	0.178	0.089	378.8	585.288	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2B-01R (D/S)	17	0.176	0.088	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-05.1B-04R	18	0.157	0.079	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.2B-01N	30	0.147	0.074	378.8	273.656	0.0	8.625	6.927	2.860	98.41	ARD
FW-04.1B-06P_1	52	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2B-01R	17	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1B-02P	58	0.124	0.062	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-10P	64	0.112	0.056	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1B-04R (D/S)	18	0.110	0.055	378.8	273.656	0.0	8.625	6.927	2.860	98.41	ARD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:28:17PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: FW: SG HEADERS
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.162

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.3 SG INLET HEADER											
FW-02.1B-11T (BR/SE)	12	6.664	3.985	430.4	17.403	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-11T (D/S)	12	6.102	3.648	430.4	12.137	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.1B-11T	12	3.866	2.345	430.4	6.059	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.3-01P	62	2.972	1.777	430.4	12.105	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.4 SG INLET HEADER											
FW-02.4-19T	14	10.237	6.121	430.4	18.116	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-19T (D/S)	14	8.716	5.211	430.4	13.587	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.1C-11T (D/S)	12	7.636	4.566	430.4	18.135	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-04E	2	6.819	4.077	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-05E	4	6.819	4.077	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-07E	2	6.819	4.077	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-09E	2	6.819	4.077	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-11E	2	6.819	4.077	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-13E	2	6.819	4.077	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-15E	2	6.819	4.077	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-17E	2	6.819	4.077	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.1C-11T (BR/SE)	12	6.665	3.985	430.4	17.408	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-11T	12	6.089	3.641	430.4	12.096	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-06P	54	5.897	3.526	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-19T (BR/SE)	14	5.844	3.494	430.4	13.066	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.4-02T (D/S)	15	5.529	3.306	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-02T	15	5.529	3.306	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-18P	52	4.652	2.781	430.4	18.108	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-08P	52	4.607	2.755	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-10P	52	4.607	2.755	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-12P_1	52	4.607	2.755	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-14P	52	4.607	2.755	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.4 SG INLET HEADER											
FW-02.4-16P	52	4.607	2.755	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-03P	65	3.686	2.204	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-12P_2	9	2.621	1.589	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.5 SG INLET HEADER											
FW-02.5-04T	14	8.716	5.211	430.4	13.587	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-04T (D/S)	14	6.949	4.155	430.4	9.058	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-04T (BR/SE)	14	5.870	3.510	430.4	13.157	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.5-01T (D/S)	15	4.756	2.844	430.4	13.595	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-01T	15	4.756	2.844	430.4	13.595	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-03T (D/S)	15	4.707	2.815	430.4	13.374	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-03T	15	4.707	2.815	430.4	13.374	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-06P	65	3.169	1.895	430.4	13.581	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-02P	65	3.138	1.876	430.4	13.374	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.6 SG INLET HEADER											
FW-02.6-03T	14	6.944	4.152	430.4	9.049	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.6-03T (BR/SE)	14	5.874	3.512	430.4	13.170	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.6-03T (D/S)	14	4.032	2.446	430.4	4.524	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.6-01P	63	2.525	1.510	430.4	9.049	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.8A SG HDR to SG 31											
FW-02.8A-05V	24	14.906	8.912	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8A-19V	22	12.362	7.391	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-04V	22	11.731	7.014	430.4	22.434	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-18V	25	10.886	6.509	430.4	19.921	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-12F	6	9.488	5.673	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-26R	18	7.469	4.466	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8A-02E	2	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-10E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-06E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-16E	2	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-22E	4	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-23E	4	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-02E	2	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-08B	4	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-05B	3	5.645	3.375	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-14E	1	5.480	3.276	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8A SG HDR to SG 31											
FW-02.8A-20P	58	5.439	3.252	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-04B	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-07B	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-11P_1	54	5.313	3.177	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-07P	54	5.313	3.177	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-24P	54	5.162	3.086	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-25R (D/S)	7	5.103	5.103	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8A-03T (D/S)	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-08T (D/S)	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-03T	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-26R (D/S)	18	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-08T	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-21T (D/S)	15	4.839	2.893	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-21T	15	4.839	2.893	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-17P	52	4.151	2.482	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-01P	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-03P	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-06P_1	53	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-15P	51	3.653	2.184	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-25R	7	3.475	3.475	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-01P	64	3.337	1.995	430.4	13.046	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-09P	65	3.321	1.986	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-11P_2	9	2.144	1.301	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-06P_2	9	2.054	1.246	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-13P	56	1.898	1.135	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-09N	30	0.094	0.056	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.8B SG HDR to SG 32											
FW-02.8B-06V	24	14.906	8.912	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8B-20V	22	12.362	7.391	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-05V	22	11.731	7.014	430.4	22.434	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-19V	25	10.886	6.509	430.4	19.921	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-25R (D/S)	7	9.540	5.704	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8B-13F	6	9.488	5.673	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-11E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-02E	2	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-07E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source	
====>Grouped by Line: FW-02.8B SG HDR to SG 32												
FW-02.8B-17E	2	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-23E	4	6.130	3.665	430.4	12.904	0.0	18.000	6.657	0.000	69.01	HBD	
FW-03.1B-02E	2	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD	
FW-03.1B-08E	2	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-25R	7	5.812	3.475	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD	
FW-03.1B-05B	3	5.645	3.375	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD	
FW-03.1B-11E	3	5.645	3.375	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-15E	1	5.480	3.276	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-21P	58	5.439	3.252	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-12P_1	54	5.364	3.207	430.4	13.144	0.0	18.000	6.657	0.000	69.01	HBD	
FW-03.1B-04B	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD	
FW-03.1B-07B	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD	
FW-03.1B-10E	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-08P	54	5.313	3.177	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-24P	54	5.162	3.086	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-04T (D/S)	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-09T (D/S)	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-04T	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-09T	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-22T (D/S)	15	4.839	2.893	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-22T	15	4.839	2.893	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-26R	18	4.466	4.466	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD	
FW-02.8B-03P	52	4.151	2.482	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-18P	52	4.151	2.482	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD	
FW-03.1B-01P	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD	
FW-03.1B-03P	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD	
FW-03.1B-06P	53	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD	
FW-03.1B-09P	53	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-16P	51	3.653	2.184	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-10P	65	3.321	1.986	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-01P	64	3.321	1.986	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-26R (D/S)	18	2.978	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-12P_2	9	2.144	1.301	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD	
FW-02.8B-14P	56	1.898	1.135	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD	
FW-03.1B-12N	30	0.094	0.056	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD	
====>Grouped by Line: FW-02.8C SG HDR to SG 34												

Sorted By: Average Wear Rate

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8C SG HDR to SG 34											
FW-02.8C-06V	24	14.906	8.912	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8C-19V	22	12.362	7.391	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-05V	22	11.731	7.014	430.4	22.434	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-18V	25	10.886	6.509	430.4	19.921	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-13F	6	9.488	5.673	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-24R (D/S)	7	8.536	5.103	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8C-25R	18	7.469	4.466	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8C-02E	2	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-11E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-07E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-16E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-22E	4	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-02E	2	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-05B	2	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-10E	4	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-24R	7	5.812	3.475	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-15E	1	5.480	3.276	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-20P	58	5.439	3.252	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-04B	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-07B	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-12E	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-14E	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-12P_1	54	5.313	3.177	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-08P	54	5.313	3.177	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-23P	54	5.162	3.086	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-11P	54	5.162	3.086	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-04T (D/S)	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-09T (D/S)	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-04T	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-25R (D/S)	18	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-09T	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-21T (D/S)	15	4.839	2.893	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-21T	15	4.839	2.893	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-03P	52	4.151	2.482	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-17P	52	4.151	2.482	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-01P	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8C SG HDR to SG 34											
FW-03.1C-03P	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-06P_1	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-16P_1	51	3.549	2.122	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-09P	51	3.549	2.122	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-13P	51	3.549	2.122	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-01P	64	3.325	1.988	430.4	12.975	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-10P	65	3.321	1.986	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-12P_2	9	2.144	1.301	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-16P_2	9	2.054	1.246	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-06P_2	9	2.054	1.246	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-14P	56	1.898	1.135	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-15N	30	0.094	0.056	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.8D SG HDR to SG 33											
FW-02.8D-06V	24	14.906	8.912	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8D-18V	22	12.362	7.391	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-05V	22	11.731	7.014	430.4	22.434	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-17V	25	10.886	6.509	430.4	19.921	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-24R (D/S)	7	9.540	5.704	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8D-13F	6	9.488	5.673	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-25R	18	8.347	4.991	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8D-11E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-02E	2	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-07E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-15E	2	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-21E	4	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-22E	4	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-02E	2	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.7-04T (BR/SE)	14	5.880	3.516	430.4	13.194	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-24R	7	5.812	3.475	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-05B	3	5.645	3.375	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-08B	3	5.645	3.375	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-19P	58	5.439	3.252	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-04B	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-07B	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-12P_1	54	5.313	3.177	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-08P	54	5.313	3.177	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8D SG HDR to SG 33											
FW-02.8D-23P	54	5.162	3.086	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-09T (D/S)	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-04T (D/S)	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-04T	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-25R (D/S)	18	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-09T	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-20T (D/S)	15	4.839	2.893	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-20T	15	4.839	2.893	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-03P	52	4.151	2.482	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-16P	52	4.151	2.482	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.7-04T	14	4.051	2.457	430.4	4.547	0.0	30.000	6.657	0.000	69.01	HBD
FW-03.1D-01P	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-03P	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-06P_1	53	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-09P	53	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-01P	64	3.334	1.994	430.4	13.033	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-10P	65	3.321	1.986	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.7-02T (D/S)	15	2.169	1.316	430.4	4.458	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.6-02T (D/S)	15	2.169	1.316	430.4	4.458	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.6-02T	15	2.169	1.316	430.4	4.458	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.7-02T	15	2.169	1.316	430.4	4.458	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.8D-12P_2	9	2.144	1.301	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-06P_2	9	2.054	1.246	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-14P	56	1.898	1.135	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.7-01P	63	1.469	0.891	430.4	4.532	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.7-03P	65	1.469	0.891	430.4	4.532	0.0	30.000	6.657	0.000	69.01	HBD
FW-03.1D-10N	30	0.094	0.056	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:28:30PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HD PMP TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.733

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-11.1A HD PMP 31 to HDR											
HD-12.2A-06O	6	8.512	5.510	370.3	33.430	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.1A-01V	24	8.201	5.309	370.3	31.512	0.0	8.625	6.959	0.000	53.12	ARD
HD-11.2A-01R (D/S)	7	4.956	3.208	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-11.1A-01N	31	4.760	3.081	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.1A-02V	25	4.760	3.081	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-01V	22	4.760	3.081	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.1A-02R	18	4.337	2.807	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-12.2A-03E	4	3.523	2.280	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.2A-01R	7	3.332	2.157	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-04T (D/S)	15	2.856	1.849	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.1A-02R (D/S)	18	2.856	1.849	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-04T	15	2.856	1.849	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-02P	58	2.095	1.356	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-05P	65	1.973	1.277	370.3	14.043	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-07P	56	1.702	1.102	370.3	33.430	0.0	12.750	6.959	0.000	53.12	ARD
====>Grouped by Line: HD-11.1B HD PMP 32 to HDR											
HD-12.2B-06O	6	8.512	5.510	370.3	33.430	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.1B-01V	24	7.744	5.013	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-11.2B-01R (D/S)	7	4.956	3.208	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-11.1B-01N	31	4.760	3.081	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.1B-02V	25	4.760	3.081	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-01V	22	4.760	3.081	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.1B-02R	18	4.337	2.807	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-12.2B-08T (BR/SE)	10	3.808	2.465	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-03E	4	3.549	2.297	370.3	13.430	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.2B-01R	7	3.332	2.157	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-08T (D/S)	10	3.313	2.327	370.3	8.492	0.0	16.000	6.959	0.000	53.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-11.1B HD PMP 32 to HDR											
HD-12.2B-04T (D/S)	15	2.856	1.849	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.1B-02R (D/S)	18	2.856	1.849	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-04T	15	2.856	1.849	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-02P	58	2.112	1.367	370.3	13.448	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.3-01P	60	1.987	1.396	370.3	8.488	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.2B-05P	65	1.911	1.237	370.3	13.343	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-07P	56	1.702	1.102	370.3	33.430	0.0	12.750	6.959	0.000	53.12	ARD
====>Grouped by Line: HD-12.2A HD PMP HDR to CD SYS											
HD-12.2A-08T (D/S)	12	5.264	2.811	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-01E	4	4.860	2.596	370.3	17.617	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-17E	2	4.750	2.537	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-03E	2	4.750	2.537	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-07E	2	4.750	2.537	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-09E	2	4.750	2.537	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-11E	2	4.750	2.537	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-13E	2	4.750	2.537	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-05E	1	4.236	2.263	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-02P	54	4.108	2.194	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-15T (D/S)	15	3.851	2.057	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-15T	15	3.851	2.057	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.2A-08T (BR/SE)	12	3.237	2.095	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.4-18P	52	3.209	1.714	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-04P	52	3.209	1.714	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-08P	52	3.209	1.714	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-10P_1	52	3.209	1.714	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-12P	52	3.209	1.714	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-14P	52	3.209	1.714	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-06P	51	2.824	1.509	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.2A-08T	12	2.745	1.923	370.3	8.595	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-16P	65	2.568	1.371	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-10P_2	9	1.789	0.975	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:28:44PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 31 TO COND
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
=====>Grouped by Line: HD-13.1 FWH 31A to Cond 33											
HD-13.1-18E (D/S)	16	4.248	2.609	102.3	46.214	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.1-20R	18	3.837	2.357	102.3	46.214	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.1-19V	8	2.482	1.525	102.3	9.199	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.1-01N	31	1.241	0.765	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-09V	22	1.241	0.765	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-21V	22	1.241	0.765	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-23N	30	0.993	0.612	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-08E	4	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-03E	4	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-10E	4	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-05E	2	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-11E	4	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-14E	2	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-16E	2	0.918	0.566	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-12E	3	0.869	0.535	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-04P	54	0.794	0.490	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-07T (D/S)	15	0.745	0.459	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-07T	15	0.745	0.459	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-20R (D/S)	18	0.745	0.459	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-02P	61	0.670	0.413	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-06P	52	0.620	0.382	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-13P	53	0.620	0.382	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-15P	52	0.620	0.382	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-17P	52	0.620	0.382	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-18E	16	0.620	0.382	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-22P	58	0.546	0.337	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
=====>Grouped by Line: HD-13.2 FWH 31B to Cond 32											

Sorted By: Average Wear Rate

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-13.2 FWH 31B to Cond 32											
HD-13.2-17V	8	2.472	1.517	102.2	9.114	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.2-16E (D/S)	16	1.532	0.940	102.2	9.114	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.2-18R	18	1.384	0.849	102.2	9.114	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.2-01N	31	1.233	0.759	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-08V	22	1.233	0.759	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-19V	22	1.233	0.759	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-07T	12	1.011	0.622	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-21N	30	0.986	0.607	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-03E	4	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-09E	4	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-10E	4	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-12E	2	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-14E	2	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-07T (BR/SE)	12	0.838	0.516	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-05E	1	0.814	0.501	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-04P	54	0.789	0.486	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-11P	54	0.789	0.486	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-18R (D/S)	18	0.740	0.455	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-02P	61	0.666	0.410	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-13P	52	0.616	0.379	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-15P	52	0.616	0.379	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-16E	16	0.616	0.379	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-06P	51	0.542	0.334	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-20P	58	0.542	0.334	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
====>Grouped by Line: HD-13.3 FWH 31C to Cond 31											
HD-13.3-17V	8	2.475	1.522	102.1	9.169	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.3-16E (D/S)	16	1.535	0.944	102.1	9.169	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.3-18R	18	1.386	0.852	102.1	9.169	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.3-01N	31	1.235	0.763	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-08V	22	1.235	0.763	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-19V	22	1.235	0.763	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-07T	12	1.013	0.626	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-21N	30	0.988	0.610	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-09E	4	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-03E	4	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-10E	4	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-13.3 FWH 31C to Cond 31											
HD-13.3-12E	2	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-14E	2	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-07T (BR/SE)	12	0.840	0.519	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-05E	1	0.815	0.503	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-04P	54	0.791	0.488	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-11P	54	0.791	0.488	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-18R (D/S)	18	0.741	0.458	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-02P	61	0.667	0.412	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-13P	52	0.618	0.381	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-15P	52	0.618	0.381	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-16E	16	0.618	0.381	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-06P	51	0.544	0.336	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-20P	58	0.544	0.336	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:29:01PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 32 TO HTR 31
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.863

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
=====>Grouped by Line: HD-08.1A FWH 32A to FWH 31A											
HD-09.1A-01V	24	8.480	2.027	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1A-01N	31	6.293	1.512	165.8	2.896	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-07T (D/S)	10	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-10V	22	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-01V	22	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2A-01R (D/S)	7	5.427	1.297	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1A-07T (BR/SE)	10	4.841	1.164	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.1A-02R	18	4.749	1.135	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1A-09E	2	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-03E	4	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-05E	2	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2A-01R	7	4.236	1.018	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-04P	54	3.873	0.931	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-08P	60	3.741	0.873	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.1A-02R (D/S)	18	3.631	0.873	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-02P	61	3.601	0.786	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-06P	52	3.026	0.727	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-04T	13	0.003	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-03E	3	0.002	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-04T (BR/SE)	13	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-04T (D/S)	13	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-02P	58	0.002	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
=====>Grouped by Line: HD-08.1B FWH 32B to FWH 31B											
HD-09.1B-01V	24	8.480	2.027	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1B-01N	31	6.293	1.512	165.8	2.896	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-07T (D/S)	10	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-10V	22	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-08.1B FWH 32B to FWH 31B											
HD-09.2B-01V	22	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2B-01R (D/S)	7	5.427	1.297	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1B-07T (BR/SE)	10	4.841	1.164	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.1B-02R	18	4.749	1.135	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1B-03E	4	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-09E	2	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-05E	2	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2B-01R	7	4.236	1.018	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-04P	54	3.873	0.931	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-08P	60	3.741	0.873	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.1B-02R (D/S)	18	3.631	0.873	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-02P	61	3.601	0.786	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-06P	52	3.026	0.727	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-04T	13	0.003	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-03E	3	0.002	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-04T (D/S)	13	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-04T (BR/SE)	13	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-02P	58	0.002	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-08.1C FWH 32C to FWH 31C											
HD-09.1C-01V	24	8.480	2.027	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1C-01N	31	6.293	1.512	165.8	2.896	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-07T (D/S)	10	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-10V	22	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-01V	22	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2C-01R (D/S)	7	5.427	1.297	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1C-07T (BR/SE)	10	4.841	1.164	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.1C-02R	18	4.749	1.135	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-8.1C-09E	2	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-03E	4	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-05E	2	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2C-01R	7	4.236	1.018	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-04P	54	3.873	0.931	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-08P	60	3.741	0.873	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.1C-02R (D/S)	18	3.631	0.873	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-02P	61	3.601	0.786	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-06P	52	3.026	0.727	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-08.1C FWH 32C to FWH 31C											
HD-09.2C-04T	13	0.003	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-03E	3	0.002	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-04T (D/S)	13	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-04T (BR/SE)	13	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-02P	58	0.002	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.3A FWH 32A to FWH 31A											
HD-09.3A-02N	30	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.3A-01P	64	0.002	0.001	165.8	1.469	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.3B FWH 32B to FWH 31B											
HD-09.3B-02N	30	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.3B-01P	64	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.3C FWH 32C to FWH 31C											
HD-09.3C-02N	30	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.3C-01P	64	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.4A FWH 32A to FWH 31A											
HD-09.4A-04N	30	0.002	0.001	165.8	1.452	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4A-02E	4	0.002	0.001	165.8	1.495	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4A-01P	63	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4A-03P	54	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.4B FWH 32B to FWH 31B											
HD-09.4B-04N	30	0.002	0.001	165.8	1.452	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4B-02E	4	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4B-01P	63	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4B-03P	54	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.4C FWH 32C to FWH 31C											
HD-09.4C-04N	30	0.002	0.001	165.8	1.452	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4C-02E	4	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4C-01P	63	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4C-03P	54	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:29:33PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 33 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.045

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
=====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A											
HD-07.1A-01V	24	10.271	2.943	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-6.2A-01E (D/S)	16	6.089	1.825	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.2A-03T (BR/SE)	13	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-01N	31	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-01V	22	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-03T	13	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.1A 02R	18	5.500	1.648	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-6.1A-30E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-03E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-32E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-05E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-34E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-07E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-09E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-41E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-11E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-13E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-14E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-16E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-18E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-20E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-22E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-24E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-26E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-15P	54	4.140	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-37E	3	4.016	1.225	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-42P	54	3.815	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-39E	1	3.786	1.155	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A											
HD-6.1A-10P	54	3.672	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-02P	61	3.493	0.945	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-44T (D/S)	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-28T (D/S)	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-44T	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.1A 02R (D/S)	18	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-28T	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-05R	18	3.318	0.980	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-08P	52	3.234	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-19P	52	3.234	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.3A-01N	30	3.084	0.948	204.2	2.875	0.0	10.750	7.096	0.000	9.12	ARD
HD-6.1A-31P	52	3.006	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-38P	53	2.934	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-04P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-33P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-06P_1	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2A-01E	16	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-12P_1	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-43P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-17P_1	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-21P_1	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-23P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-25P_1	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-27P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-40P	51	2.524	0.770	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-02P	58	2.524	0.770	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-04P	63	2.370	0.700	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-05R (D/S)	18	2.303	0.681	204.2	2.747	0.0	10.750	7.096	0.000	9.12	ARD
HD-6.1A-29P	65	2.295	0.700	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-06P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-12P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-17P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-21P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-25P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-06.1B FWH 33B to FWH 32B											
HD-07.1B-01V	24	9.821	2.943	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1B FWH 33B to FWH 32B											
HD-6.2B-01E (D/S)	16	6.089	1.825	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.2B-03T (BR/SE)	13	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-01N	31	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-01V	22	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-03T	13	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.1B-02R	18	5.500	1.648	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-6.1B-25E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-03E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-04E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-27E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-29E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-06E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-08E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-36E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-12E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-13E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-15E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-17E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-19E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-21E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-14P	54	4.140	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-32E	3	4.016	1.225	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-10E	3	4.016	1.225	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-34E	1	3.786	1.155	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-05P_1	54	3.672	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-09P	54	3.672	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-37P	54	3.672	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-16P_1	54	3.672	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-02P	61	3.493	0.945	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-23T (D/S)	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-38T (D/S)	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-38T	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.1B-02R (D/S)	18	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-23T	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-05R	18	3.318	0.980	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-07P	52	3.234	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Sorted By: Average Wear Rate

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1B FWH 33B to FWH 32B											
HD-6.1B-20P	52	3.234	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.3B-01N	30	3.084	0.948	204.2	2.875	0.0	10.750	7.096	0.000	9.12	ARD
HD-6.1B-26P	52	3.006	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-33P	53	2.934	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-28P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-11P_1	53	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2B-01E	16	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-18P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-22P_1	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-35P	51	2.524	0.770	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-02P	58	2.524	0.770	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-04P	63	2.370	0.700	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-05R (D/S)	18	2.303	0.681	204.2	2.747	0.0	10.750	7.096	0.000	9.12	ARD
HD-6.1B-24P	65	2.295	0.700	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-05P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-11P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-16P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-22P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-06.1C FWH 33C to FWH 32C											
HD-07.1C-01V	24	9.821	2.943	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-6.2C-01E (D/S)	16	6.089	1.825	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-6.1C-01N	31	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-03T (BR/SE)	13	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-01V	22	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-03T	13	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.1C-02R	18	5.500	1.648	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-6.1C-03E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-21E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-05E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-23E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-25E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-07E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-09E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-32E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-11E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-13E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1C FWH 33C to FWH 32C											
HD-6.1C-15E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-17E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-28E	3	4.016	1.225	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-33P	54	3.848	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-30E	1	3.786	1.155	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-08P_1	54	3.672	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-02P	61	3.493	0.945	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-34T (D/S)	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-19T (D/S)	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-34T	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.1C-02R (D/S)	18	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-19T	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-05R	18	3.318	0.980	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-06P	52	3.234	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-12P	52	3.234	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.3C-01N	30	3.084	0.948	204.2	2.875	0.0	10.750	7.096	0.000	9.12	ARD
HD-6.1C-22P	52	3.006	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-29P	53	2.934	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-04P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-24P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-10P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2C-01E	16	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-14P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-16P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-18P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-31P	51	2.524	0.770	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-02P	58	2.524	0.770	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-04P	63	2.370	0.700	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-05R (D/S)	18	2.303	0.681	204.2	2.747	0.0	10.750	7.096	0.000	9.12	ARD
HD-6.1C-35P	65	2.295	0.700	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-20P	65	2.295	0.700	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-08P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:29:55PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 34 TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.911

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-04.1A FWH 34A to FWH 33A											
HD-05.1A-01V	24	13.468	6.491	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-4.2A-02V	22	9.554	4.611	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3A-01R (D/S)	7	8.620	4.154	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1A-02R	18	7.542	3.635	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-4.3A-01R	7	6.688	3.228	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.2A-01E (D/S)	16	5.923	2.859	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-05.2A-01T (BR/SE)	13	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-01N	31	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-01T	13	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-06N	30	3.799	1.884	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-05E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-04E	4	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-08E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-10E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-12E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-14E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-03T (D/S)	15	3.348	1.413	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-03T	15	3.348	1.413	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-06E	3	3.324	1.649	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-03E	1	3.134	1.554	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-05P	54	3.039	1.507	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-02P	61	3.013	1.272	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.1A-02R (D/S)	18	2.849	1.413	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-11P	52	2.553	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-15P	52	2.553	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-07P	53	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-09P_1	52	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-13P	52	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-04.1A FWH 34A to FWH 33A											
HD-4.2A-01E	16	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-04P	65	2.232	0.942	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-02P	63	2.042	0.942	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-09P_2	9	1.045	0.518	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-04.1B FWH 34B to FWH 33B											
HD-05.1B-01V	24	13.468	6.491	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-4.2B-02V	22	9.554	4.611	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3B-01R (D/S)	7	8.620	4.154	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1B-02R	18	7.542	3.635	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-4.3B-01R	7	6.688	3.228	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.2B-01E (D/S)	16	5.923	2.859	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.1B-05T (D/S)	10	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-01N	31	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-01T (BR/SE)	13	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-01T	13	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-05T (BR/SE)	10	3.799	1.884	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-06N	30	3.799	1.884	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-07E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-04E	4	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-09E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-12E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-14E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-16E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-10E	3	3.324	1.649	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-03E	1	3.134	1.554	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-03E	1	3.134	1.554	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-05P	54	3.039	1.507	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-02P	61	3.013	1.272	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-06P	60	2.849	1.413	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.1B-02R (D/S)	18	2.849	1.413	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-08P	52	2.790	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-13P	52	2.553	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-17P	52	2.553	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-04P	51	2.455	1.036	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-11P_1	53	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-15P	52	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-04.1B FWH 34B to FWH 33B											
HD-4.2B-01E	16	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-02P	63	2.042	0.942	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-11P_2	9	1.045	0.518	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-04.1C FWH 34C to FWH 33C											
HD-05.1C-01V	24	13.468	6.491	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-4.2C-02V	22	9.554	4.611	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3C-01R (D/S)	7	8.620	4.154	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1C-02R	18	7.542	3.635	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-4.3C-01R	7	6.688	3.228	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.2C-01E (D/S)	16	5.923	2.859	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.1C-01N	31	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-01T (BR/SE)	13	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-01T	13	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-06N	30	3.799	1.884	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-03E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-08E	4	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-04E	4	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-10E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-05E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-12E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-14E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-16E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-18E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-20E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-22E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-06T (D/S)	15	3.348	1.413	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-06T	15	3.348	1.413	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-03E	1	3.134	1.554	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-09P	54	3.039	1.507	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-05P	54	3.039	1.507	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-02P	61	3.013	1.272	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.1C-02R (D/S)	18	2.849	1.413	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-11P	52	2.790	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-19P	52	2.553	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-23P	52	2.553	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-04P	52	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-04.1C FWH 34C to FWH 33C											
HD-4.1C-13P_1	52	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-15P	52	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-17P_1	52	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-21P	52	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.2C-01E	16	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-07P	65	2.232	0.942	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-02P	63	2.042	0.942	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-13P_2	9	1.045	0.518	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-17P_2	9	1.045	0.518	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:30:05PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 35 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.487

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-03.1A FWH 35A to HD TK											
HD-03.1A-15V	22	3.589	2.205	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-01N	31	3.576	2.197	379.8	3.077	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-16N	30	2.871	1.764	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-03E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-05E	4	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-07E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-09E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-11E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-12E	4	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-14E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-06P	54	2.297	1.411	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-13P	54	2.297	1.411	379.8	3.116	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-02P	61	1.938	1.191	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-04P	52	1.794	1.102	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-08P	52	1.794	1.102	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-10P	52	1.794	1.102	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
====>Grouped by Line: HD-03.1B FWH 35B to HD TK											
HD-03.1B-13V	22	3.589	2.205	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-01N	31	3.576	2.197	379.8	3.077	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-14N	30	2.871	1.764	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-03E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-05E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-07E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-09E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-10E	4	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-12E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-11P	54	2.297	1.411	379.8	3.116	0.0	10.750	6.880	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-03.1B FWH 35B to HD TK											
HD-03.1B-02P	61	1.938	1.191	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-04P	52	1.794	1.102	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-06P	52	1.794	1.102	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-08P	52	1.794	1.102	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
====>Grouped by Line: HD-03.1C FWH 35C to HD TK											
HD-03.1C-17V	22	3.589	2.205	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-01N	31	3.576	2.197	379.8	3.077	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-18N	30	2.871	1.764	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-03E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-05E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-07E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-09E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-11E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-13E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-14E	4	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-16E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-15P	54	2.297	1.411	379.8	3.116	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-02P	61	1.938	1.191	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-04P	52	1.794	1.102	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-06P	52	1.794	1.102	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-08P	52	1.794	1.102	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-10P	52	1.794	1.102	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-12P	52	1.794	1.102	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:30:15PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 36 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.405

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-01.1A FWH 36A to HD TK											
HD-01.2A-01R (D/S)	7	6.807	3.765	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1A-02R	18	5.956	3.295	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-01.1A-01N	31	4.867	2.784	394.5	5.239	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2A-02N	30	4.006	2.291	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-03E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-05E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-07E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-09E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.2A-01R	7	3.431	1.962	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.1A-02R (D/S)	18	3.004	1.718	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-02P	61	2.647	1.514	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-04P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-06P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-08P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-10P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.1A 01V	24	0.086	0.047	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.2A-01V	22	0.040	0.023	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
====>Grouped by Line: HD-01.1B FWH 36B to HD TK											
HD-01.2B-01R (D/S)	7	6.807	3.765	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1B-02R	18	5.956	3.295	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-01.1B-01N	31	4.867	2.784	394.5	5.239	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2B-02N	30	4.006	2.291	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-03E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-05E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-07E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.2B-01R	7	3.431	1.962	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.1B-02R (D/S)	18	3.004	1.718	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-01.1B FWH 36B to HD TK											
HD-01.1B-02P	61	2.647	1.514	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-04P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-06P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.1B-01V	24	0.086	0.047	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.2B-01V	22	0.040	0.023	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
====>Grouped by Line: HD-01.1C FWH 36C to HD TK											
HD-01.2C-01R (D/S)	7	6.807	3.765	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1C-02R	18	5.956	3.295	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-01.1C-01N	31	4.867	2.784	394.5	5.239	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2C-02N	30	4.006	2.291	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-11E	2	3.784	2.164	394.5	5.524	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-03E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-05E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-07E	4	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-09E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.2C-01R	7	3.431	1.962	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-08P	54	3.137	1.794	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.1C-02R (D/S)	18	3.004	1.718	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-02P	61	2.647	1.514	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-04P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-06P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-10P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.1C-01V	24	0.086	0.047	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.2C-01V	22	0.040	0.023	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:30:51PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR DN TO PUMPS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.912

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-10.1A HD TK to HD PMP 31											
HD-10.2A-07X	6	6.341	5.218	383.2	7.293	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-04V	22	5.230	4.298	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-06N	30	4.184	3.438	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-02E	3	3.661	3.008	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-01E (D/S)	16	3.243	2.665	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.1A-01N	31	3.136	2.577	383.2	3.408	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.2A-03P	53	2.615	2.149	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-05P	58	2.301	1.891	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.1A-02P	61	1.643	1.350	383.2	3.299	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.2A-01E	16	1.521	1.250	383.2	3.299	0.0	24.000	6.894	0.000	53.12	HBD
====>Grouped by Line: HD-10.1B HD TK to HD PMP 32											
HD-10.2B-06X	6	6.341	5.218	383.2	7.293	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-03V	22	5.230	4.298	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-05N	30	4.184	3.438	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-02P	54	3.347	2.751	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-01E (D/S)	16	3.243	2.665	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.1B-01N	31	3.136	2.577	383.2	3.408	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.2B-04P	58	2.301	1.891	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.1B-02P	61	1.643	1.350	383.2	3.299	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.2B-01E	16	1.521	1.250	383.2	3.299	0.0	24.000	6.894	0.000	53.12	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:31:00PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MS 31 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 12.299

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.1A_1 MSEP 31A to HDR											
MSD-01.1A-02T (D/S)	10	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-01N	31	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-02T (BR/SE)	10	2.131	1.007	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-03P	60	1.599	0.755	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.1A_2 MSEP 31A to HDR											
MSD-01.1A-04N	31	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-08P	61	1.439	0.680	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.1A_3 MSEP 31A to HDR											
MSD-01.1A-05N	31	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-06T (D/S)	10	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-06T (BR/SE)	10	2.131	1.007	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-07P	60	1.599	0.755	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.1B_1 MSEP 31B to HDR											
MSD-01.1B-02T (D/S)	10	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-01N	31	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-02T (BR/SE)	10	2.131	1.007	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-03P	60	1.599	0.755	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.1B_2 MSEP 31B to HDR											
MSD-01.1B-04N	31	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-08P	61	1.439	0.680	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.1B_3 MSEP 31B to HDR											
MSD-01.1B-06T (D/S)	10	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-05N	31	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-06T (BR/SE)	10	2.131	1.007	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-07P	60	1.599	0.755	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.2A MSEP 31A DR HDR											

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.2A MSEP 31A DR HDR											
MSD-01.2A-01T (D/S)	12	3.935	1.859	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.2A-01T	12	2.185	1.032	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.2A-01T (BR/SE)	12	1.812	0.856	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.2B MSEP 31B DR HDR											
MSD-01.2B-01T (D/S)	12	3.935	1.859	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.2B-01T	12	2.185	1.032	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.2B-01T (BR/SE)	12	1.812	0.856	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.3A HDR to MSEP TK 31A											
MSD-01.3A-01T (BR/SE)	11	6.818	3.221	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-04V	25	6.818	3.221	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-06V	25	6.818	3.221	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-08N	30	5.455	2.576	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-03E	2	5.046	2.383	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-01T	11	4.799	2.267	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-02P	61	3.682	1.739	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-05P	58	3.000	1.417	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-07P	58	3.000	1.417	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-01T (D/S)	11	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.3B HDR to MSEP TK 31B											
MSD-01.3B-01T (BR/SE)	11	6.818	3.221	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-04V	25	6.818	3.221	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-06V	25	6.818	3.221	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-08N	30	5.455	2.576	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-03E	2	5.046	2.383	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-01T	11	4.799	2.267	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-02P	61	3.682	1.739	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-05P	58	3.000	1.417	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-07P	58	3.000	1.417	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-01T (D/S)	11	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:31:10PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MS 32 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 12.801

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.6A_1 MSEP 32A to HDR											
MSD-01.6A-02T (D/S)	10	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-01N	31	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-02T (BR/SE)	10	2.219	1.048	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-03P	60	1.664	0.786	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.6A_2 MSEP 32A to HDR											
MSD-01.6A-04N	31	3.694	1.745	382.2	0.241	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-08P	61	1.498	0.707	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.6A_3 MSEP 32A to HDR											
MSD-01.6A-05N	31	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-06T (D/S)	10	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-06T (BR/SE)	10	2.219	1.048	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-07P	60	1.664	0.786	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.6B_1 MSEP 32B to HDR											
MSD-01.6B-01N	31	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-02T (D/S)	10	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-02T (BR/SE)	10	2.219	1.048	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-03P	60	1.696	0.801	382.2	0.181	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.6B_2 MSEP 32B to HDR											
MSD-01.6B-04N	31	3.694	1.745	382.2	0.241	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-08P	61	1.526	0.721	382.2	0.181	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.6B_3 MSEP 32B to HDR											
MSD-01.6B-06T (D/S)	10	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-05N	31	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-06T (BR/SE)	10	2.219	1.048	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-07P	60	1.671	0.789	382.2	0.178	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.7A MSEP 32A DR HDR											

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.7A MSEP 32A DR HDR											
MSD-01.7A-01T (D/S)	12	4.096	1.935	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7A-01T	12	2.274	1.074	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7A-02P	62	1.998	0.944	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7A-01T (BR/SE)	12	1.886	0.891	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.7B MSEP 32B DR HDR											
MSD-01.7B-01T (D/S)	12	4.096	1.935	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7B-01T	12	2.274	1.074	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7B-02P	62	2.031	0.959	382.2	0.358	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7B-01T (BR/SE)	12	1.886	0.891	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.8A HDR to MSEP TK 32A											
MSD-01.8A-01T (BR/SE)	11	7.097	3.352	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-04V	25	7.097	3.352	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-06V	25	7.097	3.352	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-08N	30	5.678	2.682	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-03E	2	5.252	2.481	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-01T	11	4.995	2.359	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-02P	61	3.832	1.810	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-05P	58	3.123	1.475	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-07P	58	3.123	1.475	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-01T (D/S)	11	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.8B HDR to MSEP TK 32B											
MSD-01.8B-01T (BR/SE)	11	7.097	3.352	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-04V	25	7.097	3.352	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-06V	25	7.097	3.352	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-08N	30	5.678	2.682	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-03E	2	5.252	2.481	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-01T	11	4.995	2.359	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-02P	61	3.873	1.830	382.2	0.535	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-05P	58	3.123	1.475	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-07P	58	3.123	1.475	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-01T (D/S)	11	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:31:21PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MS 33 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 8.046

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.11A_1 MSEP 33A to HDR											
MSD-01.11A-01N	31	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-02T (D/S)	10	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-02T (BR/SE)	10	1.394	0.659	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-03P	60	1.046	0.494	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.11A_2 MSEP 33A to HDR											
MSD-01.11A-04N	31	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-08P	61	0.941	0.445	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.11A_3 MSEP 33A to HDR											
MSD-01.11A-06T (D/S)	10	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-05N	31	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-06T (BR/SE)	10	1.394	0.659	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-07P	60	1.046	0.494	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.11B_1 MSEP 33B to HDR											
MSD-01.11B-02T (D/S)	10	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-01N	31	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-02T (BR/SE)	10	1.394	0.659	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-03P	60	1.046	0.494	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.11B_2 MSEP 33B to HDR											
MSD-01.11B-04N	31	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-08P	61	0.941	0.445	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.11B_3 MSEP 33B to HDR											
MSD-01.11B-06T (D/S)	10	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-05N	31	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-06T (BR/SE)	10	1.394	0.659	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-07P	60	1.046	0.494	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.12A MSEP 33A DR HDR											

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source	
====>Grouped by Line: MSD-01.12A MSEP 33A DR HDR												
MSD-01.12A-01T (D/S)	12	2.574	1.216	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.12A-01T	12	1.429	0.675	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.12A-02P	62	1.256	0.593	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.12A-01T (BR/SE)	12	1.185	0.560	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
====>Grouped by Line: MSD-01.12B MSEP 33B DR HDR												
MSD-01.12B-01T (D/S)	12	2.574	1.216	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.12B-01T	12	1.429	0.675	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.12B-02P	62	1.256	0.593	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.12B-01T (BR/SE)	12	1.185	0.560	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
====>Grouped by Line: MSD-01.13A HDR to MSEP TK 33A												
MSD-01.13A-01T (BR/SE)	11	4.461	2.107	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13A-04V	25	4.461	2.107	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13A-06V	25	4.461	2.107	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13A-10N	30	3.569	1.686	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13A-08E	2	3.497	1.652	382.2	0.563	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13A-03E	2	3.301	1.559	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13A-01T	11	3.139	1.483	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13A-02P	61	2.409	1.138	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13A-09P	52	2.323	1.097	382.2	0.553	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13A-07P	58	1.974	0.932	382.2	0.533	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13A-05P	58	1.963	0.927	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13A-01T (D/S)	11	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	
====>Grouped by Line: MSD-01.13B HDR to MSEP TK 33B												
MSD-01.13B-01T (BR/SE)	11	4.461	2.107	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13B-04V	25	4.461	2.107	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13B-06V	25	4.461	2.107	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13B-10N	30	3.569	1.686	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13B-03E	2	3.301	1.559	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13B-08E	2	3.301	1.559	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13B-01T	11	3.139	1.483	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13B-02P	61	2.409	1.138	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13B-09P	52	2.230	1.053	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13B-05P	58	1.963	0.927	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13B-07P	58	1.963	0.927	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD	
MSD-01.13B-01T (D/S)	11	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD	

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:31:48PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MSDT 31 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.466

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.4A TK 31A to HD TK											
MSD-01.5A-27N	30	4.043	1.910	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.4A-01N	31	3.033	1.432	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5A-15P_2	52	2.527	1.193	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-28P_1	9	1.112	0.525	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-06V	25	0.018	0.019	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-05E	2	0.013	0.015	382.2	2.224	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-08E	4	0.013	0.015	382.2	2.224	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-24E	2	0.013	0.014	382.2	2.199	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-03E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-10E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-12E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-14E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-16E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-18E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-20E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-22E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-26E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-09P	54	0.012	0.013	382.2	2.246	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-01E (D/S)	16	0.011	0.012	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-04P	52	0.009	0.010	382.2	2.296	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-25P	52	0.009	0.010	382.2	2.248	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-23P	52	0.009	0.010	382.2	2.217	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-11P	52	0.009	0.010	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-13P	52	0.009	0.010	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-15P_1	52	0.009	0.010	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-17P	52	0.009	0.010	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-19P	52	0.009	0.010	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-21P	52	0.009	0.010	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Sorted By: Average Wear Rate

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.4A TK 31A to HD TK											
MSD-01.5A-07P	58	0.008	0.009	382.2	2.180	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-02P	66	0.007	0.008	382.2	2.217	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.4A-03T (D/S)	15	0.006	0.007	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4A-03T	15	0.006	0.007	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4A-02P	61	0.006	0.006	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5A-01E	16	0.005	0.006	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4A-04P	65	0.004	0.005	382.2	1.273	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5A-28P_2	9	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-29P	9	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.4B TK 31B to HD TK											
MSD-01.5B-28N	30	4.043	1.910	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-12E	2	3.740	1.766	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-14E	2	3.740	1.766	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-11P_2	54	3.234	1.528	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-13P	52	2.527	1.193	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-15P	52	2.527	1.193	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.4B-01N	31	1.327	1.432	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5B-29P	9	1.112	0.525	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-30P_1	9	1.112	0.525	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-04V	25	0.018	0.019	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-06E	2	0.013	0.014	382.2	2.201	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-03E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-08E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-10E	4	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-24E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-26E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-16E	1	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-18E	1	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-20E	1	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-22E	1	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-01R (D/S)	7	0.011	0.012	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-11P_1	54	0.011	0.012	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-07P	52	0.009	0.010	382.2	2.240	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-27P	52	0.009	0.010	382.2	2.213	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-25P	52	0.009	0.010	382.2	2.224	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-32P	52	0.009	0.010	382.2	2.199	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.4B TK 31B to HD TK											
MSD-01.5B-02P	57	0.009	0.010	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-09P	52	0.009	0.010	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-05P	58	0.008	0.009	382.2	2.207	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.4B-03E	2	0.008	0.009	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-05E	2	0.008	0.009	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5B-17P	51	0.008	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-19P	51	0.008	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-21P	51	0.008	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-23P	51	0.008	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-01R	7	0.007	0.008	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-06T (D/S)	15	0.006	0.007	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-06T	15	0.006	0.007	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-02P	61	0.006	0.006	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-04P	52	0.005	0.006	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-07P	52	0.005	0.006	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-08P	65	0.004	0.005	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5B-30P_2	9	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-31P	9	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:32:13PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MSDT 32 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 4.384

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.9A TK 32A to HD TK											
MSD-01.10A-25N	30	7.189	3.396	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.9A-01N	31	5.393	2.547	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10A-26P_2	9	1.977	0.934	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-06V	25	0.032	0.034	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-22E	2	0.024	0.026	382.2	2.221	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-03E	2	0.024	0.026	382.2	2.210	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-08E	2	0.024	0.026	382.2	2.207	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-05E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-12E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-14E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-16E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-18E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-20E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-24E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-10E	1	0.021	0.023	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-01E (D/S)	16	0.020	0.021	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-21P	52	0.016	0.017	382.2	2.188	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-09P	52	0.016	0.017	382.2	2.210	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-23P	52	0.016	0.017	382.2	2.204	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-04P	52	0.016	0.017	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-13P	52	0.016	0.017	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-15P	52	0.016	0.017	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-17P	52	0.016	0.017	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-19P	52	0.016	0.017	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-07P	58	0.014	0.015	382.2	2.186	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-11P	51	0.014	0.015	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-02P	66	0.013	0.014	382.2	2.202	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.9A-03T (D/S)	15	0.011	0.012	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD

Sorted By: Average Wear Rate

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.9A TK 32A to HD TK											
MSD-01.9A-03T	15	0.011	0.012	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9A-02P	61	0.010	0.011	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10A-01E	16	0.009	0.010	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9A-04P	65	0.008	0.008	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10A-26P_1	9	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-26P_3	9	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-27P	9	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.9B TK 32B to HD TK											
MSD-01.10B-27N	30	7.189	3.396	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-11E	2	6.650	3.141	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-13E	2	6.650	3.141	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.9B-01N	31	5.393	2.547	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10B-12P	52	4.493	2.122	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-14P	52	4.493	2.122	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-28P	9	1.977	0.934	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-29P_1	9	1.977	0.934	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-05V	25	0.032	0.034	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-07E	2	0.024	0.026	382.2	2.238	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-25E	2	0.024	0.026	382.2	2.220	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-02E	4	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-04E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-09E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-23E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-15E	1	0.021	0.023	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-17E	1	0.021	0.023	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-19E	1	0.021	0.023	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-21E	1	0.021	0.023	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-03P	54	0.020	0.022	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-01E (D/S)	16	0.020	0.021	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-26P	52	0.016	0.017	382.2	2.182	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-08P	52	0.016	0.017	382.2	2.204	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-24P	52	0.016	0.017	382.2	2.198	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-10P	52	0.016	0.017	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-06P	58	0.014	0.015	382.2	2.195	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-16P	51	0.014	0.015	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-18P	51	0.014	0.015	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.9B TK 32B to HD TK											
MSD-01.10B-20P	51	0.014	0.015	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-22P	51	0.014	0.015	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.9B-03T (D/S)	15	0.011	0.012	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9B-03T	15	0.011	0.012	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9B-02P	61	0.010	0.011	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10B-01E	16	0.009	0.010	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9B-04P	65	0.008	0.008	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10B-29P_2	9	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-30P	9	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:32:37PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MSDT 33 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.770

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.14A TK 33A to HD TK											
MSD-01.15A-20N	30	6.182	2.920	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.14A-01N	31	4.637	2.190	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15A-02V	25	0.027	0.029	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-04E	2	0.021	0.023	382.2	2.258	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-13E	2	0.021	0.022	382.2	2.247	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-15E	2	0.021	0.022	382.2	2.242	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-05E	4	0.021	0.022	382.2	2.229	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-09E	2	0.020	0.022	382.2	2.199	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-11E	2	0.020	0.022	382.2	2.182	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-07E	2	0.020	0.022	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-17E	2	0.020	0.022	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-19E	2	0.020	0.022	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-06P	54	0.017	0.019	382.2	2.198	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-01E (D/S)	16	0.017	0.018	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-10P	52	0.014	0.015	382.2	2.205	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-16P	52	0.014	0.015	382.2	2.173	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-14P	52	0.014	0.015	382.2	2.169	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-08P	52	0.014	0.015	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-18P	52	0.014	0.015	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-12P	52	0.014	0.015	382.2	2.179	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-03P	58	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.14A-03T (D/S)	15	0.010	0.011	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14A-03T	15	0.010	0.011	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14A-02P	61	0.009	0.010	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15A-01E	16	0.008	0.009	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14A-04P	65	0.007	0.007	382.2	1.257	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15A-22P	9	0.006	0.006	382.2	2.169	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-21P	9	0.006	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Sorted By: Average Wear Rate

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.14B TK 33B to HD TK											
MSD-01.15B-29N	30	6.182	2.920	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-13E	2	5.718	2.701	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-15E	2	5.718	2.701	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.14B-01N	31	4.637	2.190	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15B-12P_2	52	3.864	1.825	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-14P	52	3.864	1.825	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-16P	52	3.864	1.825	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-30P	9	1.700	0.803	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-31P_1	9	1.700	0.803	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-05V	25	0.027	0.029	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-27E	2	0.021	0.023	382.2	2.258	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-07E	4	0.021	0.022	382.2	2.210	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-02E	4	0.020	0.022	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-04E	2	0.020	0.022	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-09E	2	0.020	0.022	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-25E	2	0.020	0.022	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-11E	1	0.018	0.019	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-17E	1	0.018	0.019	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-19E	1	0.018	0.019	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-21E	1	0.018	0.019	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-23E	1	0.018	0.019	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-08P	54	0.018	0.019	382.2	2.219	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-03P	54	0.017	0.019	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-01E (D/S)	16	0.017	0.018	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-28P	52	0.014	0.015	382.2	2.170	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-10P	52	0.014	0.015	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-26P	52	0.014	0.015	382.2	2.188	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-12P_1	51	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-18P	51	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-20P	51	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-22P	51	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-24P	51	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-06P	58	0.012	0.013	382.2	2.146	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.14B-03T (D/S)	15	0.010	0.011	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14B-03T	15	0.010	0.011	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14B-02P	61	0.009	0.010	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD

Sorted By: Average Wear Rate

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.14B TK 33B to HD TK											
MSD-01.15B-01E	16	0.008	0.009	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14B-04P	65	0.007	0.007	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15B-31P_2	9	0.006	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-32P	9	0.006	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:32:58PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: PD: PRESEPRTR DRAINS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.643

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: PD-01.1 PRESEP 1B DR to HDR											
PD-01.2-100	6	20.512	8.946	387.3	6.460	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-09V	25	5.398	2.175	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-02.1-01T (BR/SE)	10	4.991	2.011	387.3	1.648	0.0	10.000	6.937	0.000	83.00	ARD
PD-01.2-04E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-06E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-02B	3	3.778	1.523	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-08E	1	3.563	1.436	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-01R (D/S)	7	3.455	1.392	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-03P	53	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-05P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-07P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-02.1-01T (D/S)	10	2.471	0.996	387.3	0.606	0.0	16.000	6.937	0.000	83.00	ARD
PD-01.2-01R	7	2.247	0.906	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.1-01N	31	0.003	0.001	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-01.3 PRESEP 1A DR to HDR											
PD-01.4-100	6	20.512	8.946	387.3	6.460	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-09V	25	5.398	2.175	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-06E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-02B	3	3.778	1.523	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-04E	1	3.563	1.436	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-08E	1	3.563	1.436	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-01R (D/S)	7	3.455	1.392	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-03P	53	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-07P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-05P	51	2.375	0.957	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-01R	7	2.247	0.906	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.3-01N	31	0.003	0.001	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: PD-01.5 PRESEP 2B DR to HDR											
PD-01.6-140	6	20.512	8.946	387.3	6.460	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-13V	25	5.398	2.175	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-04E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-06E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-08E	4	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-10E	4	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-02B	3	3.778	1.523	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-12E	1	3.563	1.436	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-01R (D/S)	7	3.455	1.392	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-09P	54	3.455	1.392	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-11P	54	3.455	1.392	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-03P	53	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-05P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-07P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-01R	7	2.247	0.906	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.5-01N	31	0.003	0.001	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-01.7 PRESEP 2A DR to HDR											
PD-01.8-140	6	20.512	8.946	387.3	6.460	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-13V	25	5.398	2.175	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-04E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-06E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-08E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-10E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-02B	3	3.778	1.523	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-12E	1	3.563	1.436	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-01R (D/S)	7	3.455	1.392	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-03P	53	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-05P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-07P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-09P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-11P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-01R	7	2.247	0.906	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.7-01N	31	0.003	0.001	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-02.2 PRESEP HDR to HD TK											
PD-02.2-01T (BR/SE)	12	4.242	1.710	387.3	1.648	0.0	10.000	6.937	0.000	83.00	ARD
PD-02.2-01T (D/S)	12	3.678	1.482	387.3	1.216	0.0	16.000	6.937	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: PD-02.2 PRESEP HDR to HD TK											
PD-02.4-22T (D/S)	15	2.691	1.085	387.3	1.216	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-22T	15	2.691	1.085	387.3	1.216	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.2-01T	12	2.027	0.817	387.3	0.606	0.0	16.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-02.3 PRESEP HDR to HD TK											
PD-02.3-01T (D/S)	12	5.213	2.101	387.3	1.825	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.3-01T (BR/SE)	12	4.242	1.710	387.3	1.648	0.0	10.000	6.937	0.000	83.00	ARD
PD-02.3-01T	12	3.678	1.482	387.3	1.216	0.0	16.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-02.4 PRESEP HDR to HD TK											
PD-02.4-200	6	41.032	18.426	387.3	22.335	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-30V	21	10.686	10.335	387.3	8.992	0.0	8.625	6.937	0.000	83.00	ARD
PD-02.4-21N	30	7.436	2.997	387.3	2.809	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-01T (D/S)	12	6.676	2.691	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-12E	2	6.025	2.428	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-16E	2	6.025	2.428	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-18E	2	6.025	2.428	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-08E	1	5.374	2.166	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-10E	1	5.374	2.166	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-14E	1	5.374	2.166	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-01T	12	5.213	2.101	387.3	1.825	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-07P	54	5.211	2.100	387.3	2.438	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-01T (BR/SE)	12	4.242	1.710	387.3	1.648	0.0	10.000	6.937	0.000	83.00	ARD
PD-02.4-13P	52	4.071	1.641	387.3	2.433	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-17P	52	4.071	1.641	387.3	2.434	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-19P	52	4.071	1.641	387.3	2.434	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-29R (D/S)	17	3.847	3.721	387.3	8.992	0.0	8.625	6.937	0.000	83.00	ARD
PD-02.4-09P	51	3.582	1.444	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-11P	51	3.582	1.444	387.3	2.433	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-15P	51	3.582	1.444	387.3	2.434	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-25T (BR/SE)	13	3.375	3.281	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-02E	4	2.498	2.428	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-28E	2	2.498	2.428	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-04E	2	2.498	2.428	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-06E	4	2.498	2.428	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-22E	2	2.498	2.428	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-03P	54	2.160	2.100	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-23R	18	1.890	1.838	387.3	2.450	0.0	16.000	6.937	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: PD-02.4 PRESEP HDR to HD TK											
PD-02.4-29R	17	1.740	1.692	387.3	2.516	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-05P	52	1.688	1.641	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-27P	63	1.350	1.313	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-25T	13	1.038	1.009	387.3	0.681	0.0	30.000	6.937	0.000	83.00	ARD
PD-02.4-23R (D/S)	18	0.623	0.605	387.3	0.683	0.0	30.000	6.937	0.000	83.00	ARD
PD-02.4-24P	68	0.519	0.504	387.3	0.683	0.0	30.000	6.937	0.000	83.00	ARD
PD-02.4-31R	18	0.023	0.022	387.3	8.707	0.0	8.625	6.937	0.000	83.00	ARD
PD-02.4-31R (D/S)	18	0.008	0.008	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-32P	68	0.007	0.006	387.3	2.434	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-25T (D/S)	13	0.000	0.000	387.3	0.000	0.0	30.000	0.000	0.000	0.00	ARD
PD-02.4-26P	63	0.000	0.000	387.3	0.000	0.0	30.000	0.000	0.000	0.00	ARD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:33:27PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RH 31 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.091

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
=====>Grouped by Line: RHD-01.1A_1 RH 31A to TK 31A											
RHD01.1A-01N	31	5.466	2.973	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-03N	30	4.373	2.378	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-02P	61	2.952	1.605	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
=====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR											
RHD01.1A-35F	6	6.649	3.616	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-04N	31	5.466	2.973	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-02E	2	4.154	2.259	489.8	7.247	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-06E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-08E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-43E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-10E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-12E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-45E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-47E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-16E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-18E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-20E	4	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-29E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-31E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-33E	4	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.2A-01R (D/S)	17	3.924	2.093	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.1A-25E	3	3.826	2.081	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-27E	3	3.826	2.081	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-39E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-41E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-14E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-04E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Average Wear Rate											
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR											
RHD01.1A-22E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-24E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-34P_1	54	3.598	1.957	489.8	7.257	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-21P_1	54	3.498	1.903	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-37T (D/S)	15	3.280	1.784	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-37T	15	3.280	1.784	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.1A-02R	18	3.256	3.256	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.1A-05P	61	2.952	1.605	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-07P_1	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-09P_1	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-44P_1	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-11P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-13P_1	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-46P	52	2.733	1.486	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-48P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.2A-01R	17	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-17P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-19P	52	2.733	1.486	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-03P	52	2.733	1.486	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-26P	53	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-28P_1	53	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-30P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-32P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-40P	51	2.405	1.308	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-42P_1	51	2.405	1.308	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-15P	51	2.405	1.308	489.8	7.790	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-05P	51	2.405	1.308	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-23P	51	2.405	1.308	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-38P	65	2.186	1.189	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-01P	68	1.877	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.1A-02R (D/S)	18	1.784	1.784	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-36P	56	1.330	0.723	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-34P_2	9	1.237	0.673	489.8	7.257	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-07P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-42P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-09P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR											
RHD01.1A-44P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-13P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-21P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-28P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.1A-01V	24	0.020	0.011	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.1B_1 RH 31B to TK 31B											
RHD01.1B-01N	31	5.466	2.973	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-03N	30	4.373	2.378	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-02P	61	2.952	1.605	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR											
RHD01.1B-14F	6	6.649	3.616	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-04N	31	5.466	2.973	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-30E	4	4.154	2.259	489.8	7.247	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.2B-01R (D/S)	17	4.096	2.185	489.8	17.209	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.1B-35E	4	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-06E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-37E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-08E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-39E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-41E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-12E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-43E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-16E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-45E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-18E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-49E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-51E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-22E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-24E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-26E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-02E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-28E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-32E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-10E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-47E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-20E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR											
RHD02.2B-04E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-31P	54	3.584	1.949	489.8	7.226	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-36P	54	3.498	1.903	489.8	7.790	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.1B-02R	18	3.352	3.256	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.1B-34T (D/S)	15	3.280	1.784	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-34T	15	3.280	1.784	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-05P	61	2.952	1.605	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-52P	52	2.812	1.530	489.8	7.262	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-29P	52	2.807	1.527	489.8	9.386	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-07P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-38P_1	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-09P	52	2.733	1.486	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-40P	52	2.733	1.486	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-13P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-42P_1	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-44P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-17P	52	2.733	1.486	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-46P	52	2.733	1.486	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-19P	52	2.733	1.486	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-50P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-23P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.2B-01R	17	2.733	1.486	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-25P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-27P_1	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-03P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-33P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-11P	51	2.405	1.308	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-48P	51	2.405	1.308	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-21P_1	51	2.405	1.308	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-05P	51	2.405	1.308	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-01P	68	1.877	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.1B-02R (D/S)	18	1.841	1.784	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-15P	56	1.330	0.723	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-38P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-42P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-21P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR											
RHD01.1B-27P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.1B-01V	24	0.020	0.011	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD

Sorted By: Average Wear Rate

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:33:41PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RH 32A TO HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.356

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3A_1 RH 32A to TK 32A											
RHD01.3A-01N	31	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-03N	30	4.927	2.680	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-02P	61	3.326	1.809	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR											
RHD01.8A-01R (D/S)	7	7.860	4.192	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.5A-03F	6	7.492	4.075	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.8A-02P	57	6.302	3.361	489.8	16.750	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.3A-04N	31	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.3A-02R	18	4.684	3.668	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.4A-02E	2	4.681	2.546	489.8	7.247	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7A-04E	2	4.635	2.521	489.8	7.170	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-06E	2	4.557	2.479	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-08E	2	4.557	2.479	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-10E	2	4.557	2.479	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-12E	2	4.557	2.479	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-14E	4	4.557	2.479	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7A-02E	4	4.557	2.479	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.8A-01R	7	4.311	2.345	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-04E	1	4.065	2.211	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7A-03P	54	3.942	2.144	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-15R	18	3.449	1.876	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5A-05R	18	3.449	1.876	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-05P	61	3.326	1.809	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-07P	52	3.079	1.675	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-09P	52	3.079	1.675	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-11P	52	3.079	1.675	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-13P	52	3.079	1.675	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Average Wear Rate											
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR											
RHD02.4A-03P	52	3.079	1.675	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-05P	51	2.710	1.474	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.6A-04E	2	2.706	1.472	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-06E	4	2.706	1.472	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-08E	2	2.706	1.472	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-10E	2	2.706	1.472	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-12E	2	2.706	1.472	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-14E	2	2.706	1.472	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.3A-02R (D/S)	18	2.538	2.010	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5A-02P	67	2.463	1.340	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-06L (D/S)	10	2.400	1.305	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4A-06L	10	2.400	1.305	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6A-07P	54	2.340	1.273	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.5A-01R (D/S)	17	2.217	1.206	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7A-01R (D/S)	17	2.217	1.206	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.6A-02T (D/S)	15	2.194	1.193	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.3A-15R (D/S)	18	2.194	1.193	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.5A-05R (D/S)	18	2.194	1.193	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-02T	15	2.194	1.193	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.4A-01P	68	2.115	1.675	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.6A-05P	52	1.828	0.994	489.8	5.119	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-09P	52	1.828	0.994	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-11P	52	1.828	0.994	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.4A-01P_1	68	1.828	0.994	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-13P	52	1.828	0.994	489.8	11.023	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.5A-01R	17	1.828	0.994	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-15P_1	52	1.828	0.994	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.7A-01R	17	1.828	0.994	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-01P	68	1.828	0.994	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.5A-04P	56	1.498	0.815	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.6A-03P_1	65	1.463	0.795	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7A-01P	60	1.440	0.783	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6A-03P_2	9	0.804	0.438	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.4A-01P_2	9	0.804	0.438	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-15P_2	9	0.804	0.438	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.3A-01V	24	0.023	0.012	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:33:58PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RH 32B TO HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.055

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3B_1 RH 32B to TK 32B											
RHD01.3B-01N	31	7.984	4.342	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-03N	30	6.387	3.474	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-02P	61	4.311	2.345	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR											
RHD01.5B-03F	6	9.712	5.282	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-04N	31	7.984	4.342	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-06E	2	5.908	3.213	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-08E	2	5.908	3.213	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-10E	2	5.908	3.213	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-12E	2	5.908	3.213	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-14E	2	5.908	3.213	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-16E	2	5.908	3.213	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-18E	2	5.908	3.213	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.9B-01R (D/S)	17	5.732	3.057	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.3B-02R	18	4.938	4.755	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.7B-03R	18	4.471	2.432	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-20R	18	4.471	2.432	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5B-05R	18	4.471	2.432	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-05P	61	4.311	2.345	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-07P	52	3.992	2.171	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-09P	52	3.992	2.171	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-11P	52	3.992	2.171	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-13P	52	3.992	2.171	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-15P	52	3.992	2.171	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-17P	52	3.992	2.171	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-19P	52	3.992	2.171	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5B-02P	67	3.248	1.766	489.8	7.170	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR											
RHD01.7B-02P	67	3.194	1.737	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7B-01R (D/S)	17	2.874	1.563	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5B-01R (D/S)	17	2.874	1.563	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.6B-19E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-04E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-06E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-02E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-02E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-06E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-08E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-10E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-11E	4	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-13E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-15E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-02E	1	2.053	1.117	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-04E	1	2.053	1.117	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-06E	1	2.053	1.117	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-04E	1	2.053	1.117	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-12P	54	1.991	1.083	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.5B-04P	56	1.942	1.056	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.6B-17T (D/S)	15	1.867	1.015	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-21T (D/S)	15	1.867	1.015	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.7B-03R (D/S)	18	1.867	1.015	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-21T	15	1.867	1.015	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.3B-20R (D/S)	18	1.867	1.015	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.5B-05R (D/S)	18	1.867	1.015	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-17T	15	1.867	1.015	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-01P	68	1.580	0.859	489.8	2.524	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-20P_1	52	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.7B-01R	17	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-01P_1	68	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-05P	52	1.556	0.846	489.8	12.437	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.9B-01R	17	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.4B-01P_1	68	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-03P	52	1.556	0.846	489.8	12.437	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.5B-01R	17	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Average Wear Rate											
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR											
RHD01.6B-03P_1	52	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-07P	52	1.556	0.846	489.8	12.437	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-09P_1	52	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-14P	52	1.556	0.846	489.8	3.172	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-16P	52	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-07P	51	1.377	0.749	489.8	2.496	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-03P	51	1.369	0.745	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-05P	51	1.369	0.745	489.8	12.437	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-05P	51	1.369	0.745	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-22P_1	65	1.244	0.677	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-18P	65	1.244	0.677	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-01P	68	1.068	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.3B-02R (D/S)	18	1.054	1.015	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-22P_2	9	0.684	0.372	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-20P_2	9	0.684	0.372	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-01P_2	9	0.684	0.372	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.4B-01P_2	9	0.684	0.372	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-03P_2	9	0.684	0.372	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-09P_2	9	0.684	0.372	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.3B-01V	24	0.029	0.016	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:34:25PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RH 33 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.596

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
=====>Grouped by Line: RHD-01.10A_1 RH 33A to TK 33A											
RHD01.10A-01N	31	9.400	5.112	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-03N	30	7.520	4.090	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-02P	61	5.076	2.761	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
=====>Grouped by Line: RHD-01.10A_2 TK 33A to A HDR											
RHD01.13A-01R (D/S)	7	11.997	6.399	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.10A-18F	6	11.434	6.219	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-04N	31	9.400	5.112	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.5A-02R	18	7.149	5.599	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.12A-03E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-04E	4	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-06E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-10E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-08E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-14E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.6A-02E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-16E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.13A-01R	7	6.580	3.579	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-06E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-08E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-12E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.6A-04E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-01T (D/S)	14	6.139	3.339	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.12A-01T	14	6.139	3.339	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.12A-05P	54	6.016	3.272	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-20R	18	5.264	2.863	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-05P	61	5.076	2.761	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-07P	52	4.700	2.556	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.10A_2 TK 33A to A HDR											
RHD01.10A-11P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-15P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-17P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.6A-03P	52	4.700	2.556	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-07P	51	4.136	2.249	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-09P	51	4.136	2.249	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-13P	51	4.136	2.249	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.11A-01E	4	4.130	2.246	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11A-03E	2	4.130	2.246	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.5A-02R (D/S)	18	3.873	3.067	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-02P	64	3.760	2.045	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.11A-02P	54	3.572	1.943	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.10A-20R (D/S)	18	3.348	1.821	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.6A-01P	57	3.227	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.11A-04P	52	2.790	1.518	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.6A-05P	51	2.316	2.249	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-19P	56	2.287	1.244	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.5A-01V	24	0.035	0.018	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.10B_1 RH 33B to TK 33B											
RHD01.10B-01N	31	9.400	5.112	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-03N	30	7.520	4.090	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-02P	61	5.076	2.761	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR											
RHD01.10B-26F	6	11.434	6.219	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-52T (D/S)	10	9.400	5.112	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-04N	31	9.400	5.112	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-52T	10	9.400	5.112	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-54E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-08E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-56E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-10E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-58E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-12E	4	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-60E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-14E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-15E	4	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Average Wear Rate											
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR											
RHD01.10B-62E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-63E	4	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-17E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-19E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-21E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-22E	4	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-24E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-28E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-30E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-42E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-44E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-46E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-48E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-50E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12B-01R (DIS)	17	6.748	3.599	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.10B-06E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-32E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-34E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-36E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-38E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-40E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-13P_1	54	6.016	3.272	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-16P	54	6.016	3.272	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-23P	54	6.016	3.272	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-53P	60	5.640	3.067	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-64R	18	5.264	2.863	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-05P	61	5.076	2.761	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-55P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-09P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-57P_1	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-11P	52	4.700	2.556	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-59P	52	4.700	2.556	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-61P_1	52	4.700	2.556	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-18P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-20P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-25P_1	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Average Wear Rate											
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR											
RHD01.10B-29P	52	4.700	2.556	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-31P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-43P	52	4.700	2.556	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-45P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-47P_1	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-49P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-51P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-07P	51	4.136	2.249	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-33P	51	4.136	2.249	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-35P	51	4.136	2.249	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-37P_1	51	4.136	2.249	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-39P	51	4.136	2.249	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-41P	51	4.136	2.249	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.11B-02E	2	4.130	2.246	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-04E	2	4.130	2.246	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.6B-02P	54	3.621	1.969	489.8	10.997	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.10B-64R (D/S)	18	3.348	1.821	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-01P_1	68	2.790	1.518	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-03P	52	2.790	1.518	489.8	11.023	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-05P	52	2.790	1.518	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.12B-01R	17	2.790	1.518	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.6B-01E	4	2.401	2.312	489.8	4.100	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.10B-27P	56	2.287	1.244	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-57P_2	9	2.068	1.125	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-13P_2	9	2.068	1.125	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-61P_2	9	2.068	1.125	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-25P_2	9	2.068	1.125	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-37P_2	9	2.068	1.125	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-47P_2	9	2.068	1.125	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.11B-01P_2	9	1.228	0.668	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.5B-01V	24	0.035	0.018	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 3:58:49PM
 AnalysisDate/Time: 7/21/2011 2:35:03PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RHD HDR TO HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.184

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.10A TK A HDR to FWH 36											
RHD02.10A-11T	14	9.839	5.351	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-11T (BR/SE)	14	7.213	3.923	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.10A-03E	1	5.904	3.211	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-05E	1	5.904	3.211	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-07E	1	5.904	3.211	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-09E	1	5.904	3.211	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-01R (D/S)	7	5.725	3.114	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-11T (D/S)	14	5.435	2.956	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-02P	57	4.472	2.432	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-01R	7	4.110	2.235	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.10A-04P	51	3.936	2.141	489.8	16.051	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-06P	51	3.936	2.141	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-08P	51	3.936	2.141	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-10P	51	3.936	2.141	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.10B B HDR to FWH 36A											
RHD02.10B-16T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.10B-14T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.10B-16T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-12V	22	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-14T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-03E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-05E	4	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-07E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-09E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-11E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-01R (D/S)	7	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-06P	54	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.10B B HDR to FWH 36A											
RHD02.10B-17R	18	4.661	2.535	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-02P_1	57	4.161	2.263	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-04P	52	4.161	2.263	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-08P	52	4.161	2.263	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-10P	52	4.161	2.263	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11B-01N	30	3.953	2.150	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10B-13P	58	3.662	1.992	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-15P	63	3.329	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-17R (D/S)	18	2.965	1.612	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10B-01R	7	2.270	1.235	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.10B-02P_2	9	1.831	0.996	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.11A A HDR to FWH 36A											
RHD02.11A-19T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.11A-17T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.11A-19T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-15V	22	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-17T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-03E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-05E	4	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-07E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-08E	4	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-10E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-12E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-14E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-01R (D/S)	7	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-06P	54	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-09P_1	54	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-20R	18	4.661	2.535	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-02P_1	57	4.161	2.263	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-04P	52	4.161	2.263	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-11P	52	4.161	2.263	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-13P	52	4.161	2.263	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12A-01N	30	3.953	2.150	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.11A-16P	58	3.801	2.067	489.8	7.330	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-01R	7	3.459	1.881	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.11A-18P	63	3.419	1.859	489.8	9.386	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.11A A HDR to FWH 36A											
RHD02.11A-20R (D/S)	18	2.965	1.612	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.11A-02P_2	9	1.831	0.996	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-09P_2	9	1.831	0.996	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.12B B HDR to FWH 36B											
RHD02.12B-13T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.12B-11T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.12B-13T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-09V	22	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-11T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-02E	4	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-04E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-06E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-08E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-03P	54	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-14R	18	4.661	2.535	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-05P	52	4.161	2.263	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-07P	52	4.161	2.263	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13B-01N	30	3.953	2.150	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.12B-10P	58	3.662	1.992	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-12P	63	3.329	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-01P	64	3.329	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-14R (D/S)	18	2.965	1.612	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.13A A HDR to FWH 36B											
RHD02.13A-14T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.13A-16T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.13A-16T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-12V	22	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-14T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-02E	4	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-04E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-05E	4	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-07E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-09E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-11E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-03P	54	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-06P_1	54	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.13A A HDR to FWH 36B											
RHD02.13A-17R	18	4.661	2.535	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-08P	52	4.161	2.263	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-10P	52	4.161	2.263	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14A-01N	30	3.953	2.150	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.13A-13P	58	3.662	1.992	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-15P	63	3.329	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-01P	64	3.329	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-17R (D/S)	18	2.965	1.612	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.13A-06P_2	9	1.831	0.996	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.14B B HDR to FWH 36C											
RHD02.14B-12T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.14B-12T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-08V	22	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-04E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-05E	4	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-07E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-10T (BR/SE)	13	5.604	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.14B-03P	54	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-06P	54	5.326	2.897	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-13R	18	4.661	2.535	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-10T	13	4.526	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15B-01N	30	3.825	2.080	489.8	3.829	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.14B-09P	58	3.662	1.992	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-02E	4	3.448	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-11P	63	3.329	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-01P	64	3.329	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-13R (D/S)	18	2.965	1.612	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.14B-14P	63	1.864	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.15A A HDR to FWH 36C											
RHD02.15A-09T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.15A-07V	22	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-09T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-04E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-06E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-11T (BR/SE)	13	5.770	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.15A-12R	18	4.661	2.535	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.15A HDR to FWH 36C											
RHD02.15A-11T	13	4.660	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-03P	52	4.161	2.263	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-05P	52	4.161	2.263	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.16A-01N	30	3.953	2.150	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.15A-08P	58	3.662	1.992	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-02E	2	3.448	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-10P	63	3.329	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-01P	64	3.329	1.811	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-12R (D/S)	18	2.965	1.612	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.15A-13P	63	1.864	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.7B TK B HDR to FWH 36											
RHD02.2B-06L (D/S)	12	7.335	3.989	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.2B-06L (BR/SE)	12	7.007	3.811	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.7B-02E	2	6.619	3.600	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-04E	1	5.904	3.211	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-06E	1	5.904	3.211	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-03P	52	4.472	2.432	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-07P	51	4.020	2.186	489.8	8.198	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-05P	51	3.936	2.141	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-01P	62	3.578	1.946	489.8	16.051	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.8A TK A HDR to FWH 36											
RHD02.6A-06L (BR/SE)	12	7.007	3.811	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.6A-06L (D/S)	12	4.814	2.618	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8A-02E	1	3.875	2.108	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.6A-06L	12	2.659	1.446	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8A-03P	51	2.583	1.405	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8A-01P	62	2.348	1.277	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.8B TK B HDR to FWH 36											
RHD02.8B-06T	14	9.161	4.982	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-06T (BR/SE)	14	7.213	3.923	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.7B-08L (BR/SE)	12	7.131	3.879	489.8	9.528	3.9	8.000	6.448	0.000	42.34	HBD
RHD02.7B-08L (D/S)	12	6.829	3.714	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-06T (D/S)	14	6.458	3.513	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-02E	2	6.163	3.352	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-04E	4	6.163	3.352	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.8B TK B HDR to FWH 36											
RHD02.8B-05P	54	5.330	2.899	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-03P	52	4.164	2.265	489.8	9.871	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-01P	62	3.351	1.822	489.8	7.678	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.7B-08L	12	2.671	1.453	489.8	2.492	3.9	10.750	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.9A TK A HDR to FWH 36											
RHD02.9A-11T	14	9.161	4.982	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-11T (BR/SE)	14	7.213	3.923	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.2A-06L (BR/SE)	12	7.007	3.811	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.2A-06L (D/S)	12	6.829	3.714	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-11T (D/S)	14	6.458	3.513	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-07E	3	5.829	3.171	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-09E	3	5.829	3.171	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-02E	1	5.496	2.989	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-04E	1	5.496	2.989	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-06E	1	5.496	2.989	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.2A-06L	12	4.814	2.618	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-08P	53	4.164	2.265	489.8	8.440	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-10P	53	4.164	2.265	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-03P	51	3.664	1.993	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-05P	51	3.664	1.993	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-01P	62	3.331	1.812	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.9B TK B HDR to FWH 36											
RHD02.9B-02T (BR/SE)	14	7.213	3.923	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.9B-02T	14	6.458	3.513	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9B-02T (D/S)	14	3.567	1.940	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9B-01P	64	2.348	1.277	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:22:58PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HDR TO BFP
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.119

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-06.1 FWH 35 OUT HDR											
CD-06.1-01T	12	5.508	3.246	377.3	11.388	0.0	30.000	6.893	0.000	69.01	ARD
CD-06.1-01T (D/S)	12	6.198	3.891	375.7	15.688	0.0	30.000	6.903	0.000	69.01	ARD
CD-06.1-02P	62	3.313	2.080	375.7	18.139	0.0	28.000	6.903	0.000	69.01	ARD
CD-06.1-03T	14	8.346	5.240	375.7	15.783	0.0	30.000	6.903	0.000	69.01	ARD
CD-06.1-03T (BR/SE)	14	4.858	3.050	375.7	12.681	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.1-03T (D/S)	14	5.665	3.557	375.7	7.891	0.0	30.000	6.903	0.000	69.01	ARD
CD-06.1-01T (BR/SE)	12	6.113	3.684	370.3	16.286	0.0	16.000	6.928	0.000	69.01	ARD
====>Grouped by Line: CD-06.2A HDR to BFP 31											
CD-06.2A-01P	64	2.776	1.743	375.7	12.681	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-02E	2	5.141	3.227	375.7	12.699	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-03P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-04E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-05P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-06E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-07V	22	6.915	4.341	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-08P	58	3.043	1.910	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-09E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-10P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-11E	4	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-12P	54	4.426	2.778	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-13E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-14P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-15E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-16P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-17E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-18P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-19E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-06.2A HDR to BFP 31											
CD-06.2A-20E	4	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-21P	54	4.426	2.778	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-22P	9	1.771	1.128	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-23P	9	1.771	1.128	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-24O	6	10.980	6.893	375.7	26.293	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-25P	56	2.196	1.379	375.7	26.293	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-26E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-27P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-28E	4	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-29P	54	4.426	2.778	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-30E	1	4.564	2.865	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-31E	3	4.841	3.039	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-32P	53	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-33E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2A-34P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3A-01R (D/S)	17	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3A-01R (D/S)	17	3.600	2.260	375.7	22.658	0.0	18.000	6.903	0.000	69.01	ARD
CD-06.3A-02N	30	7.999	5.022	375.7	22.658	0.0	18.000	6.903	0.000	69.01	ARD
====>Grouped by Line: CD-06.2B HDR to BFP 32											
CD-06.2B-01R	7	3.581	2.248	375.7	7.807	0.0	30.000	6.903	0.000	69.01	ARD
CD-06.2B-01R (D/S)	7	4.426	2.778	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-02P	57	3.463	2.174	375.7	12.639	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-35P	9	1.771	1.128	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-03T	15	4.149	2.605	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-03T (D/S)	15	4.149	2.605	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-04T	13	6.915	4.341	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-04T (BR/SE)	13	6.915	4.341	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-05V	22	6.915	4.341	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-06E	4	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-07P	54	4.426	2.778	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-36P	9	1.771	1.128	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-08O	6	10.980	6.893	375.7	26.293	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-09P	56	2.196	1.379	375.7	26.293	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-10E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-11P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-12E	4	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-06.2B HDR to BFP 32											
CD-06.2B-13P	54	4.426	2.778	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-14E	2	5.117	3.213	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.2B-15P	52	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3B-01R	17	3.458	2.171	375.7	12.607	0.0	24.000	6.903	0.000	69.01	ARD
CD-06.3B-01R (D/S)	17	3.600	2.260	375.7	22.658	0.0	18.000	6.903	0.000	69.01	ARD
CD-06.3B-02N	30	7.999	5.022	375.7	22.658	0.0	18.000	6.903	0.000	69.01	ARD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:23:04PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HDR TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.090

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.8A HDR to FWH 33A											
CD-02.7-01P	64	1.123	0.737	198.0	5.515	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.7-02T	14	3.095	2.032	198.0	5.527	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.7-02T (BR/SE)	14	4.299	2.783	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-01P	64	2.456	1.590	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-02E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-03P	54	3.930	2.544	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-04V	22	6.141	3.975	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-05E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-06P	54	3.930	2.544	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-07E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8A-08N	30	4.913	3.180	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.8B HDR to FWH 33B											
CD-02.8B-01P	64	2.460	1.592	198.0	16.461	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-02E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-03P	54	3.930	2.544	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-04V	22	6.141	3.975	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-05E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-06P	54	3.930	2.544	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-07E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8B-08N	30	4.913	3.180	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.8C HDR to FWH 33C											
CD-02.8C-01P	64	2.549	1.650	198.0	17.425	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-02E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-03P	54	4.051	2.622	198.0	17.235	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-04V	22	6.141	3.975	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-05E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.8C HDR to FWH 33C											
CD-02.8C-06P	54	3.930	2.544	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-07E	4	4.544	2.942	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.8C-08N	30	4.913	3.180	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:23:12PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 31 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-01.1A FWH 31A to FWH 32A											
CD-01.1A-01N	31	4.042	2.544	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-02P	61	2.183	1.374	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-03E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-04P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-05E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-06E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-07E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-08P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-09E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-10P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-11E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-12P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1A-13N	30	3.234	2.035	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
====>Grouped by Line: CD-01.1B FWH 31B to FWH 32B											
CD-01.1B-01N	31	4.042	2.544	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-02P	61	2.183	1.374	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-03E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-04P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-05E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-06E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-07E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-08P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-09E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-10P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-11E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-12P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1B-13N	30	3.234	2.035	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-01.1C FWH 31C to FWH 32C											
CD-01.1C-01N	31	4.042	2.544	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-02P	61	2.183	1.374	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-03E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-04P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-05E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-06E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-07E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-08P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-09E	2	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-10P	52	2.021	1.272	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-11E	4	2.991	1.882	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-12P	54	2.587	1.628	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD
CD-01.1C-13N	30	3.234	2.035	156.9	16.184	0.0	14.000	7.096	0.000	90.50	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:23:21PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 32 TO 33 HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.808

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.2 FWH 32 OUT HDR											
CD-02.1B-11T	12	2.382	1.542	198.0	8.046	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.1B-11T (BR/SE)	12	3.095	2.003	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-11T (D/S)	12	3.512	2.274	198.0	16.115	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.2-01P	62	1.707	1.105	198.0	16.013	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.2-03P	9	1.175	0.771	198.0	16.013	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.2-02R	18	2.389	1.546	198.0	16.013	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.2-02R (D/S)	18	2.030	1.314	198.0	11.071	0.0	24.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.3 FWH 32 OUT HDR											
CD-02.1C-12T (BR/SE)	12	3.095	2.003	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-12T	12	2.775	1.796	198.0	11.079	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.1C-12T (D/S)	12	3.480	2.253	198.0	16.610	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-01P	62	1.706	1.104	198.0	16.740	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-02T	15	2.545	1.647	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-02T (D/S)	15	2.545	1.647	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-03P	65	1.697	1.098	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-04E	2	3.139	2.032	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-05E	3	2.969	1.922	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-06P	53	2.121	1.373	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-07E	2	3.139	2.032	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-08P	52	2.121	1.373	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-09E	1	2.800	1.812	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-10P	51	1.866	1.208	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-16P	9	1.181	0.775	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-11E	2	3.139	2.032	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-12P	52	2.121	1.373	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-13E	4	3.139	2.032	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-14P	54	2.715	1.757	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.3 FWH 32 OUT HDR											
CD-02.3-15T	14	4.666	3.020	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-15T (D/S)	14	4.566	2.956	198.0	15.968	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.3-15T (BR/SE)	14	0.384	0.252	198.0	1.117	0.0	18.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.4 FWH 32 OUT HDR											
CD-02.3-17P	62	1.660	1.075	198.0	15.968	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.4-01R	7	2.906	1.881	198.0	15.968	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.4-01R (D/S)	7	3.351	2.169	198.0	23.095	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.4-02V	23	5.236	3.389	198.0	23.095	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.4-03P	58	2.304	1.491	198.0	23.095	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.4-04E	19	4.345	2.812	198.0	24.480	0.0	20.000	7.096	0.000	89.94	HBD
CD-02.4-04E (D/S)	19	3.387	2.192	198.0	16.477	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-01P	69	2.091	1.353	198.0	16.156	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-02E	2	3.180	2.058	198.0	16.868	0.0	24.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.5 FWH 32 OUT HDR											
CD-02.5-03T (BR/SE)	12	0.378	0.248	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.5-03T	12	3.404	2.203	198.0	15.968	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-03T (D/S)	12	3.478	2.252	198.0	16.599	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-04T	14	4.688	3.035	198.0	16.723	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.5-04T (BR/SE)	14	3.186	2.062	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.5-04T (D/S)	14	3.738	2.420	198.0	11.154	0.0	24.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.6 FWH 32 OUT HDR											
CD-02.6-01T (D/S)	15	2.031	1.314	198.0	11.081	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.6-02P	65	1.354	0.876	198.0	11.081	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.6-03T	14	3.723	2.410	198.0	11.083	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.6-03T (D/S)	14	2.296	1.507	198.0	5.533	0.0	24.000	7.096	0.000	89.94	HBD
CD-02.6-03T (BR/SE)	14	3.186	2.062	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.6-01T	15	2.031	1.314	198.0	11.081	0.0	24.000	7.096	0.000	89.94	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:23:29PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 32 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.990

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.1A FWH 32A to HDR											
CD-02.1A-01N	31	5.576	3.610	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-02P	61	3.011	1.949	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-03E	2	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-04P	52	2.788	1.805	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-05V	22	5.576	3.610	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-06E	5	6.692	4.331	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-08P	55	3.903	2.527	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-09E	2	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-10P	52	2.788	1.805	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-11E	4	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-12P	54	3.569	2.310	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-14P	9	1.548	1.016	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-13R	18	3.123	2.021	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1A-13R (D/S)	18	2.127	1.377	198.0	7.994	0.0	20.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.1B FWH 32B to HDR											
CD-02.1B-01N	31	5.576	3.610	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-02P	61	3.011	1.949	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-03E	2	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-04P	52	2.788	1.805	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-05E	2	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-06E	4	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-07V	22	5.576	3.610	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-08P	58	2.454	1.588	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-09E	2	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1B-10P	52	2.912	1.885	198.0	17.602	0.0	14.000	7.096	0.000	89.94	HBD
====>Grouped by Line: CD-02.1C FWH 32C to HDR											
Sorted By: Flow Order											
Sorted By: Flow Order											

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.1C FWH 32C to HDR											
CD-02.1C-01N	31	5.576	3.610	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-02P	61	3.011	1.949	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-03E	2	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-04P	52	2.788	1.805	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-05E	2	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-06E	4	4.126	2.671	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-07P	54	3.569	2.310	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-08V	22	5.576	3.610	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-09P	58	2.454	1.588	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-10E	2	4.237	2.743	198.0	17.134	0.0	14.000	7.096	0.000	89.94	HBD
CD-02.1C-11P	52	2.788	1.805	198.0	16.426	0.0	14.000	7.096	0.000	89.94	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:23:36PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 33 TO HTR 34
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.601

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-03.1A FWH 33A to FWH 34A											
CD-03.1A-01N	31	5.101	3.218	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-02E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-03E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-04P	54	3.265	2.060	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-05E	1	3.367	2.124	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-15P	51	2.245	1.416	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-06E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-07P	54	3.265	2.060	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-14P	9	1.425	0.911	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-08E	1	3.367	2.124	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-09P	51	2.245	1.416	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-10E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-11P	54	3.265	2.060	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-12E	1	3.367	2.124	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1A-13N	30	4.081	2.575	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
====>Grouped by Line: CD-03.1B FWH 33B to FWH 34B											
CD-03.1B-01N	31	5.101	3.218	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-02E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-03E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-04P	54	3.265	2.060	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-05E	2	3.855	2.432	245.2	17.336	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-06E	4	3.861	2.436	245.2	17.379	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-07P	54	3.289	2.075	245.2	16.966	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-12P	9	1.425	0.911	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-08E	2	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-09P	52	2.551	1.609	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1B-10E	1	3.367	2.124	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-03.1B FWH 33B to FWH 34B											
CD-03.1B-11N	30	4.081	2.575	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
====>Grouped by Line: CD-03.1C FWH 33C to FWH 34C											
CD-03.1C-01N	31	5.101	3.218	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-02E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-03E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-04P	54	3.265	2.060	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-05E	2	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-06E	4	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-07P	54	3.265	2.060	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-12P	9	1.425	0.911	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-08E	2	3.775	2.381	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-09P	52	2.551	1.609	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-10E	1	3.367	2.124	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD
CD-03.1C-11N	30	4.081	2.575	245.2	16.765	0.0	14.000	7.096	0.000	88.90	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:23:45PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 34 TO HTR 35
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.452

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-04.1A FWH 34A to FWH 35A											
CD-04.1A-01N	31	5.007	3.154	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-02E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-03E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-04P	54	3.204	2.019	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-05E	2	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-06P	52	2.504	1.577	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-07E	2	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-08P	52	2.504	1.577	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-09E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-10P	54	3.204	2.019	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-15P	9	1.410	0.901	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-11E	2	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-12P	52	2.504	1.577	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-13E	1	3.305	2.082	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1A-14N	30	4.006	2.523	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
====>Grouped by Line: CD-04.1B FWH 34B to FWH 35B											
CD-04.1B-01N	31	5.007	3.154	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-02E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-03E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-04P	54	3.204	2.019	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-05E	2	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-06E	3	3.505	2.208	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-07P	53	2.504	1.577	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-08E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-09P	54	3.204	2.019	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-10E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-11P	54	3.204	2.019	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-04.1B FWH 34B to FWH 35B											
CD-04.1B-17P	9	1.410	0.901	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-12E	1	3.305	2.082	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-13E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-14P	54	3.204	2.019	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-15E	1	3.305	2.082	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1B-16N	30	4.006	2.523	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
====>Grouped by Line: CD-04.1C FWH 34C to FWH 35C											
CD-04.1C-01N	31	5.007	3.154	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-02E	4	3.819	2.406	298.3	18.078	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-03E	4	3.801	2.394	298.3	17.943	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-04P	54	3.204	2.019	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-05E	2	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-06P	52	2.504	1.577	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-07E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-08E	4	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-09P	54	3.204	2.019	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-14P	9	1.410	0.901	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-10E	2	3.705	2.334	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-11P	52	2.504	1.577	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-12E	1	3.305	2.082	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD
CD-04.1C-13N	30	4.006	2.523	298.3	17.229	0.0	14.000	7.096	0.000	87.08	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:23:49PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 35 TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.422

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-05.3 FWH 35 OUT HDR											
CD-05.1B-09T	12	1.403	0.874	377.3	6.134	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.1B-09T (BR/SE)	12	2.453	1.506	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-09T (D/S)	12	2.207	1.355	377.3	12.287	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.3-01P	62	1.077	0.661	377.3	12.287	0.0	24.000	6.880	0.000	82.05	HBD
====>Grouped by Line: CD-05.4 FWH 35 OUT HDR											
CD-05.1C-10T (BR/SE)	12	2.453	1.506	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-10T	12	2.198	1.350	377.3	12.208	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.1C-10T (D/S)	12	2.757	1.693	377.3	18.304	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-04P	62	1.345	0.826	377.3	18.304	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-01E	4	2.488	1.527	377.3	18.304	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-02P	54	2.160	1.326	377.3	18.414	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-03T (BR/SE)	10	2.692	1.653	377.3	18.329	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.4-03T (D/S)	10	2.502	1.536	377.3	11.447	0.0	30.000	6.880	0.000	82.05	HBD
CD-05.4-05P	60	1.492	0.916	377.3	11.334	0.0	30.000	6.880	0.000	82.05	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:23:54PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: HTR 35 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.655

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-05.1A FWH 35A to HDR											
CD-05.1A-01N	31	5.594	3.435	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-02E	4	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-03E	4	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-04P	54	3.580	2.198	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-05V	22	5.594	3.435	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-06P	58	2.462	1.511	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-07E	2	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-08P	52	2.797	1.717	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-09E	4	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-10P	54	3.580	2.198	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-11R	18	3.133	1.924	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1A-11R (D/S)	18	1.583	0.986	377.3	6.095	0.0	24.000	6.880	0.000	82.05	HBD
CD-05.2-01P	68	1.319	0.822	377.3	6.095	0.0	24.000	6.880	0.000	82.05	HBD
====>Grouped by Line: CD-05.1B FWH 35B to HDR											
CD-05.1B-01N	31	5.594	3.435	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-02E	4	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-03E	4	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-04P	54	3.580	2.198	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-05V	22	5.594	3.435	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-06P	58	2.462	1.511	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1B-07E	2	4.251	2.610	377.3	18.894	0.0	14.000	6.880	0.000	82.05	HBD
====>Grouped by Line: CD-05.1C FWH 35C to HDR											
CD-05.1C-01N	31	5.594	3.435	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-02E	4	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-03E	4	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-04P	54	3.580	2.198	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-05.1C FWH 35C to HDR											
CD-05.1C-05V	22	5.594	3.435	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-06P	58	2.462	1.511	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-07E	2	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-08E	4	4.140	2.542	377.3	18.113	0.0	14.000	6.880	0.000	82.05	HBD
CD-05.1C-09P	54	3.622	2.224	377.3	18.449	0.0	14.000	6.880	0.000	82.05	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:24:00PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: S/G BLWDN HX IN
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.754

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: CD-02.9 FWH HDR to SGBD HX3											
CD-02.9-01P	63	0.483	0.317	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-02E	4	0.894	0.587	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-03P	54	0.773	0.507	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-04V	22	1.208	0.793	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-05P	58	0.531	0.349	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-06E	2	0.894	0.587	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-07P	52	0.604	0.396	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-08E	4	0.894	0.587	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-09P	54	0.773	0.507	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-10P	9	0.266	0.174	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-11E	2	0.894	0.587	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-12P	52	0.604	0.396	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-13E	2	0.894	0.587	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-14P	52	0.604	0.396	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-15P	9	0.266	0.174	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-16E	2	0.894	0.587	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-17T	14	1.328	0.872	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.9-17T (BR/SE)	14	3.961	2.600	198.0	5.966	0.0	8.000	7.096	0.000	89.94	HBD
CD-02.10-01P	64	1.945	1.277	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-03P	56	2.082	1.348	198.0	14.012	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-04E	2	3.598	2.362	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-05P	52	2.431	1.596	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-06E	2	3.598	2.362	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-07P	52	2.431	1.596	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-08E	2	3.598	2.362	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-09P	52	2.431	1.596	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.10-10E	4	3.598	2.362	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD

Sorted By: Flow Order

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line:	CD-02.9 FWH HDR to SGBD HX3										
CD-02.10-11N	30	4.963	3.258	198.0	6.587	0.0	8.625	7.096	0.000	89.94	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:24:20PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: CD: S/G BLWDN HX OUT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.247

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
=====>Grouped by Line: CD-02.11 SGBD HX3 to FWH HDR											
CD-02.11-01N	31	11.487	7.540	198.0	6.587	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-02P	61	4.862	3.191	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-03E	2	6.662	4.373	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-04P	52	4.501	2.955	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-05E	1	5.942	3.900	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-06P	51	3.961	2.600	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-07E	2	6.662	4.373	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-08P	52	4.501	2.955	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-09P	9	1.981	1.300	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-10E	2	6.662	4.373	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-11P	52	4.501	2.955	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-12E	2	6.662	4.373	198.0	5.068	0.0	8.625	7.096	0.000	89.94	HBD
CD-02.11-13T (BR/SE)	10	8.382	5.502	198.0	5.966	0.0	8.000	7.096	0.000	89.94	HBD
CD-02.11-13T (D/S)	10	2.236	1.468	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-01P	60	1.342	0.881	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-02E	2	1.655	1.086	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-03P	52	1.118	0.734	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-04V	22	2.236	1.468	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-05P	58	0.984	0.646	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-06E	2	1.655	1.086	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-07P	52	1.118	0.734	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-08E	2	1.655	1.086	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-09P	52	1.118	0.734	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-10E	2	1.655	1.086	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD
CD-02.12-11P	52	1.118	0.734	198.0	1.134	0.0	18.000	7.096	0.000	89.94	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:24:26PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: BFPT DRN TO COND
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-07.1 BFPT 31 Drain to Cond											
EX-07.1-01N	31	0.285	0.291	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-02E	4	0.177	0.181	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-03EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-04P	56	0.069	0.072	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-05E	3	0.162	0.164	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-06P	53	0.183	0.186	101.7	0.046	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-07E	1	0.152	0.155	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-08EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-09P	56	0.069	0.072	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-10EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-11R	18	0.120	0.122	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.1-11R (D/S)	18	0.068	0.068	101.7	0.020	87.3	54.000	7.276	0.000	68.22	HBD
EX-07.1-12N	30	0.102	0.101	101.7	0.020	87.3	54.000	7.276	0.000	68.22	HBD
====>Grouped by Line: EX-07.2 BFPT 32 Drain to Cond											
EX-07.2-01N	31	0.285	0.291	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-02E	4	0.177	0.181	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-03EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-04P	56	0.069	0.072	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-05E	3	0.162	0.164	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-06P	53	0.183	0.186	101.7	0.046	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-07E	1	0.152	0.155	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-08EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-09P	56	0.069	0.072	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-10EJ	6	0.265	0.274	101.7	0.066	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-11R	18	0.120	0.122	101.7	0.037	87.3	48.000	7.276	0.000	68.22	HBD
EX-07.2-11R (D/S)	18	0.068	0.068	101.7	0.020	87.3	54.000	7.276	0.000	68.22	HBD
EX-07.2-12N	30	0.102	0.101	101.7	0.020	87.3	54.000	7.276	0.000	68.22	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:24:33PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: HDR TO 35 HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.988

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.16 HDR 35 to FWH 35A											
EX-02.19-01P	64	0.027	0.030	385.2	7.029	93.8	28.000	0.000	0.000	0.00	ARD
EX-02.16-01R	7	0.059	0.065	385.2	7.029	93.8	28.000	0.000	0.000	0.00	ARD
EX-02.16-01R (D/S)	7	0.074	0.082	385.2	29.715	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-02P	57	0.072	0.073	385.2	29.474	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-03E	2	0.090	0.092	385.2	30.943	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-04P	52	0.060	0.061	385.2	30.232	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-05V	22	23.091	27.255	385.2	29.945	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-06E	4	0.089	0.091	385.2	30.250	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-07P	54	0.093	0.095	385.2	30.292	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-08E	2	22.976	26.455	385.2	35.427	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.16-09N	30	21.055	24.874	385.2	29.549	93.8	18.000	0.000	0.000	0.00	ARD
====>Grouped by Line: EX-02.17 HDR 35 to FWH 35B											
EX-02.17-01P	64	0.032	0.035	385.2	30.483	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-02V	22	23.091	27.255	385.2	29.945	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-03E	4	0.089	0.091	385.2	30.250	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-04P	54	0.093	0.095	385.2	30.276	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-05E	2	23.097	26.598	385.2	35.888	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.17-06N	30	21.055	24.874	385.2	29.549	93.8	18.000	0.000	0.000	0.00	ARD
====>Grouped by Line: EX-02.18 HDR 35 to FWH 35C											
EX-02.18-01P	64	0.032	0.035	385.2	30.483	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-02V	22	23.091	27.255	385.2	29.945	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-03E	4	0.083	0.091	385.2	30.250	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-04P	54	0.077	0.085	385.2	30.250	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-05E	2	21.477	24.681	385.2	29.715	93.8	18.000	0.000	0.000	0.00	ARD
EX-02.18-06N	30	21.055	24.874	385.2	29.549	93.8	18.000	0.000	0.000	0.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:24:54PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: HDR TO 36 HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.686

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-01.5A HP EX HDR to FWH 36A											
EX-01.7-01P	63	0.001	0.001	441.8	15.740	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.5A-01R	7	0.003	0.002	441.8	15.740	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.5A-01R (D/S)	7	0.004	0.003	441.8	35.727	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-02P	57	0.004	0.003	441.8	36.793	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-03E	102	0.007	0.005	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-04P	52	0.003	0.002	441.8	53.650	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-05E	4	0.005	0.004	441.8	37.401	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-06P	54	0.005	0.004	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-16L	12	0.009	0.006	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-16L (D/S)	12	0.009	0.006	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-07L	12	0.009	0.006	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-07L (D/S)	12	0.009	0.006	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-08P	62	0.002	0.001	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-09E	102	0.007	0.005	441.8	36.805	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-10P	52	0.003	0.002	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-11V	22	9.129	4.258	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-12P	58	0.002	0.002	441.8	37.331	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-13E	2	0.005	0.004	441.8	37.496	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-17P	52	0.003	0.002	441.8	36.275	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-14E	4	0.005	0.004	441.8	38.106	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5A-15N	30	0.005	0.004	441.8	35.935	93.7	12.750	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.5B HP EX HDR to FWH 36B											
EX-01.5B-01P	64	0.002	0.001	441.8	53.069	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-02E	2	0.005	0.004	441.8	38.209	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-03P	52	0.003	0.002	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-14L	12	0.009	0.006	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-14L (D/S)	12	0.009	0.006	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-01.5B HP EX HDR to FWH 36B											
EX-01.5B-04L	12	0.009	0.006	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-04L (D/S)	12	0.009	0.006	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-05P	62	0.002	0.001	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-06E	1	0.004	0.003	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-07E	4	0.005	0.004	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-08P	54	0.005	0.004	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-09V	22	9.129	4.258	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-10P	58	0.002	0.002	441.8	37.153	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-11E	2	0.005	0.004	441.8	37.854	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-15P	52	0.003	0.002	441.8	36.954	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-12E	4	0.006	0.004	441.8	39.151	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5B-13N	30	0.005	0.004	441.8	35.935	93.7	12.750	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.5C HP EX HDR to FWH 36C											
EX-01.5C-01P	64	0.002	0.001	441.8	54.131	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-02E	2	0.005	0.004	441.8	37.455	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-03P	52	0.003	0.002	441.8	36.831	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-14L	12	0.009	0.006	441.8	36.778	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-14L (D/S)	12	0.009	0.006	441.8	36.778	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-04L	12	0.009	0.006	441.8	36.659	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-04L (D/S)	12	0.009	0.006	441.8	36.210	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-05P	62	0.002	0.001	441.8	36.778	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-06E	1	0.004	0.003	441.8	37.564	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-07E	4	0.005	0.004	441.8	37.360	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-08P	54	0.005	0.004	441.8	36.913	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-09V	22	9.129	4.258	441.8	36.567	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-10P	58	0.002	0.002	441.8	36.939	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-11E	2	0.005	0.004	441.8	37.800	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-15P	52	0.003	0.002	441.8	36.301	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-12E	4	0.005	0.004	441.8	38.321	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.5C-13N	30	0.005	0.004	441.8	35.935	93.7	12.750	6.679	0.000	196.44	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:25:13PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: HTR 36 HEADER
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.751

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-01.1 HP EXT to FWH 36 HDR											
EX-01.1-01N	31	17.040	7.928	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-02E	4	0.007	0.005	441.8	57.590	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-03P	54	0.007	0.005	441.8	55.741	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-04E	4	0.007	0.005	441.8	57.672	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-05P	54	0.006	0.004	441.8	75.097	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-06E	2	0.007	0.005	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-07P	52	0.005	0.003	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-08R	18	0.004	0.003	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.1-08R (D/S)	18	0.003	0.002	441.8	26.318	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.6-01P	68	0.002	0.002	441.8	25.914	93.7	18.000	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.2 HP EXT to FWH 36 HDR											
EX-01.2-01N	31	17.040	7.928	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-02E	4	0.007	0.005	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-03P	54	0.007	0.005	441.8	56.380	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-04E	3	0.006	0.004	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-05P	53	0.005	0.004	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-06E	4	0.007	0.005	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-07P	54	0.005	0.004	441.8	74.401	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-08E	1	0.006	0.004	441.8	55.320	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-09P	51	0.003	0.002	441.8	74.893	93.7	12.750	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER											
EX-01.2-10L	12	0.008	0.006	441.8	26.618	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.2-10L (BR/SE)	12	0.008	0.006	441.8	56.495	93.7	12.750	6.679	0.000	196.44	HBD
EX-01.2-10L (D/S)	12	0.012	0.008	441.8	55.283	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-01P	62	0.002	0.001	441.8	54.933	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-02E	2	0.006	0.005	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER											
EX-01.3-03P	52	0.004	0.003	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-04T	15	0.005	0.004	441.8	55.094	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-04T (D/S)	15	0.005	0.003	441.8	55.094	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-05P	65	0.005	0.004	441.8	55.038	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-06V	22	11.973	5.567	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-07V	25	13.059	6.072	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-08V	25	13.059	6.072	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-09E	4	0.006	0.005	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-10P	54	0.005	0.003	441.8	83.334	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-11T	15	0.004	0.003	441.8	83.334	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-11T (D/S)	15	0.003	0.002	441.8	83.334	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-12P	65	0.004	0.003	441.8	83.334	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-13E	2	0.006	0.005	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-14P	52	0.004	0.003	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-15E	2	0.006	0.005	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-16P	52	0.004	0.003	441.8	54.987	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-17T	15	0.005	0.004	441.8	55.547	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-17T (D/S)	15	0.005	0.003	441.8	55.547	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-19E	4	0.007	0.005	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-20P	54	0.007	0.005	441.8	55.224	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-21E	2	0.007	0.005	441.8	54.693	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-22P	52	0.004	0.003	441.8	55.924	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-23T	14	0.014	0.010	441.8	56.075	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-23T (D/S)	14	0.011	0.008	441.8	36.716	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.3-23T (BR/SE)	14	0.004	0.003	441.8	39.487	93.7	12.750	6.679	0.000	196.44	HBD
====>Grouped by Line: EX-01.4 HP EXT FWH 36 HEADER											
EX-01.4-01P	63	0.002	0.001	441.8	36.616	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.4-02T	14	0.011	0.008	441.8	35.801	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.4-02T (D/S)	14	0.008	0.006	441.8	15.745	93.7	18.000	6.679	0.000	196.44	HBD
EX-01.4-02T (BR/SE)	14	0.004	0.003	441.8	36.644	93.7	12.750	6.679	0.000	196.44	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:25:25PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: LP TO 31 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.811

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-06.1A LP EXT 19 to FWH 31A											
EX-06.1A-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1A-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1A-03E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1A-04N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.1B LP EXT 19 to FWH 31B											
EX-06.1B-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1B-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1B-03E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1B-04N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.1C LP EXT 19 to FWH 31C											
EX-06.1C-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1C-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1C-03E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.1C-04N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.2A LP EXT 17 to FWH 31A											
EX-06.2A-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2A-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2A-03E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2A-04N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.2B LP EXT 17 to FWH 31B											
EX-06.2B-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2B-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2B-03E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2B-04N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.2C LP EXT 17 to FWH 31C											
EX-06.2C-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-06.2C LP EXT 17 to FWH 31C											
EX-06.2C-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2C-03E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.2C-04N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.3A LP EXT 20 to FWH 31A											
EX-06.3A-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3A-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3A-03P	54	3.872	3.340	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3A-04E	1	3.187	2.747	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3A-05N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.3B LP EXT 20 to FWH 31B											
EX-06.3B-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3B-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3B-03P	54	3.872	3.340	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3B-04E	2	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3B-05N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.3C LP EXT 20 to FWH 31C											
EX-06.3C-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3C-02E	4	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3C-03P	54	3.872	3.340	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3C-04E	2	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.3C-05N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.4A LP EXT 18 to FWH 31A											
EX-06.4A-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4A-02E	3	3.380	2.914	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4A-03P	53	1.166	0.848	168.3	19.532	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4A-04E	2	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4A-05N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.4B LP EXT 18 to FWH 31B											
EX-06.4B-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4B-02E	3	3.380	2.914	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4B-03P	53	1.166	0.848	168.3	19.532	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4B-04E	2	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4B-05N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD
====>Grouped by Line: EX-06.4C LP EXT 18 to FWH 31C											
EX-06.4C-01N	31	6.266	5.442	168.3	1.201	77.1	26.000	7.141	0.000	37.64	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-06.4C LP EXT 18 to FWH 31C											
EX-06.4C-02E	3	3.380	2.914	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4C-03P	53	1.166	0.848	168.3	19.532	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4C-04E	2	3.720	3.207	168.3	1.121	77.1	26.000	7.141	0.000	37.64	HBD
EX-06.4C-05N	30	4.142	3.588	168.3	1.177	77.1	26.000	7.141	0.000	37.64	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:25:32PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: LP TO 32 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.318

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-05.1A LP EXT 16 to FWH 32A											
EX-05.1A-01N	31	7.732	4.085	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1A-02P	61	1.375	0.977	206.9	36.385	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1A-03E	3	4.424	2.367	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1A-04N	30	5.178	2.742	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.1B LP EXT 16 to FWH 32B											
EX-05.1B-01N	31	7.732	4.085	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1B-02P	61	1.375	0.977	206.9	36.385	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1B-03E	3	4.424	2.367	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1B-04N	30	5.178	2.742	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.1C LP EXT 16 to FWH 32C											
EX-05.1C-01N	31	7.732	4.085	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1C-02P	61	1.375	0.977	206.9	36.385	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1C-03E	3	4.424	2.367	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.1C-04N	30	5.178	2.742	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.2A LP EXT 15 to FWH 32A											
EX-05.2A-01N	31	7.732	4.085	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-02E	4	4.870	2.607	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-03E	3	4.424	2.367	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-04P	53	3.966	2.123	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-05E	1	4.171	2.232	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2A-06N	30	5.178	2.742	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B											
EX-05.2B-01N	31	7.732	4.085	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2B-02E	4	4.870	2.607	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2B-03E	3	4.424	2.367	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2B-04P	53	3.966	2.123	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B											
EX-05.2B-05E	1	4.171	2.232	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2B-06N	30	5.178	2.742	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD
====>Grouped by Line: EX-05.2C LP EXT 15 to FWH 32C											
EX-05.2C-01N	31	7.732	4.085	206.9	8.945	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-02E	4	4.870	2.607	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-03E	3	4.424	2.367	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-04P	53	3.966	2.123	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-05E	1	4.171	2.232	206.9	8.117	75.1	22.000	7.118	0.000	33.97	HBD
EX-05.2C-06N	30	5.178	2.742	206.9	8.800	75.1	22.000	7.118	0.000	33.97	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:26:09PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: LP TO 33 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.383

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.1 LPEX14 to FWH33A HDR											
EX-04.1-01N	31	7.669	9.240	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-08X	6	3.017	2.810	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-02E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-03E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-04P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-05E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-07P	52	2.201	2.051	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-06T (BR/SE)	10	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.1-06T (D/S)	10	4.765	5.014	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.3-01P	60	1.729	1.820	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR											
EX-04.9-09T (D/S)	12	9.707	11.210	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-01P	62	1.778	2.053	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-02T	15	4.441	5.129	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-02T (D/S)	15	3.909	4.514	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-03P	65	4.380	5.059	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-04V	22	5.314	6.236	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-05P	58	2.126	2.495	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-06V	25	7.106	8.207	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-07P	58	2.606	3.010	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-08E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-09E	3	4.952	5.719	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-10P	53	2.535	2.362	254.8	17.234	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-11E	3	4.952	5.719	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-12P	53	4.440	5.128	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-13E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-14P	52	2.113	1.968	254.8	17.234	90.5	28.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR											
EX-04.11-15E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-16P	52	3.701	4.274	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-17T	15	4.441	5.129	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-17T (D/S)	15	3.909	4.514	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-18P	65	4.380	5.059	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-20P	9	1.302	1.504	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-19T	14	11.395	13.160	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-19T (D/S)	14	7.314	7.694	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.11-19T (BR/SE)	14	3.627	4.401	254.8	7.012	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-09T	12	6.226	6.549	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.9-09T (BR/SE)	12	5.638	6.838	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.13 LP EXT 32 to FWH 33B											
EX-04.12-01P	64	1.529	1.609	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.13-01R	7	2.940	3.093	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.13-01R (D/S)	7	4.312	5.230	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-02P	57	3.886	4.714	254.8	6.994	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-07T	15	3.887	4.715	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-07T (D/S)	15	3.421	4.149	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-03E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-04P	52	3.204	3.880	254.8	7.164	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-05E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.13-06N	30	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.14 LP EXT 32 to FWH 33B											
EX-04.14-01P	64	2.047	2.479	254.8	7.285	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.14-02E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.14-03N	30	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.15 LPEX14 to FWH33C HDR											
EX-04.15-01N	31	7.669	9.240	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-08X	6	3.017	2.810	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-02E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-03E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-04P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-05E	2	4.772	5.787	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-07P	52	3.239	3.929	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-06T (BR/SE)	10	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.15-06T (D/S)	10	4.765	5.014	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.15 LPEX14 to FWH33C HDR											
EX-04.17-01P	60	1.729	1.820	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.16 LPEX13 to FWH33C HDR											
EX-04.16-01N	31	7.669	9.240	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-10X	6	3.017	2.810	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-02E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-03E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-04P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-05E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-06P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-07E	2	4.772	5.787	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-08P	52	2.201	2.051	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.18 LPEX FWH 33C IN HDR											
EX-04.16-09T	12	6.226	6.549	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.16-09T (BR/SE)	12	5.638	6.838	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.16-09T (D/S)	12	9.707	11.210	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-01P	62	1.778	2.053	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-02T	15	4.441	5.129	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-02T (D/S)	15	3.909	4.514	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-03P	65	4.380	5.059	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-04V	22	5.314	6.236	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-05P	58	2.126	2.495	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.18-06V	25	7.106	8.207	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.19-01R	7	4.560	5.267	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.19-01R (D/S)	7	3.989	4.609	254.8	14.052	90.5	24.000	7.255	0.000	69.67	HBD
EX-04.19-02V	23	3.602	4.137	254.8	14.424	90.5	24.000	7.255	0.000	69.67	HBD
EX-04.19-03R	18	2.954	3.413	254.8	14.052	90.5	24.000	7.255	0.000	69.67	HBD
EX-04.19-03R (D/S)	18	3.909	4.514	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-01P	68	2.962	3.420	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-02E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-03P	52	2.113	1.968	254.8	17.234	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-04E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-05P	52	3.701	4.274	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-06E	4	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-07P	54	5.684	6.564	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-08E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-09P	52	3.701	4.274	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.18 LPEX FWH 33C IN HDR											
EX-04.20-10E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-11P	52	2.113	1.968	254.8	17.234	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-12E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-13P	52	3.701	4.274	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-14T	15	4.441	5.129	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-14T (D/S)	15	3.909	4.514	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-15P	65	4.380	5.059	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-16T	14	11.317	13.101	254.8	5.676	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-16T (D/S)	14	7.516	7.904	254.8	0.304	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.20-16T (BR/SE)	14	3.629	4.401	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.2 LPEX13 to FWH33A HDR											
EX-04.2-01N	31	7.669	9.240	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-10X	6	3.017	2.810	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-02E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-03E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-04P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-05E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-06P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-07E	2	4.772	5.787	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-08P	52	2.201	2.051	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.21 LP EXT 31 to FWH 33C											
EX-04.20-17P	64	1.529	1.609	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.21-01R	7	2.940	3.093	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.21-01R (D/S)	7	4.312	5.230	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-02P	57	3.882	4.712	254.8	7.050	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-07T	15	3.887	4.715	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-07T (D/S)	15	3.421	4.149	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-03E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-04P	52	3.204	3.880	254.8	7.164	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-05E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.21-06N	30	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.22 LP EXT 31 to FWH 33C											
EX-04.22-01P	64	2.049	2.482	254.8	7.260	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.22-02E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.22-03N	30	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Flow Order											
====>Grouped by Line: EX-04.4 LPEX FWH 33A IN HDR											
EX-04.2-09T	12	6.226	6.549	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.2-09T (BR/SE)	12	5.638	6.838	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.2-09T (D/S)	12	9.707	11.210	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-01P	62	1.778	2.053	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-02T	15	4.441	5.129	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-02T (D/S)	15	3.909	4.514	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-03P	65	4.380	5.059	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-04V	22	5.314	6.236	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-05P	58	2.126	2.495	254.8	12.606	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-06V	25	7.106	8.207	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-07P	58	2.606	3.010	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-08E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-09P	52	2.113	1.968	254.8	17.235	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-10E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-11P	52	3.701	4.274	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-12E	4	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-13P	54	5.683	6.564	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-14E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-15P	52	3.701	4.274	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-16E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-17P	52	2.113	1.968	254.8	17.235	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-18E	2	5.865	6.773	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-19P	52	3.701	4.274	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-20T	15	4.441	5.129	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-20T (D/S)	15	3.909	4.514	254.8	5.453	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-21P	65	4.380	5.059	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-23P	9	1.302	1.504	254.8	5.454	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-22T	14	11.351	13.127	254.8	5.575	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-22T (D/S)	14	7.424	7.809	254.8	0.297	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.4-22T (BR/SE)	14	3.627	4.401	254.8	7.012	90.5	20.000	7.255	0.000	69.67	HBD
Sorted By: Flow Order											
====>Grouped by Line: EX-04.6 LP EXT to FWH 33A											
EX-04.5-01P	64	1.530	1.610	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.6-01R	7	2.940	3.093	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.6-01R (D/S)	7	4.312	5.230	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-02P	57	3.883	4.713	254.8	7.033	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-07T	15	3.884	4.714	254.8	7.025	90.5	20.000	7.255	0.000	69.67	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-04.6 LP EXT to FWH 33A											
EX-04.6-07T (D/S)	15	3.419	4.149	254.8	7.025	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-03E	2	5.032	6.030	254.8	7.997	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-04P	52	3.197	3.870	254.8	7.299	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-05E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.6-06N	30	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.7 LP EXT to FWH 33A											
EX-04.7-01P	64	2.050	2.483	254.8	7.229	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.7-02E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.7-03N	30	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.8 LPEX14 to FWH33B HDR											
EX-04.8-01N	31	7.669	9.240	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-08X	6	3.017	2.810	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-02E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-03E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-04P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-05E	2	5.134	6.226	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-07P	52	2.201	2.051	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-06T (BR/SE)	10	5.183	6.286	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.8-06T (D/S)	10	4.765	5.014	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
EX-04.10-01P	60	1.729	1.820	254.8	0.289	90.5	28.000	7.255	0.000	69.67	HBD
====>Grouped by Line: EX-04.9 LPEX13 to FWH33B HDR											
EX-04.9-01N	31	7.669	9.240	254.8	7.691	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-10X	6	3.017	2.810	254.8	21.028	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-02E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-03E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-04P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-05E	3	4.334	5.256	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-06P	53	3.887	4.714	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-07E	2	4.772	5.787	254.8	6.971	90.5	20.000	7.255	0.000	69.67	HBD
EX-04.9-08P	52	2.201	2.051	254.8	17.033	90.5	20.000	7.255	0.000	69.67	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:26:45PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: ES: PRESEP TO 35 HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.229

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.1 PSEP 2A 10" to 35 HDR											
EX-02.1-01N	31	0.020	0.022	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-02P	61	0.016	0.016	385.2	23.337	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-03E	4	0.014	0.014	385.2	23.905	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-04P	54	0.014	0.014	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-05O	6	0.015	0.015	385.2	45.863	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-06T (BR/SE)	10	0.015	0.015	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.1-06T (D/S)	10	0.015	0.015	385.2	3.409	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.5-01P	60	0.002	0.002	385.2	17.778	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.11 PSEP1B 14" to 35 HDR											
EX-02.11-02P	64	0.006	0.006	385.2	73.301	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-03E	4	0.018	0.018	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-04P	54	0.019	0.018	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-06O	6	0.020	0.020	385.2	95.761	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-07P	56	0.005	0.005	385.2	95.761	93.8	14.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.12 PSEP 1B&2B to 35 HDR											
EX-02.9-10T (D/S)	12	0.030	0.029	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.12-01P	62	0.004	0.004	385.2	75.930	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.9-10T (BR/SE)	12	0.016	0.016	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-10T	12	0.020	0.019	385.2	3.409	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR											
EX-02.11-05T (BR/SE)	12	0.021	0.021	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.11-05T	12	0.030	0.029	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.11-05T (D/S)	12	0.030	0.029	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-01P	62	0.004	0.004	385.2	75.930	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-02B	1	0.014	0.014	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-03E	4	0.018	0.017	385.2	48.757	93.8	18.000	6.854	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR											
EX-02.13-03P	54	0.013	0.013	385.2	75.933	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-04E	3	0.016	0.016	385.2	48.757	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-05P	53	0.013	0.013	385.2	48.757	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-06R	18	0.041	0.043	385.2	47.982	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.13-06R (D/S)	18	0.031	0.032	385.2	15.155	93.8	28.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.14 FWH 35 HEADER											
EX-02.7-02T	12	0.068	0.071	385.2	15.155	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.7-02T (D/S)	12	0.083	0.089	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-01P	62	4.411	4.596	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-02E	2	13.302	14.096	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-03P	52	9.185	9.570	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-04T	15	11.022	11.483	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-04T (D/S)	15	9.700	10.107	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-05P	65	10.872	11.327	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-06E	2	14.096	14.096	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-07P	52	9.144	9.517	385.2	38.039	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-08E	2	14.096	14.096	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-09P	52	9.185	9.570	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-10V	22	19.372	20.360	385.2	54.705	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-11V	25	17.635	18.374	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-12P	58	6.467	6.738	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-13V	25	17.635	18.374	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-31P	58	6.467	6.738	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-14E	3	12.288	12.803	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-32T	15	11.022	11.483	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-32T (D/S)	15	9.700	10.107	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-16E	2	14.555	15.165	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-17P	52	6.501	5.685	385.2	76.600	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-18E	2	14.555	15.165	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-19P	52	9.185	9.570	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-20E	4	14.555	15.165	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-21P	54	14.106	14.697	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-33P	9	0.019	0.020	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-22T	15	0.038	0.041	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-22T (D/S)	15	0.033	0.036	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-23P	65	0.038	0.040	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.14 FWH 35 HEADER											
EX-02.14-24E	2	14.555	15.165	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-25E	4	15.165	15.165	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-26P	54	14.044	14.616	385.2	38.039	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-27E	2	14.555	15.165	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-28P	52	0.032	0.034	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-29T	14	0.098	0.104	385.2	37.760	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-29T (D/S)	14	0.084	0.088	385.2	23.240	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.14-29T (BR/SE)	14	0.035	0.037	385.2	29.715	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.7-02T (BR/SE)	12	0.065	0.069	385.2	48.757	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.15 FWH 35 HEADER											
EX-02.15-01P	64	0.018	0.019	385.2	24.405	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.15-02T	14	0.085	0.090	385.2	24.551	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.15-02T (D/S)	14	0.082	0.087	385.2	7.714	93.8	28.000	6.854	0.000	41.00	ARD
EX-02.15-02T (BR/SE)	14	0.035	0.037	385.2	29.715	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.2 PSEP 1A 10" to 35 HDR											
EX-02.2-02P	61	0.016	0.016	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-03E	2	0.014	0.013	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-04P	52	0.006	0.006	385.2	38.302	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-05E	2	0.014	0.013	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-06P	52	0.009	0.009	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-08O	6	0.011	0.011	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.4 PSEP2A 14" to 35 HDR											
EX-02.4-02P	64	0.006	0.006	385.2	73.301	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-03E	4	0.018	0.018	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-04P	54	0.019	0.018	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-06O	6	0.020	0.020	385.2	95.761	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-07P	56	0.005	0.005	385.2	95.761	93.8	14.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.6 PSEP 1A&2A to 35 HDR											
EX-02.2-07T	12	0.020	0.019	385.2	3.409	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.2-07T (BR/SE)	12	0.016	0.016	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.2-07T (D/S)	12	0.030	0.029	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.6-01P	62	0.004	0.004	385.2	75.930	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.7 PSEP 1A&2A to 35 HDR											
EX-02.4-05T (BR/SE)	12	0.021	0.021	385.2	52.877	93.8	14.000	6.854	0.000	41.00	ARD
EX-02.4-05T	12	0.030	0.029	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: EX-02.7 PSEP 1A&2A to 35 HDR											
EX-02.4-05T (D/S)	12	0.030	0.029	385.2	50.345	93.8	18.000	6.854	0.000	41.00	ARD
EX-02.7-01P	62	0.004	0.004	385.2	75.930	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.8 PSEP 2B 10" to 35 HDR											
EX-02.8-01N	31	0.020	0.022	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-02E	3	0.012	0.012	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-03P	53	0.008	0.008	385.2	38.302	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-04E	1	0.012	0.012	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-05P	51	0.008	0.008	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-07O	6	0.015	0.015	385.2	45.863	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-06E	3	0.012	0.012	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-09P	53	0.011	0.011	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-08T (BR/SE)	10	0.015	0.015	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.8-08T (D/S)	10	0.015	0.015	385.2	3.409	93.8	18.000	6.854	0.000	41.00	ARD
====>Grouped by Line: EX-02.9 PSEP 1B 10" to 35 HDR											
EX-02.9-01N	31	0.020	0.022	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-02P	61	0.016	0.016	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-03E	2	0.014	0.013	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-04P	52	0.006	0.006	385.2	38.302	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-05E	2	0.014	0.013	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-06P	52	0.009	0.009	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-11O	6	0.011	0.011	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-07E	4	0.014	0.013	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-08P	54	0.014	0.014	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-09E	4	0.014	0.013	385.2	23.182	93.8	10.750	6.854	0.000	41.00	ARD
EX-02.9-10P	54	0.014	0.014	385.2	23.379	93.8	10.750	6.854	0.000	41.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:26:54PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: FW: 36 HTR TO SG HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.451

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.1A FWH 36A to SG HDR											
FW-02.1A-01N	31	10.634	6.358	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-02E	4	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-03P	54	6.806	4.069	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-04E	4	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-05V	22	15.025	8.984	430.4	29.883	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-06P	58	4.679	2.798	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-07E	2	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-08P	52	5.317	3.179	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-09E	2	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-10P	52	5.317	3.179	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-11E	2	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-12P	52	5.317	3.179	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-13R	18	5.955	3.561	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1A-13R (D/S)	18	3.029	1.837	430.4	5.938	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.1B FWH 36B to SG HDR											
FW-02.1B-01N	31	10.634	6.358	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-02E	4	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-03P	54	6.806	4.069	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-04E	4	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-05V	22	15.025	8.984	430.4	29.883	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-06P	58	4.679	2.798	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-07E	2	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-08P	52	5.317	3.179	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-09E	2	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-10P	52	5.340	3.193	430.4	17.364	0.0	18.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.1C FWH 36C to SG HDR											

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.1C FWH 36C to SG HDR											
FW-02.1C-01N	31	10.634	6.358	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-02E	4	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-03P	54	6.806	4.069	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-04E	4	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-05V	22	15.025	8.984	430.4	29.883	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-06P	58	4.679	2.798	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-07E	2	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-08P	52	5.317	3.179	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-09E	2	7.869	4.705	430.4	17.248	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-10P	52	5.367	3.209	430.4	17.508	0.0	18.000	6.657	0.000	69.01	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:27:17PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: FW: BFP TO 36 HTR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.893

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.1A BFP 31 to RCIRC T											
FW-01.1A-01N	31	0.020	0.011	378.8	33.290	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.1A-02P	61	5.918	3.390	378.8	33.715	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.1A-03R	18	6.159	3.528	378.8	33.910	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.1A-03R (D/S)	18	4.792	2.745	378.8	20.389	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-01E	4	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-02P	54	5.074	2.906	378.8	20.153	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-03T	15	4.754	2.723	378.8	20.135	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-03T (D/S)	15	4.754	2.723	378.8	20.135	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-03T (BR/SE)	15	35.827	20.521	378.8	539.374	0.0	6.625	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.1B BFP 32 to RCIRC T											
FW-01.1B-01N	31	0.020	0.011	378.8	33.290	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.1B-02P	61	6.028	3.453	378.8	34.720	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.1B-03R	18	6.159	3.528	378.8	33.910	0.0	16.000	6.892	0.000	69.01	ARD
FW-01.1B-03R (D/S)	18	4.792	2.745	378.8	20.389	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-01E	4	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-02P	54	5.066	2.902	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-03E	1	5.390	3.087	378.8	21.122	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-04P	51	3.483	1.995	378.8	20.103	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-05T	15	4.752	2.722	378.8	20.121	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-05T (D/S)	15	4.752	2.722	378.8	20.121	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-05T (BR/SE)	15	35.827	20.521	378.8	539.374	0.0	6.625	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR											
FW-01.2A-04P	65	3.170	1.816	378.8	20.135	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-05V	25	8.877	5.085	378.8	24.119	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-06V	22	11.059	6.335	378.8	34.207	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-07E	4	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR											
FW-01.2A-08T	15	4.749	2.720	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-08T (D/S)	15	4.749	2.720	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-09P	65	3.166	1.813	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-10E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-11P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-12E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-13P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-14E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-15P_1	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-15P_2	9	2.328	1.356	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-16E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-17P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-18E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-19P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-20E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-21P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-22E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2A-23P	52	3.970	2.274	378.8	20.198	0.0	20.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR											
FW-01.2B-06P	65	3.178	1.820	378.8	20.216	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-07V	25	8.877	5.085	378.8	24.119	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-08V	22	11.059	6.335	378.8	34.207	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-09E	4	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-10P	54	5.066	2.902	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-11T	15	4.749	2.720	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-11T (D/S)	15	4.749	2.720	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-12P	65	3.166	1.813	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-13E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-14P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-15E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-16P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B.17E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-18P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-19E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-20P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-21E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR											
FW-01.2B-22P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-23E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-24P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-25E	2	5.857	3.355	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-26P	52	3.958	2.267	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-27R	18	4.433	2.539	378.8	20.099	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.2B-27R (D/S)	18	2.777	1.591	378.8	8.564	0.0	30.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.3 BFP DISCHARGE HDR											
FW-01.3-01T (BR/SE)	12	5.391	3.088	378.8	20.148	0.0	20.000	6.892	0.000	69.01	ARD
FW-01.3-01T	12	3.836	2.197	378.8	8.709	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-01T (D/S)	12	5.651	3.237	378.8	17.419	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-02P	62	2.755	1.578	378.8	17.409	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-03E	4	5.166	2.959	378.8	17.780	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-04E	4	5.226	2.993	378.8	18.111	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-05P	54	4.364	2.500	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-06E	2	5.046	2.890	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-07P	52	3.409	1.953	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-08E	4	5.046	2.890	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-09P	54	4.364	2.500	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-10E	2	5.046	2.890	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-11P	52	3.409	1.953	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-12E	2	5.046	2.890	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-13P	52	3.409	1.953	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-14E	2	5.046	2.890	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-15E	4	5.046	2.890	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-16P	54	4.364	2.500	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-17T	15	4.091	2.343	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-17T (D/S)	15	4.091	2.343	378.8	17.128	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.3-18P	65	2.750	1.575	378.8	17.350	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.4-01T	14	7.564	4.332	378.8	17.358	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.4-01T (D/S)	14	6.031	3.455	378.8	11.577	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.4-01T (BR/SE)	14	5.113	2.928	378.8	16.905	0.0	18.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.4 BFP DISCHARGE HDR											
FW-01.4-02P	63	2.191	1.255	378.8	11.561	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.5-01T	14	6.050	3.466	378.8	11.635	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.5-01T (D/S)	14	3.776	2.199	378.8	5.809	0.0	30.000	6.892	0.000	69.01	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-01.4 BFP DISCHARGE HDR											
FW-01.5-01T (BR/SE)	14	5.109	2.927	378.8	16.888	0.0	18.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.6A BFP HDR to FWH 36A											
FW-01.6A-01R	7	2.362	1.376	378.8	5.704	0.0	30.000	6.892	0.000	69.01	ARD
FW-01.6A-01R (D/S)	7	4.615	2.644	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-02P	57	3.646	2.088	378.8	16.863	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-03E	2	5.337	3.057	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-04P	52	3.606	2.065	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-05E	2	5.337	3.057	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-06P	52	3.606	2.065	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-07V	22	10.190	5.836	378.8	28.703	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-08E	4	5.337	3.057	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-09P	54	4.615	2.644	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-10E	3	5.048	2.891	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-11P	53	3.606	2.065	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6A-12N	30	5.769	3.305	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.6B BFP HDR to FWH 36B											
FW-01.6B-02P	64	2.881	1.650	378.8	16.534	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-03E	2	5.337	3.057	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-04P	52	3.606	2.065	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-05V	22	10.190	5.836	378.8	28.703	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-06E	4	5.337	3.057	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-07P	54	4.615	2.644	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-08E	3	5.048	2.891	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6B-10N	30	5.769	3.305	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
====>Grouped by Line: FW-01.6C BFP HDR to FWH 36C											
FW-01.6C-02P	64	2.885	1.652	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-03E	2	5.337	3.057	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-04P	52	3.606	2.065	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-05V	22	10.190	5.836	378.8	28.703	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-06E	4	5.337	3.057	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-08E	3	5.048	2.891	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD
FW-01.6C-10N	30	5.769	3.305	378.8	16.567	0.0	18.000	6.892	0.000	69.01	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:27:35PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 0.020

Run Name: FW: FW RECIRC
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-04.1A BFP 31 RECIRC											
FW-04.1A-10P	64	0.112	0.056	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-01E	4	0.218	0.109	378.8	581.324	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-02P	54	0.180	0.090	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-03E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-04P_1	52	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-04P_2	9	0.223	0.113	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-05E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-06P_1	52	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-06P_2	9	0.223	0.113	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-07E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-08E	4	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1A-09P	54	0.183	0.092	378.8	553.754	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2A-01R	17	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2A-01R (D/S)	17	0.176	0.088	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-02P	67	0.201	0.101	378.8	1,361.711	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-03B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-04E	3	0.343	0.172	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-05P	53	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-06E	1	0.323	0.162	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-07P_1	51	0.215	0.108	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-07P_2	9	0.505	0.257	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-08B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-09P_1	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-09P_2	9	0.505	0.257	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-10B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-11P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-12B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-04.1A BFP 31 RECIRC											
FW-04.2A-13P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-14B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-15P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-16B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-17P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-18B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-19P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-20B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-21P	52	0.250	0.125	378.8	1,345.944	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-22B	2	0.396	0.198	378.8	1,500.508	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-23P	52	0.255	0.128	378.8	1,388.613	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-24R	18	0.274	0.137	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2A-24R (D/S)	18	0.169	0.084	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-01V	24	0.574	0.288	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-02P	58	0.125	0.063	378.8	549.199	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-03V	22	0.574	0.288	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-04R	18	0.157	0.079	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1A-04R (D/S)	18	0.110	0.055	378.8	273.656	0.0	8.625	6.927	2.860	98.41	ARD
FW-05.2A-01N	30	0.147	0.074	378.8	273.656	0.0	8.625	6.927	2.860	98.41	ARD
====>Grouped by Line: FW-04.1B BFP 32 RECIRC											
FW-04.1B-10P	64	0.112	0.056	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-01E	4	0.221	0.111	378.8	593.847	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-02P	54	0.185	0.092	378.8	561.160	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-03E	4	0.234	0.117	378.8	650.542	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-04P_1	54	0.180	0.090	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-04P_2	9	0.223	0.113	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-05E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-06P_1	52	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-06P_2	9	0.223	0.113	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-07E	2	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-08E	4	0.208	0.104	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.1B-09P	54	0.180	0.090	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2B-01R	17	0.141	0.070	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-04.2B-01R (D/S)	17	0.176	0.088	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-02P	67	0.196	0.098	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-03B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-04.1B BFP 32 RECIRC											
FW-04.2B-04P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-05E	1	0.323	0.162	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-06P	51	0.215	0.108	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-07E	1	0.323	0.162	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-08P_1	51	0.215	0.108	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-08P_2	9	0.505	0.257	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-09B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-10P_1	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-10P_2	9	0.505	0.257	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-11B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-12P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-13B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-14P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-15B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-16P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-17B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-18P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-19B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-20P	52	0.245	0.123	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-21B	2	0.362	0.181	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-22P	52	0.253	0.127	378.8	1,374.167	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-23R	18	0.274	0.137	378.8	1,301.901	0.0	4.500	6.927	2.860	98.41	ARD
FW-04.2B-23R (D/S)	18	0.178	0.089	378.8	585.288	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1B-01V	24	0.574	0.288	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1B-02P	58	0.124	0.062	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1B-03V	22	0.574	0.288	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1B-04R	18	0.157	0.079	378.8	539.374	0.0	6.625	6.927	2.860	98.41	ARD
FW-05.1B-04R (D/S)	18	0.110	0.055	378.8	273.656	0.0	8.625	6.927	2.860	98.41	ARD
FW-05.2B-01N	30	0.147	0.074	378.8	273.656	0.0	8.625	6.927	2.860	98.41	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:28:17PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: FW: SG HEADERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.162

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.3 SG INLET HEADER											
FW-02.1B-11T	12	3.866	2.345	430.4	6.059	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.1B-11T (BR/SE)	12	6.664	3.985	430.4	17.403	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1B-11T (D/S)	12	6.102	3.648	430.4	12.137	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.3-01P	62	2.972	1.777	430.4	12.105	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.4 SG INLET HEADER											
FW-02.1C-11T (BR/SE)	12	6.665	3.985	430.4	17.408	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.1C-11T	12	6.089	3.641	430.4	12.096	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.1C-11T (D/S)	12	7.636	4.566	430.4	18.135	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-02T	15	5.529	3.306	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-02T (D/S)	15	5.529	3.306	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-03P	65	3.686	2.204	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-04E	2	6.819	4.077	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-05E	4	6.819	4.077	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-06P	54	5.897	3.526	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-07E	2	6.819	4.077	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-08P	52	4.607	2.755	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-09E	2	6.819	4.077	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-10P	52	4.607	2.755	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-11E	2	6.819	4.077	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-12P_1	52	4.607	2.755	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-12P_2	9	2.621	1.589	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-13E	2	6.819	4.077	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-14P	52	4.607	2.755	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-15E	2	6.819	4.077	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-16P	52	4.607	2.755	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-17E	2	6.819	4.077	430.4	17.833	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-18P	52	4.652	2.781	430.4	18.108	0.0	30.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.4 SG INLET HEADER											
FW-02.4-19T	14	10.237	6.121	430.4	18.116	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.4-19T (BR/SE)	14	5.844	3.494	430.4	13.066	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.4-19T (D/S)	14	8.716	5.211	430.4	13.587	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.5 SG INLET HEADER											
FW-02.5-01T (D/S)	15	4.756	2.844	430.4	13.595	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-02P	65	3.138	1.876	430.4	13.374	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-03T	15	4.707	2.815	430.4	13.374	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-03T (D/S)	15	4.707	2.815	430.4	13.374	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-06P	65	3.169	1.895	430.4	13.581	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-04T	14	8.716	5.211	430.4	13.587	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-04T (D/S)	14	6.949	4.155	430.4	9.058	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.5-04T (BR/SE)	14	5.870	3.510	430.4	13.157	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.5-01T	15	4.756	2.844	430.4	13.595	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.6 SG INLET HEADER											
FW-02.6-01P	63	2.525	1.510	430.4	9.049	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.6-03T	14	6.944	4.152	430.4	9.049	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.6-03T (BR/SE)	14	5.874	3.512	430.4	13.170	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.6-03T (D/S)	14	4.032	2.446	430.4	4.524	0.0	30.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.8A SG HDR to SG 31											
FW-02.8A-01P	64	3.337	1.995	430.4	13.046	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-02E	2	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-03T	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-03T (D/S)	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-04V	22	11.731	7.014	430.4	22.434	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-25R	7	3.475	3.475	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-25R (D/S)	7	5.103	5.103	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8A-05V	24	14.906	8.912	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8A-26R	18	7.469	4.466	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8A-26R (D/S)	18	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-06E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-07P	54	5.313	3.177	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-08T	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-08T (D/S)	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-09P	65	3.321	1.986	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-10E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-11P_1	54	5.313	3.177	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8A SG HDR to SG 31											
FW-02.8A-11P_2	9	2.144	1.301	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-12F	6	9.488	5.673	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-13P	56	1.898	1.135	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-14E	1	5.480	3.276	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-15P	51	3.653	2.184	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-16E	2	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-17P	52	4.151	2.482	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-18V	25	10.886	6.509	430.4	19.921	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-19V	22	12.362	7.391	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-20P	58	5.439	3.252	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-21T	15	4.839	2.893	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-21T (D/S)	15	4.839	2.893	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-22E	4	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-23E	4	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8A-24P	54	5.162	3.086	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-01P	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-02E	2	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-03P	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-04B	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-05B	3	5.645	3.375	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-06P_1	53	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-06P_2	9	2.054	1.246	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-07B	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-08B	4	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1A-09N	30	0.094	0.056	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.8B SG HDR to SG 32											
FW-02.8B-01P	64	3.321	1.986	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-02E	2	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-03P	52	4.151	2.482	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-04T	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-04T (D/S)	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-05V	22	11.731	7.014	430.4	22.434	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-25R	7	5.812	3.475	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-25R (D/S)	7	9.540	5.704	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8B-06V	24	14.906	8.912	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8B-26R	18	4.466	4.466	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8B SG HDR to SG 32											
FW-02.8B-26R (D/S)	18	2.978	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-07E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-08P	54	5.313	3.177	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-09T	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-09T (D/S)	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-10P	65	3.321	1.986	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-11E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-12P_1	54	5.364	3.207	430.4	13.144	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-12P_2	9	2.144	1.301	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-13F	6	9.488	5.673	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-14P	56	1.898	1.135	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-15E	1	5.480	3.276	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-16P	51	3.653	2.184	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-17E	2	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-18P	52	4.151	2.482	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-19V	25	10.886	6.509	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-20V	22	12.362	7.391	430.4	19.921	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-21P	58	5.439	3.252	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-22T	15	4.839	2.893	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-22T (D/S)	15	4.839	2.893	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-23E	4	6.130	3.665	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8B-24P	54	5.162	3.086	430.4	12.904	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-01P	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-02E	2	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-03P	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-04B	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-05B	3	5.645	3.375	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-06P	53	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-07B	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-08E	2	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-09P	53	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-10E	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-11E	3	5.645	3.375	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1B-12N	30	0.094	0.056	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.8C SG HDR to SG 34											
FW-02.8C-01P	64	3.325	1.988	430.4	12.975	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8C SG HDR to SG 34											
FW-02.8C-02E	2	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-03P	52	4.151	2.482	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-04T	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-04T (D/S)	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-05V	22	11.731	7.014	430.4	22.434	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-24R	7	5.812	3.475	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-24R (D/S)	7	8.536	5.103	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8C-06V	24	14.906	8.912	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8C-25R	18	7.469	4.466	430.4	27.512	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8C-25R (D/S)	18	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-07E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-08P	54	5.313	3.177	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-09T	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-09T (D/S)	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-10P	65	3.321	1.986	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-11E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-12P_1	54	5.313	3.177	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-12P_2	9	2.144	1.301	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-13F	6	9.488	5.673	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-14P	56	1.898	1.135	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-15E	1	5.480	3.276	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-16E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-17P	52	4.151	2.482	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-18V	25	10.886	6.509	430.4	19.921	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-19V	22	12.362	7.391	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-20P	58	5.439	3.252	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-21T	15	4.839	2.893	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-21T (D/S)	15	4.839	2.893	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-22E	4	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8C-23P	54	5.162	3.086	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-01P	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-02E	2	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-03P	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-04B	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-16P_1	51	3.549	2.122	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-16P_2	9	2.054	1.246	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8C SG HDR to SG 34											
FW-03.1C-05B	2	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-06P_1	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-06P_2	9	2.054	1.246	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-07B	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-09P	51	3.549	2.122	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-10E	4	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-11P	54	5.162	3.086	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-12E	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-13P	51	3.549	2.122	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-14E	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1C-15N	30	0.094	0.056	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
====>Grouped by Line: FW-02.8D SG HDR to SG 33											
FW-02.6-02T (D/S)	15	2.169	1.316	430.4	4.458	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.7-01P	63	1.469	0.891	430.4	4.532	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.7-02T	15	2.169	1.316	430.4	4.458	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.7-02T (D/S)	15	2.169	1.316	430.4	4.458	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.7-03P	65	1.469	0.891	430.4	4.532	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.7-04T	14	4.051	2.457	430.4	4.547	0.0	30.000	6.657	0.000	69.01	HBD
FW-02.7-04T (BR/SE)	14	5.880	3.516	430.4	13.194	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-01P	64	3.334	1.994	430.4	13.033	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-02E	2	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-03P	52	4.151	2.482	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-04T	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-04T (D/S)	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-05V	22	11.731	7.014	430.4	22.434	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-24R	7	5.812	3.475	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-24R (D/S)	7	9.540	5.704	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8D-06V	24	14.906	8.912	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8D-25R	18	8.347	4.991	430.4	32.833	0.0	12.750	6.657	0.000	69.01	HBD
FW-02.8D-25R (D/S)	18	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-07E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-08P	54	5.313	3.177	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-09T	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-09T (D/S)	15	4.981	2.978	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-10P	65	3.321	1.986	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-11E	4	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: FW-02.8D SG HDR to SG 33											
FW-02.8D-12P_1	54	5.313	3.177	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-12P_2	9	2.144	1.301	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-13F	6	9.488	5.673	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-14P	56	1.898	1.135	430.4	16.012	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-15E	2	6.144	3.673	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-16P	52	4.151	2.482	430.4	12.949	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-17V	25	10.886	6.509	430.4	19.921	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-18V	22	12.362	7.391	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-19P	58	5.439	3.252	430.4	24.384	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-20T	15	4.839	2.893	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-20T (DIS)	15	4.839	2.893	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-21E	4	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-22E	4	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.8D-23P	54	5.162	3.086	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-01P	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-02E	2	5.968	3.568	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-03P	52	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-04B	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-05B	3	5.645	3.375	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-06P_1	53	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-06P_2	9	2.054	1.246	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-07B	1	5.323	3.183	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-08B	3	5.645	3.375	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-09P	53	4.032	2.411	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-03.1D-10N	30	0.094	0.056	430.4	12.366	0.0	18.000	6.657	0.000	69.01	HBD
FW-02.6-02T	15	2.169	1.316	430.4	4.458	0.0	30.000	6.657	0.000	69.01	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:28:30PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HD PMP TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.733

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-11.1A HD PMP 31 to HDR											
HD-11.1A-01N	31	4.760	3.081	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.1A-02V	25	4.760	3.081	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.2A-01R	7	3.332	2.157	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.2A-01R (D/S)	7	4.956	3.208	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-12.1A-01V	24	8.201	5.309	370.3	31.512	0.0	8.625	6.959	0.000	53.12	ARD
HD-12.1A-02R	18	4.337	2.807	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-12.1A-02R (D/S)	18	2.856	1.849	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-01V	22	4.760	3.081	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-02P	58	2.095	1.356	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-03E	4	3.523	2.280	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-04T	15	2.856	1.849	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-04T (D/S)	15	2.856	1.849	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-05P	65	1.973	1.277	370.3	14.043	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-06O	6	8.512	5.510	370.3	33.430	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-07P	56	1.702	1.102	370.3	33.430	0.0	12.750	6.959	0.000	53.12	ARD
====>Grouped by Line: HD-11.1B HD PMP 32 to HDR											
HD-11.1B-01N	31	4.760	3.081	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.1B-02V	25	4.760	3.081	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.2B-01R	7	3.332	2.157	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-11.2B-01R (D/S)	7	4.956	3.208	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-12.1B-01V	24	7.744	5.013	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-12.1B-02R	18	4.337	2.807	370.3	28.763	0.0	8.625	6.959	0.000	53.12	ARD
HD-12.1B-02R (D/S)	18	2.856	1.849	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-01V	22	4.760	3.081	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-02P	58	2.112	1.367	370.3	13.448	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-03E	4	3.549	2.297	370.3	13.430	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-04T	15	2.856	1.849	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-11.1B HD PMP 32 to HDR											
HD-12.2B-04T (D/S)	15	2.856	1.849	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-05P	65	1.911	1.237	370.3	13.343	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-06O	6	8.512	5.510	370.3	33.430	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-07P	56	1.702	1.102	370.3	33.430	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-08T (BR/SE)	10	3.808	2.465	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2B-08T (D/S)	10	3.313	2.327	370.3	8.492	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.3-01P	60	1.987	1.396	370.3	8.488	0.0	16.000	6.959	0.000	53.12	ARD
====>Grouped by Line: HD-12.2A HD PMP HDR to CD SYS											
HD-12.2A-08T (BR/SE)	12	3.237	2.095	370.3	13.270	0.0	12.750	6.959	0.000	53.12	ARD
HD-12.2A-08T	12	2.745	1.923	370.3	8.595	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.2A-08T (D/S)	12	5.264	2.811	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-01E	4	4.860	2.596	370.3	17.617	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-02P	54	4.108	2.194	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-03E	2	4.750	2.537	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-04P	52	3.209	1.714	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-05E	1	4.236	2.263	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-06P	51	2.824	1.509	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-07E	2	4.750	2.537	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-08P	52	3.209	1.714	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-09E	2	4.750	2.537	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-10P_1	52	3.209	1.714	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-10P_2	9	1.789	0.975	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-11E	2	4.750	2.537	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-12P	52	3.209	1.714	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-13E	2	4.750	2.537	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-14P	52	3.209	1.714	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-15T	15	3.851	2.057	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-15T (D/S)	15	3.851	2.057	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-16P	65	2.568	1.371	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-17E	2	4.750	2.537	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD
HD-12.4-18P	52	3.209	1.714	370.3	16.985	0.0	16.000	6.959	0.000	53.12	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:28:44PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 31 TO COND
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-13.1 FWH 31A to Cond 33											
HD-13.1-01N	31	1.241	0.765	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-02P	61	0.670	0.413	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-03E	4	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-04P	54	0.794	0.490	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-05E	2	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-06P	52	0.620	0.382	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-07T	15	0.745	0.459	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-07T (D/S)	15	0.745	0.459	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-08E	4	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-09V	22	1.241	0.765	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-10E	4	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-11E	4	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-12E	3	0.869	0.535	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-13P	53	0.620	0.382	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-14E	2	0.918	0.566	102.2	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-15P	52	0.620	0.382	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-16E	2	0.918	0.566	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-17P	52	0.620	0.382	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-18E	16	0.620	0.382	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-18E (D/S)	16	4.248	2.609	102.3	46.214	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.1-19V	8	2.482	1.525	102.3	9.199	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.1-20R	18	3.837	2.357	102.3	46.214	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.1-20R (D/S)	18	0.745	0.459	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-21V	22	1.241	0.765	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-22P	58	0.546	0.337	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.1-23N	30	0.993	0.612	102.3	4.047	0.0	12.750	7.096	0.000	9.12	NFA
====>Grouped by Line: HD-13.2 FWH 31B to Cond 32											

Sorted By: Flow Order

Sorted By: Flow Order

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-13.2 FWH 31B to Cond 32											
HD-13.2-01N	31	1.233	0.759	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-02P	61	0.666	0.410	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-03E	4	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-04P	54	0.789	0.486	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-05E	1	0.814	0.501	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-06P	51	0.542	0.334	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-07T	12	1.011	0.622	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-07T (BR/SE)	12	0.838	0.516	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-08V	22	1.233	0.759	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-09E	4	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-10E	4	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-11P	54	0.789	0.486	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-12E	2	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-13P	52	0.616	0.379	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-14E	2	0.912	0.562	102.1	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-15P	52	0.616	0.379	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-16E	16	0.616	0.379	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-16E (D/S)	16	1.532	0.940	102.2	9.114	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.2-17V	8	2.472	1.517	102.2	9.114	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.2-18R	18	1.384	0.849	102.2	9.114	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.2-18R (D/S)	18	0.740	0.455	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-19V	22	1.233	0.759	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-20P	58	0.542	0.334	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.2-21N	30	0.986	0.607	102.2	4.010	0.0	12.750	7.096	0.000	9.12	NFA
====>Grouped by Line: HD-13.3 FWH 31C to Cond 31											
HD-13.3-01N	31	1.235	0.763	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-02P	61	0.667	0.412	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-03E	4	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-04P	54	0.791	0.488	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-05E	1	0.815	0.503	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-06P	51	0.544	0.336	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-07T	12	1.013	0.626	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-07T (BR/SE)	12	0.840	0.519	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-08V	22	1.235	0.763	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-09E	4	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-10E	4	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-13.3 FWH 31C to Cond 31											
HD-13.3-11P	54	0.791	0.488	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-12E	2	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-13P	52	0.618	0.381	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-14E	2	0.914	0.564	102.0	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-15P	52	0.618	0.381	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-16E	16	0.618	0.381	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-16E (D/S)	16	1.535	0.944	102.1	9.169	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.3-17V	8	2.475	1.522	102.1	9.169	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.3-18R	18	1.386	0.852	102.1	9.169	0.0	8.625	7.096	0.000	9.12	NFA
HD-13.3-18R (D/S)	18	0.741	0.458	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-19V	22	1.235	0.763	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-20P	58	0.544	0.336	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA
HD-13.3-21N	30	0.988	0.610	102.1	4.034	0.0	12.750	7.096	0.000	9.12	NFA

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:29:01PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 32 TO HTR 31
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.863

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-08.1A FWH 32A to FWH 31A											
HD-8.1A-01N	31	6.293	1.512	165.8	2.896	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-02P	61	3.601	0.786	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-03E	4	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-04P	54	3.873	0.931	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-05E	2	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-06P	52	3.026	0.727	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-07T (BR/SE)	10	4.841	1.164	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-07T (D/S)	10	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-08P	60	3.741	0.873	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-09E	2	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1A-10V	22	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2A-01R	7	4.236	1.018	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2A-01R (D/S)	7	5.427	1.297	165.8	2.779	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1A-01V	24	8.480	2.027	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1A-02R	18	4.749	1.135	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1A-02R (D/S)	18	3.631	0.873	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.2A-01V	22	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-02P	58	0.002	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-03E	3	0.002	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-04T	13	0.003	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-04T (BR/SE)	13	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2A-04T (D/S)	13	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-08.1B FWH 32B to FWH 31B											
HD-8.1B-01N	31	6.293	1.512	165.8	2.896	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-02P	61	3.601	0.786	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-03E	4	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-04P	54	3.873	0.931	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-08.1B FWH 32B to FWH 31B											
HD-8.1B-05E	2	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-06P	52	3.026	0.727	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-07T (BR/SE)	10	4.841	1.164	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-07T (D/S)	10	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-08P	60	3.741	0.873	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-09E	2	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1B-10V	22	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2B-01R	7	4.236	1.018	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2B-01R (D/S)	7	5.427	1.297	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1B-01V	24	8.480	2.027	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1B-02R	18	4.749	1.135	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1B-02R (D/S)	18	3.631	0.873	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-01V	22	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-02P	58	0.002	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-03E	3	0.002	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-04T	13	0.003	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-04T (BR/SE)	13	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2B-04T (D/S)	13	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-08.1C FWH 32C to FWH 31C											
HD-8.1C-01N	31	6.293	1.512	165.8	2.896	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-02P	61	3.601	0.786	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-03E	4	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-04P	54	3.873	0.931	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-05E	2	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-06P	52	3.026	0.727	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-07T (BR/SE)	10	4.841	1.164	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-07T (D/S)	10	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-08P	60	3.741	0.873	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-09E	2	4.478	1.077	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.1C-10V	22	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2C-01R	7	4.236	1.018	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-8.2C-01R (D/S)	7	5.427	1.297	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1C-01V	24	8.480	2.027	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1C-02R	18	4.749	1.135	165.8	3.969	0.0	10.750	7.096	0.000	9.12	ARD
HD-09.1C-02R (D/S)	18	3.631	0.873	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-01V	22	6.051	1.455	165.8	2.779	0.0	12.750	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-08.1C FWH 32C to FWH 31C											
HD-09.2C-02P	58	0.002	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-03E	3	0.002	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-04T	13	0.003	0.001	165.8	2.926	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-04T (BR/SE)	13	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.2C-04T (D/S)	13	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.3A FWH 32A to FWH 31A											
HD-09.3A-01P	64	0.002	0.001	165.8	1.469	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.3A-02N	30	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.3B FWH 32B to FWH 31B											
HD-09.3B-01P	64	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.3B-02N	30	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.3C FWH 32C to FWH 31C											
HD-09.3C-01P	64	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.3C-02N	30	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.4A FWH 32A to FWH 31A											
HD-09.4A-01P	63	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4A-02E	4	0.002	0.001	165.8	1.495	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4A-03P	54	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4A-04N	30	0.002	0.001	165.8	1.452	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.4B FWH 32B to FWH 31B											
HD-09.4B-01P	63	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4B-02E	4	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4B-03P	54	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4B-04N	30	0.002	0.001	165.8	1.452	0.0	12.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-09.4C FWH 32C to FWH 31C											
HD-09.4C-01P	63	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4C-02E	4	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4C-03P	54	0.002	0.001	165.8	1.468	0.0	12.750	7.096	0.000	9.12	ARD
HD-09.4C-04N	30	0.002	0.001	165.8	1.452	0.0	12.750	7.096	0.000	9.12	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:29:33PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 33 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.045

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A											
HD-6.1A-01N	31	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-02P	61	3.493	0.945	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-03E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-04P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-05E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-06P_1	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-06P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-07E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-08P	52	3.234	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-09E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-10P	54	3.672	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-11E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-12P_1	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-12P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-13E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-43P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-14E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-15P	54	4.140	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-16E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-17P_1	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-17P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-18E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-19P	52	3.234	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-20E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-21P_1	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-21P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-22E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A											
HD-6.1A-23P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-24E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-25P_1	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-25P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-26E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-27P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-28T	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-28T (D/S)	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-29P	65	2.295	0.700	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-44T	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-44T (D/S)	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-30E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-31P	52	3.006	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-32E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-33P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-34E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-37E	3	4.016	1.225	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-38P	53	2.934	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-39E	1	3.786	1.155	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-40P	51	2.524	0.770	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-41E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1A-42P	54	3.815	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2A-01E	16	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2A-01E (D/S)	16	6.089	1.825	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1A-01V	24	10.271	2.943	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1A 02R	18	5.500	1.648	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1A 02R (D/S)	18	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-01V	22	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-02P	58	2.524	0.770	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-03T	13	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-03T (BR/SE)	13	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-04P	63	2.370	0.700	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-05R	18	3.318	0.980	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2A-05R (D/S)	18	2.303	0.681	204.2	2.747	0.0	10.750	7.096	0.000	9.12	ARD
HD-07.3A-01N	30	3.084	0.948	204.2	2.875	0.0	10.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-06.1B FWH 33B to FWH 32B											

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1B FWH 33B to FWH 32B											
HD-6.1B-01N	31	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-02P	61	3.493	0.945	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-03E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-04E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-05P_1	54	3.672	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-05P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-06E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-07P	52	3.234	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-08E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-09P	54	3.672	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-10E	3	4.016	1.225	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-11P_1	53	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-11P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-12E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-13E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-14P	54	4.140	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-15E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-16P_1	54	3.672	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-16P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-17E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-18P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-19E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-20P	52	3.234	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-21E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-22P_1	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-22P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-23T	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-23T (D/S)	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-24P	65	2.295	0.700	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-38T	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-38T (D/S)	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-25E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-26P	52	3.006	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-27E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-28P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-29E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1B FWH 33B to FWH 32B											
HD-6.1B-32E	3	4.016	1.225	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-33P	53	2.934	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-34E	1	3.786	1.155	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-35P	51	2.524	0.770	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-36E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1B-37P	54	3.672	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2B-01E	16	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2B-01E (D/S)	16	6.089	1.825	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1B-01V	24	9.821	2.943	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1B-02R	18	5.500	1.648	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1B-02R (D/S)	18	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-01V	22	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-02P	58	2.524	0.770	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-03T	13	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-03T (BR/SE)	13	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-04P	63	2.370	0.700	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-05R	18	3.318	0.980	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2B-05R (D/S)	18	2.303	0.681	204.2	2.747	0.0	10.750	7.096	0.000	9.12	ARD
HD-07.3B-01N	30	3.084	0.948	204.2	2.875	0.0	10.750	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-06.1C FWH 33C to FWH 32C											
HD-6.1C-01N	31	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-02P	61	3.493	0.945	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-03E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-04P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-05E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-06P	52	3.234	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-07E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-08P_1	54	3.672	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-08P_2	9	1.262	0.385	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-09E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-10P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-11E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-12P	52	3.234	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-13E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-14P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-15E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-06.1C FWH 33C to FWH 32C											
HD-6.1C-16P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-17E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-18P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-19T	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-19T (D/S)	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-20P	65	2.295	0.700	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-34T	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-34T (D/S)	15	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-35P	65	2.295	0.700	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-21E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-22P	52	3.006	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-23E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-24P	52	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-25E	2	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-28E	3	4.016	1.225	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-29P	53	2.934	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-30E	1	3.786	1.155	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-31P	51	2.524	0.770	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-32E	4	4.245	1.295	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.1C-33P	54	3.848	1.120	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2C-01E	16	2.868	0.875	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-6.2C-01E (D/S)	16	6.089	1.825	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1C-01V	24	9.821	2.943	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1C-02R	18	5.500	1.648	204.2	7.846	0.0	6.625	7.096	0.000	9.12	ARD
HD-07.1C-02R (D/S)	18	3.442	1.050	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-01V	22	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-02P	58	2.524	0.770	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-03T	13	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-03T (BR/SE)	13	5.737	1.750	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-04P	63	2.370	0.700	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-05R	18	3.318	0.980	204.2	4.372	0.0	8.625	7.096	0.000	9.12	ARD
HD-07.2C-05R (D/S)	18	2.303	0.681	204.2	2.747	0.0	10.750	7.096	0.000	9.12	ARD
HD-07.3C-01N	30	3.084	0.948	204.2	2.875	0.0	10.750	7.096	0.000	9.12	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:29:55PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 34 TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.911

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-04.1A FWH 34A to FWH 33A											
HD-4.1A-01N	31	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-02P	61	3.013	1.272	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-03T	15	3.348	1.413	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-03T (D/S)	15	3.348	1.413	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-04P	65	2.232	0.942	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-05E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-06E	3	3.324	1.649	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-07P	53	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-08E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-09P_1	52	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-09P_2	9	1.045	0.518	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-10E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-11P	52	2.553	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-12E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-13P	52	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-14E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1A-15P	52	2.553	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.2A-01E	16	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.2A-01E (D/S)	16	5.923	2.859	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.2A-02V	22	9.554	4.611	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3A-01R	7	6.688	3.228	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3A-01R (D/S)	7	8.620	4.154	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1A-01V	24	13.468	6.491	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1A-02R	18	7.542	3.635	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1A-02R (D/S)	18	2.849	1.413	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-01T	13	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-01T (BR/SE)	13	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-04.1A FWH 34A to FWH 33A											
HD-05.2A-02P	63	2.042	0.942	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-03E	1	3.134	1.554	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-04E	4	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-05P	54	3.039	1.507	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2A-06N	30	3.799	1.884	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-04.1B FWH 34B to FWH 33B											
HD-4.1B-01N	31	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-02P	61	3.013	1.272	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-03E	1	3.134	1.554	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-04P	51	2.455	1.036	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-05T (BR/SE)	10	3.799	1.884	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-05T (D/S)	10	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-06P	60	2.849	1.413	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-07E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-08P	52	2.790	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-09E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-10E	3	3.324	1.649	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-11P_1	53	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-11P_2	9	1.045	0.518	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-12E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-13P	52	2.553	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-14E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-15P	52	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-16E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1B-17P	52	2.553	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.2B-01E (D/S)	16	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.2B-01E (D/S)	16	5.923	2.859	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.2B-02V	22	9.554	4.611	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3B-01R	7	6.688	3.228	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3B-01R (D/S)	7	8.620	4.154	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1B-01V	24	13.468	6.491	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1B-02R	18	7.542	3.635	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1B-02R (D/S)	18	2.849	1.413	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-01T	13	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-01T (BR/SE)	13	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-02P	63	2.042	0.942	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-04.1B FWH 34B to FWH 33B											
HD-05.2B-03E	1	3.134	1.554	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-04E	4	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-05P	54	3.039	1.507	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2B-06N	30	3.799	1.884	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
====>Grouped by Line: HD-04.1C FWH 34C to FWH 33C											
HD-4.1C-01N	31	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-02P	61	3.013	1.272	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-03E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-04P	52	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-05E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-06T	15	3.348	1.413	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-06T (D/S)	15	3.348	1.413	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-07P	65	2.232	0.942	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-08E	4	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-09P	54	3.039	1.507	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-10E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-11P	52	2.790	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-12E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-13P_1	52	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-13P_2	9	1.045	0.518	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-14E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-15P	52	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-16E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-17P_1	52	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-17P_2	9	1.045	0.518	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-18E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-19P	52	2.553	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-20E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-21P	52	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-22E	2	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.1C-23P	52	2.553	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.2C-01E	16	2.374	1.178	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-4.2C-01E (D/S)	16	5.923	2.859	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.2C-02V	22	9.554	4.611	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3C-01R	7	6.688	3.228	253.2	9.779	0.0	4.500	7.096	0.000	9.12	ARD
HD-4.3C-01R (D/S)	7	8.620	4.154	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-04.1C FWH 34C to FWH 33C											
HD-05.1C-01V	24	13.468	6.491	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1C-02R	18	7.542	3.635	253.2	16.839	0.0	3.500	7.096	0.000	9.12	ARD
HD-05.1C-02R (D/S)	18	2.849	1.413	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-01T	13	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-01T (BR/SE)	13	4.749	2.355	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-02P	63	2.042	0.942	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-03E	1	3.134	1.554	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-04E	4	3.514	1.743	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-05P	54	3.039	1.507	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD
HD-05.2C-06N	30	3.799	1.884	253.2	4.309	0.0	6.625	7.096	0.000	9.12	ARD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:30:05PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 35 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.487

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-03.1A FWH 35A to HD TK											
HD-03.1A-01N	31	3.576	2.197	379.8	3.077	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-02P	61	1.938	1.191	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-03E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-04P	52	1.794	1.102	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-05E	4	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-06P	54	2.297	1.411	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-07E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-08P	52	1.794	1.102	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-09E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-10P	52	1.794	1.102	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-11E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-12E	4	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-13P	54	2.297	1.411	379.8	3.116	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-14E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-15V	22	3.589	2.205	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1A-16N	30	2.871	1.764	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
====>Grouped by Line: HD-03.1B FWH 35B to HD TK											
HD-03.1B-01N	31	3.576	2.197	379.8	3.077	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-02P	61	1.938	1.191	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-03E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-04P	52	1.794	1.102	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-05E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-06P	52	1.794	1.102	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-07E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-08P	52	1.794	1.102	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-09E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-10E	4	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-03.1B FWH 35B to HD TK											
HD-03.1B-11P	54	2.297	1.411	379.8	3.116	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-12E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-13V	22	3.589	2.205	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1B-14N	30	2.871	1.764	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
====>Grouped by Line: HD-03.1C FWH 35C to HD TK											
HD-03.1C-01N	31	3.576	2.197	379.8	3.077	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-02P	61	1.938	1.191	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-03E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-04P	52	1.794	1.102	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-05E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-06P	52	1.794	1.102	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-07E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-08P	52	1.794	1.102	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-09E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-10P	52	1.794	1.102	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-11E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-12P	52	1.794	1.102	379.8	3.138	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-13E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-14E	4	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-15P	54	2.297	1.411	379.8	3.116	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-16E	2	2.656	1.632	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-17V	22	3.589	2.205	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD
HD-03.1C-18N	30	2.871	1.764	379.8	3.089	0.0	10.750	6.880	0.000	41.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:30:15PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR 36 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours:220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.405

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-01.1A FWH 36A to HD TK											
HD-01.1A-01N	31	4.867	2.784	394.5	5.239	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-02P	61	2.647	1.514	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-03E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-04P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-05E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-06P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-07E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-08P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-09E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1A-10P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.2A-01R	7	3.431	1.962	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.2A-01R (D/S)	7	6.807	3.765	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1A 01V	24	0.086	0.047	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1A-02R	18	5.956	3.295	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1A-02R (D/S)	18	3.004	1.718	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2A-01V	22	0.040	0.023	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2A-02N	30	4.006	2.291	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
====>Grouped by Line: HD-01.1B FWH 36B to HD TK											
HD-01.1B-01N	31	4.867	2.784	394.5	5.239	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-02P	61	2.647	1.514	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-03E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-04P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-05E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-06P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1B-07E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.2B-01R	7	3.431	1.962	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.2B-01R (D/S)	7	6.807	3.765	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-01.1B FWH 36B to HD TK											
HD-02.1B-01V	24	0.086	0.047	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1B-02R	18	5.956	3.295	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1B-02R (D/S)	18	3.004	1.718	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2B-01V	22	0.040	0.023	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2B-02N	30	4.006	2.291	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
====>Grouped by Line: HD-01.1C FWH 36C to HD TK											
HD-01.1C-01N	31	4.867	2.784	394.5	5.239	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-02P	61	2.647	1.514	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-03E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-04P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-05E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-06P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-07E	4	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-08P	54	3.137	1.794	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-09E	2	3.627	2.074	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-10P	52	2.451	1.401	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.1C-11E	2	3.784	2.164	394.5	5.524	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.2C-01R	7	3.431	1.962	394.5	5.278	0.0	10.750	6.811	0.000	41.00	ARD
HD-01.2C-01R (D/S)	7	6.807	3.765	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1C-01V	24	0.086	0.047	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1C-02R	18	5.956	3.295	394.5	14.743	0.0	6.625	6.811	0.000	41.00	ARD
HD-02.1C-02R (D/S)	18	3.004	1.718	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2C-01V	22	0.040	0.023	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD
HD-02.2C-02N	30	4.006	2.291	394.5	5.401	0.0	10.750	6.811	0.000	41.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:30:51PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: HD: HTR DN TO PUMPS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.912

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: HD-10.1A HD TK to HD PMP 31											
HD-10.1A-01N	31	3.136	2.577	383.2	3.408	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.1A-02P	61	1.643	1.350	383.2	3.299	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.2A-01E	16	1.521	1.250	383.2	3.299	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.2A-01E (D/S)	16	3.243	2.665	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-02E	3	3.661	3.008	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-03P	53	2.615	2.149	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-04V	22	5.230	4.298	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-05P	58	2.301	1.891	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-07X	6	6.341	5.218	383.2	7.293	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2A-06N	30	4.184	3.438	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
====>Grouped by Line: HD-10.1B HD TK to HD PMP 32											
HD-10.1B-01N	31	3.136	2.577	383.2	3.408	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.1B-02P	61	1.643	1.350	383.2	3.299	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.2B-01E	16	1.521	1.250	383.2	3.299	0.0	24.000	6.894	0.000	53.12	HBD
HD-10.2B-01E (D/S)	16	3.243	2.665	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-02P	54	3.347	2.751	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-03V	22	5.230	4.298	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-04P	58	2.301	1.891	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-06X	6	6.341	5.218	383.2	7.293	0.0	18.000	6.894	0.000	53.12	HBD
HD-10.2B-05N	30	4.184	3.438	383.2	5.907	0.0	18.000	6.894	0.000	53.12	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:31:00PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MS 31 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 12.299

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.1A_1 MSEP 31A to HDR											
MSD-01.1A-01N	31	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-02T (BR/SE)	10	2.131	1.007	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-02T (D/S)	10	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-03P	60	1.599	0.755	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.1A_2 MSEP 31A to HDR											
MSD-01.1A-04N	31	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-08P	61	1.439	0.680	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.1A_3 MSEP 31A to HDR											
MSD-01.1A-05N	31	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-06T (BR/SE)	10	2.131	1.007	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-06T (D/S)	10	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1A-07P	60	1.599	0.755	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.1B_1 MSEP 31B to HDR											
MSD-01.1B-01N	31	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-02T (BR/SE)	10	2.131	1.007	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-02T (D/S)	10	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-03P	60	1.599	0.755	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.1B_2 MSEP 31B to HDR											
MSD-01.1B-04N	31	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-08P	61	1.439	0.680	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.1B_3 MSEP 31B to HDR											
MSD-01.1B-05N	31	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-06T (BR/SE)	10	2.131	1.007	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-06T (D/S)	10	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.1B-07P	60	1.599	0.755	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.2A MSEP 31A DR HDR											

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.2A MSEP 31A DR HDR											
MSD-01.2A-01T	12	2.185	1.032	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.2A-01T (BR/SE)	12	1.812	0.856	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.2A-01T (D/S)	12	3.935	1.859	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.2B MSEP 31B DR HDR											
MSD-01.2B-01T	12	2.185	1.032	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.2B-01T (BR/SE)	12	1.812	0.856	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.2B-01T (D/S)	12	3.935	1.859	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.3A HDR to MSEP TK 31A											
MSD-01.3A-01T (D/S)	11	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-01T	11	4.799	2.267	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-01T (BR/SE)	11	6.818	3.221	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-02P	61	3.682	1.739	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-03E	2	5.046	2.383	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-04V	25	6.818	3.221	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-05P	58	3.000	1.417	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-06V	25	6.818	3.221	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-07P	58	3.000	1.417	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3A-08N	30	5.455	2.576	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.3B HDR to MSEP TK 31B											
MSD-01.3B-01T (D/S)	11	2.664	1.258	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-01T	11	4.799	2.267	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-01T (BR/SE)	11	6.818	3.221	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-02P	61	3.682	1.739	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-03E	2	5.046	2.383	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-04V	25	6.818	3.221	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-05P	58	3.000	1.417	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-06V	25	6.818	3.221	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-07P	58	3.000	1.417	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.3B-08N	30	5.455	2.576	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD

Company: Entergy Nuclear Operations, Inc.

Plant: Indian Point

Unit: 3

DB Name: IPEC 3 (v4).DB

Run Name: MSD: MS 32 TO MSDT

Ending Period: RO17

Total Plant Operating Hours: 220,317

WRA Data Option: NFA->ARD->HBD->COMP

Line Correction Factor: 12.801

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:31:10PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.6A_1 MSEP 32A to HDR											
MSD-01.6A-01N	31	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-02T (BR/SE)	10	2.219	1.048	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-02T (D/S)	10	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-03P	60	1.664	0.786	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.6A_2 MSEP 32A to HDR											
MSD-01.6A-04N	31	3.694	1.745	382.2	0.241	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-08P	61	1.498	0.707	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.6A_3 MSEP 32A to HDR											
MSD-01.6A-05N	31	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-06T (BR/SE)	10	2.219	1.048	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-06T (D/S)	10	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6A-07P	60	1.664	0.786	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.6B_1 MSEP 32B to HDR											
MSD-01.6B-01N	31	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-02T (BR/SE)	10	2.219	1.048	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-02T (D/S)	10	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-03P	60	1.696	0.801	382.2	0.181	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.6B_2 MSEP 32B to HDR											
MSD-01.6B-04N	31	3.694	1.745	382.2	0.241	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-08P	61	1.526	0.721	382.2	0.181	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.6B_3 MSEP 32B to HDR											
MSD-01.6B-05N	31	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-06T (BR/SE)	10	2.219	1.048	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-06T (D/S)	10	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.6B-07P	60	1.671	0.789	382.2	0.178	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.7A MSEP 32A DR HDR											

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.7A MSEP 32A DR HDR											
MSD-01.7A-01T	12	2.274	1.074	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7A-01T (BR/SE)	12	1.886	0.891	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7A-01T (D/S)	12	4.096	1.935	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7A-02P	62	1.998	0.944	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.7B MSEP 32B DR HDR											
MSD-01.7B-01T	12	2.274	1.074	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7B-01T (BR/SE)	12	1.886	0.891	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7B-01T (D/S)	12	4.096	1.935	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.7B-02P	62	2.031	0.959	382.2	0.358	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.8A HDR to MSEP TK 32A											
MSD-01.8A-01T (D/S)	11	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-01T	11	4.995	2.359	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-01T (BR/SE)	11	7.097	3.352	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-02P	61	3.832	1.810	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-03E	2	5.252	2.481	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-04V	25	7.097	3.352	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-05P	58	3.123	1.475	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-06V	25	7.097	3.352	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-07P	58	3.123	1.475	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8A-08N	30	5.678	2.682	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.8B HDR to MSEP TK 32B											
MSD-01.8B-01T (D/S)	11	2.773	1.310	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-01T	11	4.995	2.359	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-01T (BR/SE)	11	7.097	3.352	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-02P	61	3.873	1.830	382.2	0.535	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-03E	2	5.252	2.481	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-04V	25	7.097	3.352	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-05P	58	3.123	1.475	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-06V	25	7.097	3.352	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-07P	58	3.123	1.475	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.8B-08N	30	5.678	2.682	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD

Company: Entergy Nuclear Operations, Inc.

Plant: Indian Point

Unit: 3

DB Name: IPEC 3 (v4).DB

Run Name: MSD: MS 33 TO MSDT

Ending Period: RO17

Total Plant Operating Hours: 220,317

WRA Data Option: NFA->ARD->HBD->COMP

Line Correction Factor: 8.046

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:31:21PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.11A_1 MSEP 33A to HDR											
MSD-01.11A-01N	31	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-02T (BR/SE)	10	1.394	0.659	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-02T (D/S)	10	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-03P	60	1.046	0.494	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.11A_2 MSEP 33A to HDR											
MSD-01.11A-04N	31	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-08P	61	0.941	0.445	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.11A_3 MSEP 33A to HDR											
MSD-01.11A-05N	31	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-06T (BR/SE)	10	1.394	0.659	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-06T (D/S)	10	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11A-07P	60	1.046	0.494	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.11B_1 MSEP 33B to HDR											
MSD-01.11B-01N	31	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-02T (BR/SE)	10	1.394	0.659	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-02T (D/S)	10	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-03P	60	1.046	0.494	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.11B_2 MSEP 33B to HDR											
MSD-01.11B-04N	31	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-08P	61	0.941	0.445	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.11B_3 MSEP 33B to HDR											
MSD-01.11B-05N	31	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-06T (BR/SE)	10	1.394	0.659	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-06T (D/S)	10	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.11B-07P	60	1.046	0.494	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.11A MSEP 33A DR HDR											

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.12A MSEP 33A DR HDR											
MSD-01.12A-01T	12	1.429	0.675	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12A-01T (BR/SE)	12	1.185	0.560	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12A-01T (D/S)	12	2.574	1.216	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12A-02P	62	1.256	0.593	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.12B MSEP 33B DR HDR											
MSD-01.12B-01T	12	1.429	0.675	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12B-01T (BR/SE)	12	1.185	0.560	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12B-01T (D/S)	12	2.574	1.216	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.12B-02P	62	1.256	0.593	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.13A HDR to MSEP TK 33A											
MSD-01.13A-01T (D/S)	11	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-01T	11	3.139	1.483	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-01T (BR/SE)	11	4.461	2.107	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-02P	61	2.409	1.138	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-03E	2	3.301	1.559	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-04V	25	4.461	2.107	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-05P	58	1.963	0.927	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-06V	25	4.461	2.107	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-07P	58	1.974	0.932	382.2	0.533	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-08E	2	3.497	1.652	382.2	0.563	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-09P	52	2.323	1.097	382.2	0.553	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13A-10N	30	3.569	1.686	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.13B HDR to MSEP TK 33B											
MSD-01.13B-01T (D/S)	11	1.743	0.823	382.2	0.177	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-01T	11	3.139	1.483	382.2	0.351	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-01T (BR/SE)	11	4.461	2.107	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-02P	61	2.409	1.138	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-03E	2	3.301	1.559	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-04V	25	4.461	2.107	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-05P	58	1.963	0.927	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-06V	25	4.461	2.107	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-07P	58	1.963	0.927	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-08E	2	3.301	1.559	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-09P	52	2.230	1.053	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD
MSD-01.13B-10N	30	3.569	1.686	382.2	0.529	0.0	12.750	6.962	0.000	83.00	ARD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:31:48PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MSDT 31 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.466

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.4A TK 31A to HD TK											
MSD-01.4A-01N	31	3.033	1.432	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4A-02P	61	0.006	0.006	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4A-03T	15	0.006	0.007	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4A-03T (D/S)	15	0.006	0.007	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4A-04P	65	0.004	0.005	382.2	1.273	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5A-01E	16	0.005	0.006	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5A-01E (D/S)	16	0.011	0.012	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-02P	66	0.007	0.008	382.2	2.217	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-03E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-04P	52	0.009	0.010	382.2	2.296	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-05E	2	0.013	0.015	382.2	2.224	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-06V	25	0.018	0.019	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-07P	58	0.008	0.009	382.2	2.180	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-08E	4	0.013	0.015	382.2	2.224	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-09P	54	0.012	0.013	382.2	2.246	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-10E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-11P	52	0.009	0.010	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-12E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-13P	52	0.009	0.010	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-14E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-15P_1	52	0.009	0.010	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-15P_2	52	2.527	1.193	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-28P_1	9	1.112	0.525	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-28P_2	9	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-16E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-17P	52	0.009	0.010	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-18E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.4A TK 31A to HD TK											
MSD-01.5A-19P	52	0.009	0.010	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-20E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-21P	52	0.009	0.010	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-29P	9	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-22E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-23P	52	0.009	0.010	382.2	2.217	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-24E	2	0.013	0.014	382.2	2.199	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-25P	52	0.009	0.010	382.2	2.248	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-26E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5A-27N	30	4.043	1.910	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.4B TK 31B to HD TK											
MSD-01.4B-01N	31	1.327	1.432	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-02P	61	0.006	0.006	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-03E	2	0.008	0.009	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-04P	52	0.005	0.006	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-05E	2	0.008	0.009	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-07P	52	0.005	0.006	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-06T	15	0.006	0.007	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-06T (D/S)	15	0.006	0.007	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.4B-08P	65	0.004	0.005	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5B-01R	7	0.007	0.008	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.5B-01R (D/S)	7	0.011	0.012	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-02P	57	0.009	0.010	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-03E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-04V	25	0.018	0.019	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-05P	58	0.008	0.009	382.2	2.207	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-06E	2	0.013	0.014	382.2	2.201	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-07P	52	0.009	0.010	382.2	2.240	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-08E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-09P	52	0.009	0.010	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-10E	4	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-11P_1	54	0.011	0.012	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-11P_2	54	3.234	1.528	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-29P	9	1.112	0.525	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-12E	2	3.740	1.766	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-13P	52	2.527	1.193	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.4B TK 31B to HD TK											
MSD-01.5B-14E	2	3.740	1.766	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-15P	52	2.527	1.193	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-30P_1	9	1.112	0.525	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-30P_2	9	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-16E	1	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-17P	51	0.008	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-18E	1	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-19P	51	0.008	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-20E	1	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-21P	51	0.008	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-22E	1	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-23P	51	0.008	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-31P	9	0.004	0.004	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-24E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-25P	52	0.009	0.010	382.2	2.224	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-32P	52	0.009	0.010	382.2	2.199	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-26E	2	0.013	0.014	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-27P	52	0.009	0.010	382.2	2.213	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.5B-28N	30	4.043	1.910	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:32:13PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MSDT 32 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 4.384

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
=====>Grouped by Line: MSD-01.9A TK 32A to HD TK											
MSD-01.9A-01N	31	5.393	2.547	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9A-02P	61	0.010	0.011	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9A-03T	15	0.011	0.012	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9A-03T (D/S)	15	0.011	0.012	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9A-04P	65	0.008	0.008	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10A-01E	16	0.009	0.010	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10A-01E (D/S)	16	0.020	0.021	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-02P	66	0.013	0.014	382.2	2.202	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-03E	2	0.024	0.026	382.2	2.210	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-04P	52	0.016	0.017	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-05E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-06V	25	0.032	0.034	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-07P	58	0.014	0.015	382.2	2.186	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-08E	2	0.024	0.026	382.2	2.207	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-09P	52	0.016	0.017	382.2	2.210	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-10E	1	0.021	0.023	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-11P	51	0.014	0.015	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-12E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-13P	52	0.016	0.017	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-26P_1	9	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-26P_2	9	1.977	0.934	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-26P_3	9	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-14E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-15P	52	0.016	0.017	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-16E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-17P	52	0.016	0.017	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-18E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.9A TK 32A to HD TK											
MSD-01.10A-19P	52	0.016	0.017	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-27P	9	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-20E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-21P	52	0.016	0.017	382.2	2.188	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-22E	2	0.024	0.026	382.2	2.221	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-23P	52	0.016	0.017	382.2	2.204	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-24E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10A-25N	30	7.189	3.396	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.9B TK 32B to HD TK											
MSD-01.9B-01N	31	5.393	2.547	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9B-02P	61	0.010	0.011	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9B-03T	15	0.011	0.012	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9B-03T (D/S)	15	0.011	0.012	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.9B-04P	65	0.008	0.008	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10B-01E	16	0.009	0.010	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.10B-01E (D/S)	16	0.020	0.021	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-02E	4	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-03P	54	0.020	0.022	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-04E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-05V	25	0.032	0.034	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-06P	58	0.014	0.015	382.2	2.195	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-07E	2	0.024	0.026	382.2	2.238	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-08P	52	0.016	0.017	382.2	2.204	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-09E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-10P	52	0.016	0.017	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-28P	9	1.977	0.934	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-11E	2	6.650	3.141	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-12P	52	4.493	2.122	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-13E	2	6.650	3.141	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-14P	52	4.493	2.122	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-29P_1	9	1.977	0.934	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-29P_2	9	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-15E	1	0.021	0.023	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-16P	51	0.014	0.015	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-17E	1	0.021	0.023	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-18P	51	0.014	0.015	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.9B TK 32B to HD TK											
MSD-01.10B-19E	1	0.021	0.023	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-20P	51	0.014	0.015	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-21E	1	0.021	0.023	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-22P	51	0.014	0.015	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-30P	9	0.007	0.008	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-23E	2	0.023	0.025	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-24P	52	0.016	0.017	382.2	2.198	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-25E	2	0.024	0.026	382.2	2.220	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-26P	52	0.016	0.017	382.2	2.182	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.10B-27N	30	7.189	3.396	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:32:37PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: MSD: MSDT 33 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.770

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.14A TK 33A to HD TK											
MSD-01.14A-01N	31	4.637	2.190	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14A-02P	61	0.009	0.010	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14A-03T	15	0.010	0.011	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14A-03T (D/S)	15	0.010	0.011	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14A-04P	65	0.007	0.007	382.2	1.257	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15A-01E	16	0.008	0.009	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15A-01E (D/S)	16	0.017	0.018	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-02V	25	0.027	0.029	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-03P	58	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-04E	2	0.021	0.023	382.2	2.258	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-05E	4	0.021	0.022	382.2	2.229	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-06P	54	0.017	0.019	382.2	2.198	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-07E	2	0.020	0.022	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-08P	52	0.014	0.015	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-21P	9	0.006	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-09E	2	0.020	0.022	382.2	2.199	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-10P	52	0.014	0.015	382.2	2.205	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-11E	2	0.020	0.022	382.2	2.182	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-12P	52	0.014	0.015	382.2	2.179	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-13E	2	0.021	0.022	382.2	2.247	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-14P	52	0.014	0.015	382.2	2.169	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-22P	9	0.006	0.006	382.2	2.169	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-15E	2	0.021	0.022	382.2	2.242	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-16P	52	0.014	0.015	382.2	2.173	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-17E	2	0.020	0.022	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-18P	52	0.014	0.015	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15A-19E	2	0.020	0.022	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.14A TK 33A to HD TK											
MSD-01.15A-20N	30	6.182	2.920	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
====>Grouped by Line: MSD-01.14B TK 33B to HD TK											
MSD-01.14B-01N	31	4.637	2.190	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14B-02P	61	0.009	0.010	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14B-03T	15	0.010	0.011	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14B-03T (D/S)	15	0.010	0.011	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.14B-04P	65	0.007	0.007	382.2	1.255	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15B-01E	16	0.008	0.009	382.2	1.251	0.0	8.625	6.962	0.000	83.00	ARD
MSD-01.15B-01E (D/S)	16	0.017	0.018	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-02E	4	0.020	0.022	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-03P	54	0.017	0.019	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-04E	2	0.020	0.022	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-05V	25	0.027	0.029	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-06P	58	0.012	0.013	382.2	2.146	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-07E	4	0.021	0.022	382.2	2.210	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-08P	54	0.018	0.019	382.2	2.219	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-09E	2	0.020	0.022	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-10P	52	0.014	0.015	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-11E	1	0.018	0.019	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-12P_1	51	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-12P_2	52	3.864	1.825	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-30P	9	1.700	0.803	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-13E	2	5.718	2.701	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-14P	52	3.864	1.825	382.2	2.191	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-15E	2	5.718	2.701	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-16P	52	3.864	1.825	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-31P_1	9	1.700	0.803	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-31P_2	9	0.006	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-17E	1	0.018	0.019	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-18P	51	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-19E	1	0.018	0.019	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-20P	51	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-21E	1	0.018	0.019	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-22P	51	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-23E	1	0.018	0.019	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-24P	51	0.012	0.013	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: MSD-01.14B TK 33B to HD TK											
MSD-01.15B-32P	9	0.006	0.006	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-25E	2	0.020	0.022	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-26P	52	0.014	0.015	382.2	2.188	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-27E	2	0.021	0.023	382.2	2.258	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-28P	52	0.014	0.015	382.2	2.170	0.0	6.625	6.962	0.000	83.00	ARD
MSD-01.15B-29N	30	6.182	2.920	382.2	2.168	0.0	6.625	6.962	0.000	83.00	ARD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:32:58PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: PD: PRESEPRTR DRAINS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.643

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: PD-01.1 PRESEP 1B DR to HDR											
PD-01.1-01N	31	0.003	0.001	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.2-01R	7	2.247	0.906	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.2-01R (D/S)	7	3.455	1.392	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-02B	3	3.778	1.523	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-03P	53	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-04E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-05P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-06E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-07P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-08E	1	3.563	1.436	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-09V	25	5.398	2.175	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.2-100	6	20.512	8.946	387.3	6.460	0.0	10.750	6.937	0.000	83.00	ARD
PD-02.1-01T (BR/SE)	10	4.991	2.011	387.3	1.648	0.0	10.000	6.937	0.000	83.00	ARD
PD-02.1-01T (D/S)	10	2.471	0.996	387.3	0.606	0.0	16.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-01.3 PRESEP 1A DR to HDR											
PD-01.3-01N	31	0.003	0.001	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.4-01R	7	2.247	0.906	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.4-01R (D/S)	7	3.455	1.392	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-02B	3	3.778	1.523	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-03P	53	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-04E	1	3.563	1.436	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-05P	51	2.375	0.957	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-06E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-07P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-08E	1	3.563	1.436	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-09V	25	5.398	2.175	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.4-100	6	20.512	8.946	387.3	6.460	0.0	10.750	6.937	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: PD-01.5 PRESEP 2B DR to HDR											
PD-01.5-01N	31	0.003	0.001	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.6-01R	7	2.247	0.906	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.6-01R (D/S)	7	3.455	1.392	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-02B	3	3.778	1.523	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-03P	53	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-04E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-05P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-06E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-07P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-08E	4	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-09P	54	3.455	1.392	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-10E	4	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-11P	54	3.455	1.392	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-12E	1	3.563	1.436	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-13V	25	5.398	2.175	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.6-14O	6	20.512	8.946	387.3	6.460	0.0	10.750	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-01.7 PRESEP 2A DR to HDR											
PD-01.7-01N	31	0.003	0.001	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.8-01R	7	2.247	0.906	387.3	0.804	0.0	14.000	6.937	0.000	83.00	ARD
PD-01.8-01R (D/S)	7	3.455	1.392	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-02B	3	3.778	1.523	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-03P	53	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-04E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-05P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-06E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-07P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-08E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-09P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-10E	2	3.994	1.610	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-11P	52	2.699	1.088	387.3	1.417	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-12E	1	3.563	1.436	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-13V	25	5.398	2.175	387.3	1.410	0.0	10.750	6.937	0.000	83.00	ARD
PD-01.8-14O	6	20.512	8.946	387.3	6.460	0.0	10.750	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-02.2 PRESEP HDR to HD TK											
PD-02.2-01T (BR/SE)	12	4.242	1.710	387.3	1.648	0.0	10.000	6.937	0.000	83.00	ARD
PD-02.2-01T (D/S)	12	3.678	1.482	387.3	1.216	0.0	16.000	6.937	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: PD-02.2 PRESEP HDR to HD TK											
PD-02.4-22T	15	2.691	1.085	387.3	1.216	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-22T (D/S)	15	2.691	1.085	387.3	1.216	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.2-01T	12	2.027	0.817	387.3	0.606	0.0	16.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-02.3 PRESEP HDR to HD TK											
PD-02.3-01T (BR/SE)	12	4.242	1.710	387.3	1.648	0.0	10.000	6.937	0.000	83.00	ARD
PD-02.3-01T (D/S)	12	5.213	2.101	387.3	1.825	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.3-01T	12	3.678	1.482	387.3	1.216	0.0	16.000	6.937	0.000	83.00	ARD
====>Grouped by Line: PD-02.4 PRESEP HDR to HD TK											
PD-02.4-01T (BR/SE)	12	4.242	1.710	387.3	1.648	0.0	10.000	6.937	0.000	83.00	ARD
PD-02.4-01T	12	5.213	2.101	387.3	1.825	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-01T (D/S)	12	6.676	2.691	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-02E	4	2.498	2.428	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-03P	54	2.160	2.100	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-04E	2	2.498	2.428	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-05P	52	1.688	1.641	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-22E	2	2.498	2.428	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-23R	18	1.890	1.838	387.3	2.450	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-23R (D/S)	18	0.623	0.605	387.3	0.683	0.0	30.000	6.937	0.000	83.00	ARD
PD-02.4-24P	68	0.519	0.504	387.3	0.683	0.0	30.000	6.937	0.000	83.00	ARD
PD-02.4-25T	13	1.038	1.009	387.3	0.681	0.0	30.000	6.937	0.000	83.00	ARD
PD-02.4-25T (BR/SE)	13	3.375	3.281	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-27P	63	1.350	1.313	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-28E	2	2.498	2.428	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-06E	4	2.498	2.428	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-07P	54	5.211	2.100	387.3	2.438	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-08E	1	5.374	2.166	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-09P	51	3.582	1.444	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-10E	1	5.374	2.166	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-11P	51	3.582	1.444	387.3	2.433	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-12E	2	6.025	2.428	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-13P	52	4.071	1.641	387.3	2.433	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-14E	1	5.374	2.166	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-15P	51	3.582	1.444	387.3	2.434	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-16E	2	6.025	2.428	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-17P	52	4.071	1.641	387.3	2.434	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-18E	2	6.025	2.428	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: PD-02.4 PRESEP HDR to HD TK											
PD-02.4-19P	52	4.071	1.641	387.3	2.434	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-29R	17	1.740	1.692	387.3	2.516	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-29R (D/S)	17	3.847	3.721	387.3	8.992	0.0	8.625	6.937	0.000	83.00	ARD
PD-02.4-30V	21	10.686	10.335	387.3	8.992	0.0	8.625	6.937	0.000	83.00	ARD
PD-02.4-31R	18	0.023	0.022	387.3	8.707	0.0	8.625	6.937	0.000	83.00	ARD
PD-02.4-31R (D/S)	18	0.008	0.008	387.3	2.435	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-32P	68	0.007	0.006	387.3	2.434	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-20O	6	41.032	18.426	387.3	22.335	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-21N	30	7.436	2.997	387.3	2.809	0.0	16.000	6.937	0.000	83.00	ARD
PD-02.4-25T (D/S)	13	0.000	0.000	387.3	0.000	0.0	30.000	0.000	0.000	0.00	ARD
PD-02.4-26P	63	0.000	0.000	387.3	0.000	0.0	30.000	0.000	0.000	0.00	ARD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:33:27PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RH 31 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.091

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.1A_1 RH 31A to TK 31A											
RHD01.1A-01N	31	5.466	2.973	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-02P	61	2.952	1.605	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-03N	30	4.373	2.378	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR											
RHD01.1A-04N	31	5.466	2.973	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-05P	61	2.952	1.605	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-06E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-07P_1	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-07P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-08E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-09P_1	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-09P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-10E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-11P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-12E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-13P_1	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-13P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-14E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-15P	51	2.405	1.308	489.8	7.790	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-16E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-17P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-18E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-19P	52	2.733	1.486	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-20E	4	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-21P_1	54	3.498	1.903	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-21P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-22E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
Sorted By: Flow Order											
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR											
RHD01.1A-23P	51	2.405	1.308	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-24E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-25E	3	3.826	2.081	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-26P	53	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-27E	3	3.826	2.081	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-28P_1	53	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-28P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-29E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-30P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-31E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-32P	52	2.733	1.486	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-33E	4	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-34P_1	54	3.598	1.957	489.8	7.257	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-34P_2	9	1.237	0.673	489.8	7.257	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-35F	6	6.649	3.616	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-36P	56	1.330	0.723	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-37T	15	3.280	1.784	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-37T (D/S)	15	3.280	1.784	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-38P	65	2.186	1.189	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-39E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-40P	51	2.405	1.308	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-41E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-42P_1	51	2.405	1.308	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-42P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-43E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-44P_1	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-44P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-45E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-46P	52	2.733	1.486	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-47E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1A-48P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.2A-01R	17	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.2A-01R (D/S)	17	3.924	2.093	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.1A-01V	24	0.020	0.011	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.1A-02R	18	3.256	3.256	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.1A-02R (D/S)	18	1.784	1.784	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR											
RHD02.2A-01P	68	1.877	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-02E	2	4.154	2.259	489.8	7.247	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-03P	52	2.733	1.486	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-04E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2A-05P	51	2.405	1.308	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.1B_1 RH 31B to TK 31B											
RHD01.1B-01N	31	5.466	2.973	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-02P	61	2.952	1.605	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-03N	30	4.373	2.378	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR											
RHD01.1B-04N	31	5.466	2.973	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-05P	61	2.952	1.605	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-06E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-07P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-08E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-09P	52	2.733	1.486	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-10E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-11P	51	2.405	1.308	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-12E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-13P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-14F	6	6.649	3.616	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-15P	56	1.330	0.723	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-16E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-17P	52	2.733	1.486	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-18E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-19P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-20E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-21P_1	51	2.405	1.308	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-21P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-22E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-23P	52	2.733	1.486	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-24E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-25P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-26E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-27P_1	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-27P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR											
RHD01.1B-28E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-29P	52	2.807	1.527	489.8	9.386	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-30E	4	4.154	2.259	489.8	7.247	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-31P	54	3.584	1.949	489.8	7.226	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-32E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-33P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-34T	15	3.280	1.784	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-34T (D/S)	15	3.280	1.784	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-35E	4	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-36P	54	3.498	1.903	489.8	7.790	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-37E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-38P_1	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-38P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-39E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-40P	52	2.733	1.486	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-41E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-42P_1	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-42P_2	9	1.203	0.654	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-43E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-44P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-45E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-46P	52	2.733	1.486	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-47E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-48P	51	2.405	1.308	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-49E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-50P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-51E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.1B-52P	52	2.812	1.530	489.8	7.262	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.2B-01R	17	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.2B-01R (D/S)	17	4.096	2.185	489.8	17.209	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.1B-01V	24	0.020	0.011	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.1B-02R	18	3.352	3.256	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.1B-02R (D/S)	18	1.841	1.784	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-01P	68	1.877	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-02E	2	4.045	2.200	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-03P	52	2.733	1.486	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR											
RHD02.2B-04E	1	3.608	1.962	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.2B-05P	51	2.405	1.308	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Sorted By: Flow Order

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:33:41PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RH 32A TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.356

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3A_1 RH 32A to TK 32A											
RHD01.3A-01N	31	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-02P	61	3.326	1.809	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-03N	30	4.927	2.680	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR											
RHD01.3A-04N	31	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-05P	61	3.326	1.809	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-06E	2	4.557	2.479	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-07P	52	3.079	1.675	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-08E	2	4.557	2.479	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-09P	52	3.079	1.675	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-10E	2	4.557	2.479	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-11P	52	3.079	1.675	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-12E	2	4.557	2.479	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-13P	52	3.079	1.675	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-14E	4	4.557	2.479	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-15R	18	3.449	1.876	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3A-15R (D/S)	18	2.194	1.193	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.4A-01P_1	68	1.828	0.994	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.4A-01P_2	9	0.804	0.438	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.5A-01R	17	1.828	0.994	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.5A-01R (D/S)	17	2.217	1.206	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5A-02P	67	2.463	1.340	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5A-03F	6	7.492	4.075	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5A-04P	56	1.498	0.815	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5A-05R	18	3.449	1.876	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5A-05R (D/S)	18	2.194	1.193	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-01P	68	1.828	0.994	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR											
RHD01.6A-02T	15	2.194	1.193	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-02T (D/S)	15	2.194	1.193	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-03P_1	65	1.463	0.795	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-03P_2	9	0.804	0.438	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-04E	2	2.706	1.472	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-05P	52	1.828	0.994	489.8	5.119	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-06E	4	2.706	1.472	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-07P	54	2.340	1.273	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-08E	2	2.706	1.472	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-09P	52	1.828	0.994	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-10E	2	2.706	1.472	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-11P	52	1.828	0.994	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-12E	2	2.706	1.472	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-13P	52	1.828	0.994	489.8	11.023	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-14E	2	2.706	1.472	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-15P_1	52	1.828	0.994	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.6A-15P_2	9	0.804	0.438	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.7A-01R	17	1.828	0.994	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.7A-01R (D/S)	17	2.217	1.206	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7A-02E	4	4.557	2.479	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7A-03P	54	3.942	2.144	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7A-04E	2	4.635	2.521	489.8	7.170	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.8A-01R	7	4.311	2.345	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.8A-01R (D/S)	7	7.860	4.192	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD01.8A-02P	57	6.302	3.361	489.8	16.750	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.3A-01V	24	0.023	0.012	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.3A-02R	18	4.684	3.668	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.3A-02R (D/S)	18	2.538	2.010	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-01P	68	2.115	1.675	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-02E	2	4.681	2.546	489.8	7.247	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-03P	52	3.079	1.675	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-04E	1	4.065	2.211	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-05P	51	2.710	1.474	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.4A-06L	10	2.400	1.305	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4A-06L (D/S)	10	2.400	1.305	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.7A-01P	60	1.440	0.783	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:33:58PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RH 32B TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.055

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3B_1 RH 32B to TK 32B											
RHD01.3B-01N	31	7.984	4.342	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-02P	61	4.311	2.345	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-03N	30	6.387	3.474	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR											
RHD01.3B-04N	31	7.984	4.342	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-05P	61	4.311	2.345	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-06E	2	5.908	3.213	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-07P	52	3.992	2.171	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-08E	2	5.908	3.213	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-09P	52	3.992	2.171	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-10E	2	5.908	3.213	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-11P	52	3.992	2.171	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-12E	2	5.908	3.213	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-13P	52	3.992	2.171	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-14E	2	5.908	3.213	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-15P	52	3.992	2.171	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-16E	2	5.908	3.213	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-17P	52	3.992	2.171	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-18E	2	5.908	3.213	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-19P	52	3.992	2.171	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-20R	18	4.471	2.432	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.3B-20R (D/S)	18	1.867	1.015	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.4B-01P_1	68	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.4B-01P_2	9	0.684	0.372	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.5B-01R	17	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.5B-01R (D/S)	17	2.874	1.563	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5B-02P	67	3.248	1.766	489.8	7.170	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR											
RHD01.5B-03F	6	9.712	5.282	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5B-04P	56	1.942	1.056	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5B-05R	18	4.471	2.432	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.5B-05R (D/S)	18	1.867	1.015	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-01P	68	1.580	0.859	489.8	2.524	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-02E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-03P_1	52	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-03P_2	9	0.684	0.372	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-04E	1	2.053	1.117	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-05P	51	1.369	0.745	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-06E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-07P	52	1.556	0.846	489.8	12.437	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-08E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-09P_1	52	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-09P_2	9	0.684	0.372	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-10E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-11E	4	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-12P	54	1.991	1.083	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-13E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-14P	52	1.556	0.846	489.8	3.172	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-15E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-16P	52	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-17T	15	1.867	1.015	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-17T (D/S)	15	1.867	1.015	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-18P	65	1.244	0.677	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-19E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-20P_1	52	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-20P_2	9	0.684	0.372	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-21T	15	1.867	1.015	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-21T (D/S)	15	1.867	1.015	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-22P_1	65	1.244	0.677	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.6B-22P_2	9	0.684	0.372	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.7B-01R	17	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.7B-01R (D/S)	17	2.874	1.563	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7B-02P	67	3.194	1.737	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.7B-03R	18	4.471	2.432	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR											
RHD01.7B-03R (D/S)	18	1.867	1.015	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-01P_1	68	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-01P_2	9	0.684	0.372	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-02E	1	2.053	1.117	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-03P	51	1.369	0.745	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-04E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-05P	52	1.556	0.846	489.8	12.437	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.8B-06E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.9B-01R	17	1.556	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD01.9B-01R (D/S)	17	5.732	3.057	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.3B-01V	24	0.029	0.016	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.3B-02R	18	4.938	4.755	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.3B-02R (D/S)	18	1.054	1.015	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-01P	68	1.068	0.846	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-02E	2	2.302	1.252	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-03P	52	1.556	0.846	489.8	12.437	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-04E	1	2.053	1.117	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-05P	51	1.369	0.745	489.8	12.437	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-06E	1	2.053	1.117	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.4B-07P	51	1.377	0.749	489.8	2.496	3.9	10.750	6.448	0.000	42.34	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 Analysis Date/Time: 7/21/2011 2:34:25PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RH 33 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.596

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.10A_1 RH 33A to TK 33A											
RHD01.10A-01N	31	9.400	5.112	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-02P	61	5.076	2.761	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-03N	30	7.520	4.090	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.10A_2 TK 33A to A HDR											
RHD01.10A-04N	31	9.400	5.112	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-05P	61	5.076	2.761	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-06E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-07P	51	4.136	2.249	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-08E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-09P	51	4.136	2.249	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-10E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-11P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-12E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-13P	51	4.136	2.249	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-14E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-15P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-16E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-17P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-18F	6	11.434	6.219	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-19P	56	2.287	1.244	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-20R	18	5.264	2.863	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10A-20R (D/S)	18	3.348	1.821	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11A-01E	4	4.130	2.246	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11A-02P	54	3.572	1.943	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11A-03E	2	4.130	2.246	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11A-04P	52	2.790	1.518	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.12A-01T	14	6.139	3.339	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.10A_2 TK 33A to A HDR											
RHD01.12A-01T (D/S)	14	6.139	3.339	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.12A-02P	64	3.760	2.045	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-03E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-04E	4	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-05P	54	6.016	3.272	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-06E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-07P	52	4.700	2.556	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.12A-08E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.13A-01R	7	6.580	3.579	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.13A-01R (D/S)	7	11.997	6.399	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.5A-01V	24	0.035	0.018	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.5A-02R	18	7.149	5.599	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.5A-02R (D/S)	18	3.873	3.067	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.6A-01P	57	3.227	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.6A-02E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.6A-03P	52	4.700	2.556	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.6A-04E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.6A-05P	51	2.316	2.249	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.10B_1 RH 33B to TK 33B											
RHD01.10B-01N	31	9.400	5.112	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-02P	61	5.076	2.761	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-03N	30	7.520	4.090	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR											
RHD01.10B-04N	31	9.400	5.112	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-05P	61	5.076	2.761	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-06E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-07P	51	4.136	2.249	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-08E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-09P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-10E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-11P	52	4.700	2.556	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-12E	4	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-13P_1	54	6.016	3.272	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-13P_2	9	2.068	1.125	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-14E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-15E	4	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR											
RHD01.10B-16P	54	6.016	3.272	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-17E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-18P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-19E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-20P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-21E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-22E	4	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-23P	54	6.016	3.272	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-24E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-25P_1	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-25P_2	9	2.068	1.125	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-26F	6	11.434	6.219	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-27P	56	2.287	1.244	489.8	8.712	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-28E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-29P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-30E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-31P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-32E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-33P	51	4.136	2.249	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-34E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-35P	51	4.136	2.249	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-36E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-37P_1	51	4.136	2.249	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-37P_2	9	2.068	1.125	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-38E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-39P	51	4.136	2.249	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-40E	1	6.204	3.374	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-41P	51	4.136	2.249	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-42E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-43P	52	4.700	2.556	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-44E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-45P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-46E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-47P_1	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-47P_2	9	2.068	1.125	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-48E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR											
RHD01.10B-49P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-50E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-51P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-52T	10	9.400	5.112	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-52T (D/S)	10	9.400	5.112	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-53P	60	5.640	3.067	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-54E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-55P	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-56E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-57P_1	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-57P_2	9	2.068	1.125	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-58E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-59P	52	4.700	2.556	489.8	11.433	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-60E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-61P_1	52	4.700	2.556	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-61P_2	9	2.068	1.125	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-62E	2	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-63E	4	6.956	3.783	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-64R	18	5.264	2.863	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD01.10B-64R (D/S)	18	3.348	1.821	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-01P_1	68	2.790	1.518	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-01P_2	9	1.228	0.668	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-02E	2	4.130	2.246	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-03P	52	2.790	1.518	489.8	11.023	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-04E	2	4.130	2.246	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.11B-05P	52	2.790	1.518	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.12B-01R	17	2.790	1.518	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD01.12B-01R (D/S)	17	6.748	3.599	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.5B-01V	24	0.035	0.018	489.8	16.071	3.9	4.500	6.448	0.000	42.34	HBD
RHD02.6B-01E	4	2.401	2.312	489.8	4.100	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.6B-02P	54	3.621	1.969	489.8	10.997	3.9	8.625	6.448	0.000	42.34	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Rate Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:01:47PM
 AnalysisDate/Time: 7/21/2011 2:35:03PM

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Run Name: RHD: RHD HDR TO HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.184

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.10A TK A HDR to FWH 36											
RHD02.10A-01R	7	4.110	2.235	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.10A-01R (D/S)	7	5.725	3.114	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-02P	57	4.472	2.432	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-03E	1	5.904	3.211	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-04P	51	3.936	2.141	489.8	16.051	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-05E	1	5.904	3.211	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-06P	51	3.936	2.141	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-07E	1	5.904	3.211	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-08P	51	3.936	2.141	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-09E	1	5.904	3.211	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-10P	51	3.936	2.141	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-11T	14	9.839	5.351	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-11T (D/S)	14	5.435	2.956	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.10A-11T (BR/SE)	14	7.213	3.923	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.10B B HDR to FWH 36A											
RHD02.10B-01R	7	2.270	1.235	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.10B-01R (D/S)	7	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-02P_1	57	4.161	2.263	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-02P_2	9	1.831	0.996	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-03E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-04P	52	4.161	2.263	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-05E	4	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-06P	54	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-07E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-08P	52	4.161	2.263	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-09E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-10P	52	4.161	2.263	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.10B B HDR to FWH 36A											
RHD02.10B-11E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-12V	22	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-13P	58	3.662	1.992	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-14T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-14T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.10B-15P	63	3.329	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-16T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-16T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.10B-17R	18	4.661	2.535	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.10B-17R (D/S)	18	2.965	1.612	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.11B-01N	30	3.953	2.150	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.11A A HDR to FWH 36A											
RHD02.11A-01R	7	3.459	1.881	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.11A-01R (D/S)	7	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-02P_1	57	4.161	2.263	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-02P_2	9	1.831	0.996	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-03E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-04P	52	4.161	2.263	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-05E	4	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-06P	54	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-07E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-08E	4	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-09P_1	54	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-09P_2	9	1.831	0.996	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-10E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-11P	52	4.161	2.263	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-12E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-13P	52	4.161	2.263	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-14E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-15V	22	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-16P	58	3.801	2.067	489.8	7.330	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-17T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-17T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.11A-18P	63	3.419	1.859	489.8	9.386	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-19T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-19T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.11A A HDR to FWH 36A											
RHD02.11A-20R	18	4.661	2.535	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.11A-20R (D/S)	18	2.965	1.612	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.12A-01N	30	3.953	2.150	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.12B B HDR to FWH 36B											
RHD02.12B-01P	64	3.329	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-02E	4	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-03P	54	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-04E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-05P	52	4.161	2.263	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-06E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-07P	52	4.161	2.263	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-08E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-09V	22	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-10P	58	3.662	1.992	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-11T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-11T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.12B-12P	63	3.329	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-13T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-13T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.12B-14R	18	4.661	2.535	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.12B-14R (D/S)	18	2.965	1.612	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.13B-01N	30	3.953	2.150	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.13A A HDR to FWH 36B											
RHD02.13A-01P	64	3.329	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-02E	4	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-03P	54	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-04E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-05E	4	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-06P_1	54	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-06P_2	9	1.831	0.996	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-07E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-08P	52	4.161	2.263	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-09E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-10P	52	4.161	2.263	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-11E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-12V	22	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.13A A HDR to FWH 36B											
RHD02.13A-13P	58	3.662	1.992	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-14T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-14T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.13A-15P	63	3.329	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-16T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-16T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.13A-17R	18	4.661	2.535	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.13A-17R (D/S)	18	2.965	1.612	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.14A-01N	30	3.953	2.150	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.14B B HDR to FWH 36C											
RHD02.14B-01P	64	3.329	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-02E	4	3.448	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-03P	54	5.326	2.897	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-04E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-05E	4	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-06P	54	5.326	2.897	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-07E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-08V	22	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-09P	58	3.662	1.992	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-10T	13	4.526	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-10T (BR/SE)	13	5.604	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.14B-11P	63	3.329	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-12T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-12T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.14B-14P	63	1.864	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-13R	18	4.661	2.535	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.14B-13R (D/S)	18	2.965	1.612	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.15B-01N	30	3.825	2.080	489.8	3.829	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.15A A HDR to FWH 36C											
RHD02.15A-01P	64	3.329	1.811	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-02E	2	3.448	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-03P	52	4.161	2.263	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-04E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-05P	52	4.161	2.263	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-06E	2	6.159	3.350	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-07V	22	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.15A A HDR to FWH 36C											
RHD02.15A-08P	58	3.662	1.992	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-09T	13	8.322	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-09T (BR/SE)	13	10.304	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.15A-10P	63	3.329	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-11T	13	4.660	4.526	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-11T (BR/SE)	13	5.770	5.604	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.15A-13P	63	1.864	1.811	489.8	9.116	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-12R	18	4.661	2.535	489.8	7.039	3.9	6.625	6.448	0.000	42.34	HBD
RHD02.15A-12R (D/S)	18	2.965	1.612	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.16A-01N	30	3.953	2.150	489.8	3.971	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.7B TK B HDR to FWH 36											
RHD02.2B-06L (BR/SE)	12	7.007	3.811	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.2B-06L (D/S)	12	7.335	3.989	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-01P	62	3.578	1.946	489.8	16.051	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-02E	2	6.619	3.600	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-03P	52	4.472	2.432	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-04E	1	5.904	3.211	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-05P	51	3.936	2.141	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-06E	1	5.904	3.211	489.8	8.011	3.9	8.625	6.448	0.000	42.34	HBD
RHD02.7B-07P	51	4.020	2.186	489.8	8.198	3.9	8.625	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.8A TK A HDR to FWH 36											
RHD02.6A-06L (BR/SE)	12	7.007	3.811	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.6A-06L	12	2.659	1.446	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.6A-06L (D/S)	12	4.814	2.618	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8A-01P	62	2.348	1.277	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8A-02E	1	3.875	2.108	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8A-03P	51	2.583	1.405	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.8B TK B HDR to FWH 36											
RHD02.7B-08L	12	2.671	1.453	489.8	2.492	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-06T (BR/SE)	14	7.213	3.923	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.7B-08L (BR/SE)	12	7.131	3.879	489.8	9.528	3.9	8.000	6.448	0.000	42.34	HBD
RHD02.7B-08L (D/S)	12	6.829	3.714	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-01P	62	3.351	1.822	489.8	7.678	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-02E	2	6.163	3.352	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-03P	52	4.164	2.265	489.8	9.871	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-04E	4	6.163	3.352	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD

Component Name	Geom Code	Average Wear Rate (mils/yr)	Current Wear Rate (mils/yr)	Temp (F)	Velocity (ft/s)	Quality (%)	OD (in)	Hot pH	Oxygen (ppb)	Hydrazine (ppb)	Input Source
====>Grouped by Line: RHD-02.8B TK B HDR to FWH 36											
RHD02.8B-05P	54	5.330	2.899	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-06T	14	9.161	4.982	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.8B-06T (D/S)	14	6.458	3.513	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.9A TK A HDR to FWH 36											
RHD02.2A-06L (BR/SE)	12	7.007	3.811	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.9A-11T (D/S)	14	6.458	3.513	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-11T (BR/SE)	14	7.213	3.923	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.2A-06L	12	4.814	2.618	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.2A-06L (D/S)	12	6.829	3.714	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-01P	62	3.331	1.812	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-02E	1	5.496	2.989	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-03P	51	3.664	1.993	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-04E	1	5.496	2.989	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-05P	51	3.664	1.993	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-06E	1	5.496	2.989	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-07E	3	5.829	3.171	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-08P	53	4.164	2.265	489.8	8.440	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-09E	3	5.829	3.171	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-10P	53	4.164	2.265	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9A-11T	14	9.161	4.982	489.8	7.629	3.9	10.750	6.448	0.000	42.34	HBD
====>Grouped by Line: RHD-02.9B TK B HDR to FWH 36											
RHD02.9B-02T (D/S)	14	3.567	1.940	489.8	2.480	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9B-02T (BR/SE)	14	7.213	3.923	489.8	8.881	3.9	6.000	6.448	0.000	42.34	HBD
RHD02.9B-01P	64	2.348	1.277	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD
RHD02.9B-02T	14	6.458	3.513	489.8	5.045	3.9	10.750	6.448	0.000	42.34	HBD

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: CD: HDR TO BFP
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.119

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			
=====>Grouped by Line: CD-06.1 FWH 35 OUT HDR						
CD-06.1-03T	0.702	0.594	0.561	54,613	No	220,317
CD-06.1-03T (D/S)	0.702	0.619	0.561	141,186	No	220,317
CD-06.1-01T (D/S)	0.659	0.658	0.561	217,807	No	220,317
CD-06.1-01T	0.659	0.658	0.561	259,169	No	220,317
CD-06.1-01T (BR/SE)	0.000	0.430	0.299	309,560	Yes	220,317
CD-06.1-03T (BR/SE)	0.721	0.590	0.449	403,042	No	220,317
CD-06.1-02P	0.663	0.643	0.524	502,377	No	220,317
Sorted By: Remaining Life						
=====>Grouped by Line: CD-06.2A HDR to BFP 31						
CD-06.2A-24O	0.688	0.412	0.523	-132,130	No	220,317
CD-06.2A-07V	0.688	0.514	0.559	-89,764	No	220,317
CD-06.2A-04E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-06E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-09E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-13E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-15E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-17E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-19E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-20E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-26E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-28E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-33E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-31E	0.688	0.566	0.523	125,467	No	220,317
CD-06.2A-30E	0.688	0.573	0.523	154,340	No	220,317
CD-06.2A-12P	0.688	0.577	0.523	170,130	No	220,317
CD-06.2A-21P	0.688	0.577	0.523	170,130	No	220,317
CD-06.2A-29P	0.688	0.577	0.523	170,130	No	220,317
CD-06.2A-05P	0.688	0.601	0.523	316,028	No	220,317
CD-06.2A-10P	0.688	0.601	0.523	316,028	No	220,317
CD-06.2A-14P	0.688	0.601	0.523	316,028	No	220,317

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
===> Grouped by Line: CD-06.2A HDR to BFP 31							
CD-06.2A-16P	0.688	0.601	0.523	0.523	316,028	No	220,317
CD-06.2A-18P	0.688	0.601	0.523	0.523	316,028	No	220,317
CD-06.2A-27P	0.688	0.601	0.523	0.523	316,028	No	220,317
CD-06.2A-32P	0.688	0.601	0.523	0.523	316,028	No	220,317
CD-06.2A-34P	0.688	0.601	0.523	0.523	316,028	No	220,317
CD-06.2A-02E	0.729	0.658	0.523	0.523	365,933	Yes	220,317
CD-06.2A-11E	0.688	0.663	0.523	0.523	381,323	Yes	220,317
CD-06.3A-01R	0.000	0.622	0.523	0.523	399,173	Yes	220,317
CD-06.3A-01R (D/S)	0.000	0.522	0.392	0.392	504,915	Yes	220,317
CD-06.2A-08P	0.688	0.642	0.523	0.523	547,785	Yes	220,317
CD-06.2A-01P	0.721	0.651	0.523	0.523	645,569	Yes	220,317
CD-06.2A-03P	0.688	0.703	0.523	0.523	726,120	Yes	220,317
CD-06.2A-25P	0.688	0.640	0.523	0.523	745,933	Yes	220,317
CD-06.2A-22P	0.688	0.643	0.523	0.523	937,173	No	220,317
CD-06.2A-23P	0.688	0.643	0.523	0.523	937,173	No	220,317
CD-06.3A-02N	0.562	1.002	0.392	0.392	1,064,316	Yes	220,317
Sorted By: Remaining Life							
===> Grouped by Line: CD-06.2B HDR to BFP 32							
CD-06.2B-08O	0.688	0.412	0.523	0.523	-132,130	No	220,317
CD-06.2B-05V	0.688	0.514	0.559	0.559	-89,764	No	220,317
CD-06.2B-10E	0.688	0.559	0.523	0.523	99,716	No	220,317
CD-06.2B-12E	0.688	0.559	0.523	0.523	99,716	No	220,317
CD-06.2B-14E	0.688	0.559	0.523	0.523	99,716	No	220,317
CD-06.2B-13P	0.688	0.577	0.523	0.523	170,130	No	220,317
CD-06.2B-03T	0.688	0.584	0.523	0.523	204,868	No	220,317
CD-06.2B-03T (D/S)	0.000	0.584	0.523	0.523	204,868	No	220,317
CD-06.2B-07P	0.688	0.614	0.523	0.523	288,713	Yes	220,317
CD-06.2B-06E	0.688	0.630	0.523	0.523	291,495	Yes	220,317
CD-06.3B-01R (D/S)	0.000	0.471	0.392	0.392	307,874	No	220,317
CD-06.2B-11P	0.688	0.601	0.523	0.523	316,028	No	220,317
CD-06.2B-15P	0.688	0.601	0.523	0.523	316,028	No	220,317
CD-06.3B-01R	0.000	0.601	0.523	0.523	316,028	No	220,317
CD-06.2B-02P	0.702	0.612	0.523	0.523	360,762	Yes	220,317
CD-06.2B-01R (D/S)	0.000	0.664	0.492	0.492	544,126	Yes	220,317
CD-06.2B-09P	0.688	0.613	0.523	0.523	574,371	Yes	220,317
CD-06.2B-04T (BR/SE)	0.000	0.874	0.523	0.523	709,370	Yes	220,317
CD-06.2B-01R	0.000	0.816	0.615	0.615	785,844	Yes	220,317
CD-06.2B-04T	0.688	0.947	0.523	0.523	856,670	Yes	220,317
CD-06.3B-02N	0.562	0.910	0.392	0.392	904,377	No	220,317
Sorted By: Remaining Life							

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: CD-06.2B HDR to BFP 32								
CD-06.2B-35P	0.688	0.643	0.523	0.523	0.523	937,173	No	220,317
CD-06.2B-36P	0.688	0.643	0.523	0.523	0.523	937,173	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Run Name: CD: HDR TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.090

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				

====> **Grouped by Line: CD-02.8A HDR to FWH 33A**

CD-02.8A-03P	0.438	0.351	0.305	0.305	158,152	Yes	220,317
CD-02.7-02T (BR/SE)	0.000	0.364	0.305	0.305	186,885	Yes	220,317
CD-02.8A-06P	0.438	0.372	0.305	0.305	231,684	Yes	220,317
CD-02.8A-01P	0.438	0.376	0.305	0.305	392,801	No	220,317
CD-02.8A-05E	0.438	0.444	0.305	0.305	413,311	Yes	220,317
CD-02.8A-07E	0.438	0.449	0.305	0.305	428,202	Yes	220,317
CD-02.8A-08N	0.438	0.481	0.305	0.305	484,041	Yes	220,317
CD-02.7-02T	0.688	0.650	0.523	0.523	549,564	Yes	220,317
CD-02.8A-02E	0.438	0.490	0.305	0.305	552,233	Yes	220,317
CD-02.8A-04V	0.438	0.707	0.326	0.326	839,007	No	220,317
CD-02.7-01P	0.675	0.647	0.523	0.523	1,473,855	No	220,317

Sorted By: Remaining Life

====> **Grouped by Line: CD-02.8B HDR to FWH 33B**

CD-02.8B-04V	0.438	0.284	0.326	0.326	-93,537	No	220,317
CD-02.8B-03P	0.438	0.376	0.305	0.305	244,432	Yes	220,317
CD-02.8B-06P	0.438	0.394	0.305	0.305	306,413	Yes	220,317
CD-02.8B-02E	0.000	0.417	0.305	0.305	334,112	Yes	220,317
CD-02.8B-01P	0.445	0.367	0.305	0.305	339,495	Yes	220,317
CD-02.8B-08N	0.438	0.466	0.305	0.305	442,721	Yes	220,317
CD-02.8B-05E	0.438	0.474	0.305	0.305	503,862	Yes	220,317
CD-02.8B-07E	0.438	0.474	0.305	0.305	503,862	Yes	220,317

Sorted By: Remaining Life

====> **Grouped by Line: CD-02.8C HDR to FWH 33C**

CD-02.8C-03P	0.594	0.359	0.305	0.305	179,830	Yes	220,317
CD-02.8C-06P	0.438	0.368	0.305	0.305	217,910	Yes	220,317
CD-02.8C-02E	0.000	0.379	0.305	0.305	220,946	Yes	220,317
CD-02.8C-08N	0.438	0.439	0.305	0.305	369,368	Yes	220,317
CD-02.8C-05E	0.438	0.446	0.305	0.305	419,161	Yes	220,317
CD-02.8C-07E	0.438	0.449	0.305	0.305	428,202	Yes	220,317
CD-02.8C-01P	0.629	0.565	0.305	0.305	1,379,970	No	220,317

Sorted By: Remaining Life

Component Name	Init.	Pred.[1]	Thoop	Thickness (in)	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: CD-02.8C HDR to FWH 33C								
CD-02.8C-04V	0.438	0.957	0.326	0.326		1,389,949	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: CD: HTR 31 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Ihoop				

====>Grouped by Line: CD-01.1A FWH 31A to FWH 32A

CD-01.1A-01N	0.438	0.336	0.305	0.305	108,208	No	220,317
CD-01.1A-13N	0.438	0.357	0.305	0.305	222,786	No	220,317
CD-01.1A-03E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1A-09E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1A-11E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1A-06E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1A-07E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1A-05E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1A-12P	0.438	0.373	0.305	0.305	366,009	No	220,317
CD-01.1A-08P	0.438	0.373	0.305	0.305	366,009	No	220,317
CD-01.1A-02P	0.438	0.383	0.305	0.305	498,622	No	220,317
CD-01.1A-10P	0.438	0.387	0.305	0.305	566,521	No	220,317
CD-01.1A-04P	0.438	0.387	0.305	0.305	566,521	No	220,317

Sorted By: Remaining Life

====>Grouped by Line: CD-01.1B FWH 31B to FWH 32B

CD-01.1B-01N	0.438	0.336	0.305	0.305	108,208	No	220,317
CD-01.1B-13N	0.438	0.357	0.305	0.305	222,786	No	220,317
CD-01.1B-11E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1B-09E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1B-03E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1B-05E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1B-06E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1B-07E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1B-12P	0.438	0.373	0.305	0.305	366,009	No	220,317
CD-01.1B-08P	0.438	0.373	0.305	0.305	366,009	No	220,317
CD-01.1B-02P	0.438	0.383	0.305	0.305	498,622	No	220,317
CD-01.1B-10P	0.438	0.387	0.305	0.305	566,521	No	220,317
CD-01.1B-04P	0.438	0.387	0.305	0.305	566,521	No	220,317

Sorted By: Remaining Life

====>Grouped by Line: CD-01.1C FWH 31C to FWH 32C

Sorted By: Remaining Life

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
===> Grouped by Line: CD-01.1C FWH 31C to FWH 32C							
CD-01.1C-01N	0.438	0.336	0.305	0.305	108,208	No	220,317
CD-01.1C-13N	0.438	0.357	0.305	0.305	222,786	No	220,317
CD-01.1C-11E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1C-06E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1C-07E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1C-05E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1C-03E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1C-09E	0.438	0.363	0.305	0.305	269,237	No	220,317
CD-01.1C-12P	0.438	0.373	0.305	0.305	366,009	No	220,317
CD-01.1C-08P	0.438	0.373	0.305	0.305	366,009	No	220,317
CD-01.1C-02P	0.438	0.383	0.305	0.305	498,622	No	220,317
CD-01.1C-10P	0.438	0.387	0.305	0.305	566,521	No	220,317
CD-01.1C-04P	0.438	0.387	0.305	0.305	566,521	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: CD: HTR 32 TO 33 HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.808

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Ihoop				
=====>Grouped by Line: CD-02.2 FWH 32 OUT HDR							
CD-02.1B-11T (BR/SE)	0.000	0.352	0.305	0.305	203,780	Yes	220,317
CD-02.1B-11T (D/S)	0.624	0.550	0.436	0.436	440,348	Yes	220,317
CD-02.1B-11T	0.624	0.555	0.436	0.436	678,326	Yes	220,317
CD-02.2-01P	0.594	0.549	0.436	0.436	901,297	Yes	220,317
CD-02.2-02R (D/S)	0.000	0.676	0.523	0.523	1,023,392	Yes	220,317
CD-02.2-02R	0.000	0.683	0.436	0.436	1,402,635	Yes	220,317
CD-02.2-03P	0.594	0.564	0.436	0.436	1,463,207	No	220,317
Sorted By: Remaining Life							
=====>Grouped by Line: CD-02.3 FWH 32 OUT HDR							
CD-02.1C-12T (BR/SE)	0.000	0.372	0.305	0.305	294,220	Yes	220,317
CD-02.3-15T (D/S)	0.000	0.647	0.523	0.523	368,576	Yes	220,317
CD-02.3-13E	0.688	0.609	0.523	0.523	372,166	No	220,317
CD-02.3-07E	0.688	0.609	0.523	0.523	372,166	No	220,317
CD-02.3-04E	0.688	0.609	0.523	0.523	372,166	No	220,317
CD-02.3-11E	0.688	0.609	0.523	0.523	372,166	No	220,317
CD-02.3-05E	0.688	0.613	0.523	0.523	412,882	No	220,317
CD-02.1C-12T (D/S)	0.692	0.634	0.523	0.523	430,809	Yes	220,317
CD-02.3-09E	0.688	0.618	0.523	0.523	458,533	No	220,317
CD-02.3-15T	0.688	0.682	0.523	0.523	461,815	No	220,317
CD-02.3-14P	0.688	0.620	0.523	0.523	483,498	No	220,317
CD-02.3-02T	0.688	0.624	0.523	0.523	538,422	No	220,317
CD-02.3-02T (D/S)	0.000	0.624	0.523	0.523	538,422	No	220,317
CD-02.1C-12T	0.692	0.634	0.523	0.523	544,743	Yes	220,317
CD-02.3-12P	0.688	0.635	0.523	0.523	714,178	No	220,317
CD-02.3-08P	0.688	0.635	0.523	0.523	714,178	No	220,317
CD-02.3-06P	0.688	0.635	0.523	0.523	714,178	No	220,317
CD-02.3-10P	0.688	0.641	0.523	0.523	857,979	No	220,317
CD-02.3-03P	0.688	0.645	0.523	0.523	977,812	No	220,317
CD-02.3-01P	0.736	0.669	0.523	0.523	1,156,450	Yes	220,317
CD-02.3-16P	0.688	0.658	0.523	0.523	1,531,832	No	220,317
Sorted By: Remaining Life							

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: CD-02.3 FWH 32 OUT HDR							
CD-02.3-15T (BR/SE)	0.000	0.495	0.392	0.392	3,594,426	No	220,317
====> Grouped by Line: CD-02.4 FWH 32 OUT HDR							
CD-02.4-02V	0.594	0.462	0.466	0.466	-9,870	No	220,317
CD-02.4-01R (D/S)	0.000	0.510	0.436	0.436	299,355	No	220,317
CD-02.4-01R	0.000	0.615	0.523	0.523	429,372	No	220,317
CD-02.4-03P	0.594	0.536	0.436	0.436	590,135	No	220,317
CD-02.5-02E	0.994	0.664	0.523	0.523	601,608	No	220,317
CD-02.4-04E (D/S)	0.864	0.683	0.523	0.523	638,843	Yes	220,317
CD-02.4-04E	0.864	0.716	0.436	0.436	874,537	Yes	220,317
CD-02.3-17P	0.688	0.646	0.523	0.523	1,006,670	No	220,317
CD-02.5-01P	0.754	0.709	0.523	0.523	1,207,542	No	220,317
====> Grouped by Line: CD-02.5 FWH 32 OUT HDR							
CD-02.5-04T (BR/SE)	0.000	0.356	0.305	0.305	217,215	No	220,317
CD-02.5-04T	0.730	0.646	0.523	0.523	356,769	Yes	220,317
CD-02.5-03T	0.688	0.616	0.523	0.523	371,947	Yes	220,317
CD-02.5-03T (D/S)	0.000	0.623	0.523	0.523	391,721	Yes	220,317
CD-02.5-04T (D/S)	0.730	0.637	0.523	0.523	412,531	Yes	220,317
CD-02.5-03T (BR/SE)	0.000	0.552	0.392	0.392	5,661,022	No	220,317
====> Grouped by Line: CD-02.6 FWH 32 OUT HDR							
CD-02.6-03T (BR/SE)	0.000	0.369	0.305	0.305	271,651	Yes	220,317
CD-02.6-03T	0.694	0.657	0.523	0.523	488,685	Yes	220,317
CD-02.6-03T (D/S)	0.694	0.646	0.523	0.523	716,417	Yes	220,317
CD-02.6-01T	0.693	0.631	0.523	0.523	723,037	Yes	220,317
CD-02.6-01T (D/S)	0.693	0.647	0.523	0.523	829,667	Yes	220,317
CD-02.6-02P	0.693	0.640	0.523	0.523	1,169,307	Yes	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Run Name: CD: HTR 32 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.990

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				

=====>Grouped by Line: CD-02.1A FWH 32A to HDR

CD-02.1A-05V	0.438	0.298	0.326	0.326	-66,764	No	220,317
CD-02.1A-11E	0.438	0.334	0.305	0.305	96,067	No	220,317
CD-02.1A-09E	0.438	0.334	0.305	0.305	96,067	No	220,317
CD-02.1A-03E	0.438	0.334	0.305	0.305	96,067	No	220,317
CD-02.1A-08P	0.438	0.340	0.305	0.305	121,006	No	220,317
CD-02.1A-12P	0.438	0.348	0.305	0.305	164,259	No	220,317
CD-02.1A-02P	0.438	0.362	0.305	0.305	257,706	No	220,317
CD-02.1A-01N	0.438	0.428	0.305	0.305	298,155	No	220,317
CD-02.1A-10P	0.438	0.368	0.305	0.305	305,552	No	220,317
CD-02.1A-04P	0.438	0.368	0.305	0.305	305,552	No	220,317
CD-02.1A-06E	0.438	0.481	0.305	0.305	356,775	Yes	220,317
CD-02.1A-13R (D/S)	0.000	0.550	0.436	0.436	725,345	Yes	220,317
CD-02.1A-14P	0.438	0.399	0.305	0.305	811,812	No	220,317
CD-02.1A-13R	0.000	0.599	0.305	0.305	1,275,961	Yes	220,317

Sorted By: Remaining Life

=====>Grouped by Line: CD-02.1B FWH 32B to HDR

CD-02.1B-07V	0.438	0.298	0.326	0.326	-66,764	No	220,317
CD-02.1B-06E	0.438	0.334	0.305	0.305	96,067	No	220,317
CD-02.1B-05E	0.438	0.334	0.305	0.305	96,067	No	220,317
CD-02.1B-02P	0.438	0.362	0.305	0.305	257,706	No	220,317
CD-02.1B-04P	0.438	0.368	0.305	0.305	305,552	No	220,317
CD-02.1B-01N	0.438	0.432	0.305	0.305	307,863	No	220,317
CD-02.1B-03E	0.438	0.408	0.305	0.305	336,917	Yes	220,317
CD-02.1B-08P	0.438	0.376	0.305	0.305	393,631	No	220,317
CD-02.1B-09E	0.438	0.474	0.305	0.305	556,011	Yes	220,317
CD-02.1B-10P	0.661	0.588	0.305	0.305	1,314,383	No	220,317

Sorted By: Remaining Life

=====>Grouped by Line: CD-02.1C FWH 32C to HDR

CD-02.1C-08V	0.438	0.298	0.326	0.326	-66,764	No	220,317
CD-02.1C-06E	0.438	0.334	0.305	0.305	96,067	No	220,317

Sorted By: Remaining Life

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
===> Grouped by Line: CD-02.1C FWH 32C to HDR							
CD-02.1C-05E	0.438	0.334	0.305	0.305	96,067	No	220,317
CD-02.1C-07P	0.438	0.348	0.305	0.305	164,259	No	220,317
CD-02.1C-02P	0.438	0.349	0.305	0.305	198,536	Yes	220,317
CD-02.1C-01N	0.438	0.389	0.305	0.305	203,506	No	220,317
CD-02.1C-04P	0.438	0.368	0.305	0.305	305,552	No	220,317
CD-02.1C-11P	0.438	0.368	0.305	0.305	305,552	No	220,317
CD-02.1C-09P	0.438	0.376	0.305	0.305	393,631	No	220,317
CD-02.1C-03E	0.438	0.461	0.305	0.305	510,735	Yes	220,317
CD-02.1C-10E	0.575	0.491	0.305	0.305	594,057	Yes	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: CD: HTR 33 TO HTR 34
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.601

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			

====>Grouped by Line: CD-03.1A FWH 33A to FWH 34A

CD-03.1A-13N	0.438	0.335	0.305	0.305	No	220,317
CD-03.1A-06E	0.438	0.343	0.305	0.305	No	220,317
CD-03.1A-10E	0.438	0.343	0.305	0.305	No	220,317
CD-03.1A-05E	0.438	0.353	0.305	0.305	No	220,317
CD-03.1A-12E	0.438	0.353	0.305	0.305	No	220,317
CD-03.1A-08E	0.438	0.353	0.305	0.305	No	220,317
CD-03.1A-07P	0.438	0.356	0.305	0.305	No	220,317
CD-03.1A-11P	0.438	0.356	0.305	0.305	No	220,317
CD-03.1A-01N	0.438	0.400	0.305	0.305	Yes	220,317
CD-03.1A-04P	0.438	0.374	0.305	0.305	Yes	220,317
CD-03.1A-15P	0.438	0.382	0.305	0.305	No	220,317
CD-03.1A-09P	0.438	0.382	0.305	0.305	No	220,317
CD-03.1A-02E	0.438	0.466	0.305	0.305	Yes	220,317
CD-03.1A-03E	0.438	0.481	0.305	0.305	Yes	220,317
CD-03.1A-14P	0.438	0.402	0.305	0.305	No	220,317

Sorted By: Remaining Life

====>Grouped by Line: CD-03.1B FWH 33B to FWH 34B

CD-03.1B-01N	0.438	0.310	0.305	0.305	No	220,317
CD-03.1B-11N	0.438	0.335	0.305	0.305	No	220,317
CD-03.1B-08E	0.438	0.343	0.305	0.305	No	220,317
CD-03.1B-10E	0.438	0.353	0.305	0.305	No	220,317
CD-03.1B-07P	0.477	0.365	0.305	0.305	Yes	220,317
CD-03.1B-04P	0.438	0.388	0.305	0.305	Yes	220,317
CD-03.1B-09P	0.438	0.374	0.305	0.305	No	220,317
CD-03.1B-05E	0.547	0.433	0.305	0.305	Yes	220,317
CD-03.1B-02E	0.438	0.459	0.305	0.305	Yes	220,317
CD-03.1B-03E	0.438	0.467	0.305	0.305	Yes	220,317
CD-03.1B-06E	0.555	0.478	0.305	0.305	Yes	220,317
CD-03.1B-12P	0.438	0.402	0.305	0.305	No	220,317

Sorted By: Remaining Life

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
===> Grouped by Line: CD-03.1C FWH 33C to FWH 34C							
CD-03.1C-11N	0.438	0.335	0.305	0.305	103,547	No	220,317
CD-03.1C-03E	0.438	0.343	0.305	0.305	140,259	No	220,317
CD-03.1C-05E	0.438	0.343	0.305	0.305	140,259	No	220,317
CD-03.1C-06E	0.438	0.343	0.305	0.305	140,259	No	220,317
CD-03.1C-08E	0.438	0.343	0.305	0.305	140,259	No	220,317
CD-03.1C-10E	0.438	0.353	0.305	0.305	199,593	No	220,317
CD-03.1C-04P	0.438	0.356	0.305	0.305	216,744	No	220,317
CD-03.1C-07P	0.438	0.356	0.305	0.305	216,744	No	220,317
CD-03.1C-01N	0.438	0.424	0.305	0.305	324,285	Yes	220,317
CD-03.1C-09P	0.438	0.374	0.305	0.305	375,220	No	220,317
CD-03.1C-02E	0.438	0.436	0.305	0.305	482,086	Yes	220,317
CD-03.1C-12P	0.438	0.402	0.305	0.305	934,608	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: CD: HTR 34 TO HTR 35
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.452

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			
====>Grouped by Line: CD-04.1A FWH 34A to FWH 35A						
CD-04.1A-01N	0.438	0.343	0.305	107,083	No	220,317
CD-04.1A-14N	0.438	0.337	0.305	112,247	No	220,317
CD-04.1A-11E	0.438	0.345	0.305	149,707	No	220,317
CD-04.1A-09E	0.438	0.345	0.305	149,707	No	220,317
CD-04.1A-07E	0.438	0.345	0.305	149,707	No	220,317
CD-04.1A-05E	0.438	0.345	0.305	149,707	No	220,317
CD-04.1A-13E	0.438	0.355	0.305	210,248	No	220,317
CD-04.1A-10P	0.438	0.357	0.305	227,748	No	220,317
CD-04.1A-04P	0.438	0.362	0.305	248,206	Yes	220,317
CD-04.1A-12P	0.438	0.375	0.305	389,449	No	220,317
CD-04.1A-08P	0.438	0.375	0.305	389,449	No	220,317
CD-04.1A-06P	0.438	0.375	0.305	389,449	No	220,317
CD-04.1A-02E	0.438	0.471	0.305	624,955	Yes	220,317
CD-04.1A-03E	0.438	0.475	0.305	639,968	Yes	220,317
CD-04.1A-15P	0.438	0.403	0.305	949,605	No	220,317
Sorted By: Remaining Life						
====>Grouped by Line: CD-04.1B FWH 34B to FWH 35B						
CD-04.1B-16N	0.438	0.337	0.305	112,247	No	220,317
CD-04.1B-13E	0.438	0.345	0.305	149,707	No	220,317
CD-04.1B-10E	0.438	0.345	0.305	149,707	No	220,317
CD-04.1B-08E	0.438	0.345	0.305	149,707	No	220,317
CD-04.1B-05E	0.438	0.345	0.305	149,707	No	220,317
CD-04.1B-06E	0.438	0.350	0.305	178,248	No	220,317
CD-04.1B-15E	0.438	0.355	0.305	210,248	No	220,317
CD-04.1B-12E	0.438	0.355	0.305	210,248	No	220,317
CD-04.1B-14P	0.438	0.357	0.305	227,748	No	220,317
CD-04.1B-11P	0.438	0.357	0.305	227,748	No	220,317
CD-04.1B-09P	0.438	0.357	0.305	227,748	No	220,317
CD-04.1B-01N	0.438	0.389	0.305	234,337	Yes	220,317
CD-04.1B-07P	0.438	0.375	0.305	389,449	No	220,317
Sorted By: Remaining Life						

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: CD-04.1B FWH 34B to FWH 35B							
CD-04.1B-04P	0.438	0.398	0.305	0.305	405,438	Yes	220,317
CD-04.1B-03E	0.438	0.456	0.305	0.305	568,076	Yes	220,317
CD-04.1B-02E	0.438	0.478	0.305	0.305	650,648	Yes	220,317
CD-04.1B-17P	0.438	0.403	0.305	0.305	949,605	No	220,317
====> Grouped by Line: CD-04.1C FWH 34C to FWH 35C							
CD-04.1C-13N	0.438	0.337	0.305	0.305	112,247	No	220,317
CD-04.1C-08E	0.438	0.345	0.305	0.305	149,707	No	220,317
CD-04.1C-10E	0.438	0.345	0.305	0.305	149,707	No	220,317
CD-04.1C-12E	0.438	0.355	0.305	0.305	210,248	No	220,317
CD-04.1C-04P	0.438	0.357	0.305	0.305	227,748	No	220,317
CD-04.1C-09P	0.438	0.357	0.305	0.305	227,748	No	220,317
CD-04.1C-11P	0.438	0.375	0.305	0.305	389,449	No	220,317
CD-04.1C-01N	0.438	0.454	0.305	0.305	415,256	No	220,317
CD-04.1C-07E	0.438	0.435	0.305	0.305	489,193	Yes	220,317
CD-04.1C-02E	0.594	0.457	0.305	0.305	554,445	Yes	220,317
CD-04.1C-03E	0.570	0.459	0.305	0.305	564,459	Yes	220,317
CD-04.1C-05E	0.438	0.467	0.305	0.305	609,298	Yes	220,317
CD-04.1C-06P	0.438	0.428	0.305	0.305	682,095	Yes	220,317
CD-04.1C-14P	0.438	0.403	0.305	0.305	949,605	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Run Name: CD: HTR 35 TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.422

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
=====> Grouped by Line: CD-05.3 FWH 35 OUT HDR						
CD-05.1B-09T (BR/SE)	0.000	0.417	0.305	652,445	Yes	220,317
CD-05.1B-09T (D/S)	0.724	0.662	0.523	902,129	Yes	220,317
CD-05.1B-09T	0.724	0.641	0.523	1,186,154	Yes	220,317
CD-05.3-01P	0.724	0.666	0.523	1,895,640	Yes	220,317
=====> Grouped by Line: CD-05.4 FWH 35 OUT HDR						
CD-05.4-03T (D/S)	0.696	0.666	0.653	70,873	Yes	220,317
CD-05.1C-10T (BR/SE)	0.000	0.404	0.305	577,508	Yes	220,317
CD-05.1C-10T (D/S)	0.000	0.657	0.523	697,453	Yes	220,317
CD-05.4-03T (BR/SE)	0.696	0.669	0.523	774,884	Yes	220,317
CD-05.4-01E	0.688	0.670	0.523	845,981	Yes	220,317
CD-05.4-02P	0.722	0.668	0.523	957,611	No	220,317
CD-05.1C-10T	0.000	0.675	0.523	987,056	Yes	220,317
CD-05.4-05P	0.625	0.668	0.561	1,019,285	No	220,317
CD-05.4-04P	0.688	0.654	0.523	1,389,797	No	220,317

Note:
 [1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Run Name: CD: HTR 35 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.655

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				

=====>Grouped by Line: CD-05.1A FWH 35A to HDR

CD-05.1A-05V	0.438	0.297	0.326	0.326	-71,536	No	220,317
CD-05.1A-09E	0.438	0.334	0.305	0.305	99,785	No	220,317
CD-05.1A-01N	0.438	0.347	0.305	0.305	107,634	Yes	220,317
CD-05.1A-10P	0.438	0.348	0.305	0.305	171,444	No	220,317
CD-05.1A-04P	0.438	0.348	0.305	0.305	171,444	No	220,317
CD-05.1A-02E	0.438	0.366	0.305	0.305	210,174	Yes	220,317
CD-05.1A-03E	0.438	0.374	0.305	0.305	237,745	Yes	220,317
CD-05.1A-11R	0.000	0.359	0.305	0.305	247,199	No	220,317
CD-05.1A-08P	0.438	0.368	0.305	0.305	319,924	No	220,317
CD-05.1A-06P	0.438	0.372	0.305	0.305	388,642	Yes	220,317
CD-05.1A-07E	0.438	0.470	0.305	0.305	568,619	Yes	220,317
CD-05.1A-11R (D/S)	0.000	0.648	0.523	0.523	1,114,477	No	220,317
CD-05.2-01P	0.688	0.655	0.523	0.523	1,408,103	No	220,317

Sorted By: Remaining Life

=====>Grouped by Line: CD-05.1B FWH 35B to HDR

CD-05.1B-05V	0.438	0.297	0.326	0.326	-71,536	No	220,317
CD-05.1B-01N	0.438	0.297	0.305	0.305	-19,458	No	220,317
CD-05.1B-04P	0.438	0.359	0.305	0.305	215,750	Yes	220,317
CD-05.1B-02E	0.438	0.433	0.305	0.305	440,976	Yes	220,317
CD-05.1B-06P	0.438	0.383	0.305	0.305	452,400	Yes	220,317
CD-05.1B-07E	0.575	0.466	0.305	0.305	539,842	Yes	220,317
CD-05.1B-03E	0.438	0.491	0.305	0.305	640,866	Yes	220,317

Sorted By: Remaining Life

=====>Grouped by Line: CD-05.1C FWH 35C to HDR

CD-05.1C-05V	0.438	0.297	0.326	0.326	-71,536	No	220,317
CD-05.1C-03E	0.438	0.334	0.305	0.305	99,785	No	220,317
CD-05.1C-02E	0.438	0.334	0.305	0.305	99,785	No	220,317
CD-05.1C-07E	0.438	0.334	0.305	0.305	99,785	No	220,317
CD-05.1C-04P	0.438	0.348	0.305	0.305	171,444	No	220,317
CD-05.1C-01N	0.438	0.390	0.305	0.305	216,395	No	220,317

Sorted By: Remaining Life

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: CD-05.1C FWH 35C to HDR								
CD-05.1C-09P	0.498	0.407	0.305	0.305	0.305	401,698	No	220,317
CD-05.1C-06P	0.438	0.376	0.305	0.305	0.305	412,482	No	220,317
CD-05.1C-08E	0.438	0.437	0.305	0.305	0.305	456,730	Yes	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: CD: S/G BLWDN HX IN
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.754

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
=====>Grouped by Line: CD-02.9 FWH HDR to SGBD HX3							
CD-02.10-06E	0.322	0.232	0.188	0.188	161,913	No	220,317
CD-02.9-17T (BR/SE)	0.000	0.222	0.174	0.174	162,184	No	220,317
CD-02.10-04E	0.322	0.266	0.188	0.188	291,440	Yes	220,317
CD-02.10-10E	0.322	0.268	0.188	0.188	296,589	Yes	220,317
CD-02.10-08E	0.322	0.286	0.188	0.188	363,352	Yes	220,317
CD-02.10-05P	0.322	0.261	0.188	0.188	400,738	No	220,317
CD-02.10-07P	0.322	0.261	0.188	0.188	400,738	No	220,317
CD-02.10-03P	0.322	0.270	0.188	0.188	531,679	No	220,317
CD-02.10-09P	0.322	0.290	0.188	0.188	563,454	Yes	220,317
CD-02.10-01P	0.322	0.273	0.188	0.188	584,832	No	220,317
CD-02.9-04V	0.562	0.532	0.420	0.420	1,238,780	No	220,317
CD-02.10-11N	0.812	0.687	0.188	0.188	1,342,643	No	220,317
CD-02.9-17T	0.562	0.529	0.392	0.392	1,371,733	No	220,317
CD-02.9-16E	0.562	0.540	0.392	0.392	2,202,347	No	220,317
CD-02.9-13E	0.562	0.540	0.392	0.392	2,202,347	No	220,317
CD-02.9-11E	0.562	0.540	0.392	0.392	2,202,347	No	220,317
CD-02.9-08E	0.562	0.540	0.392	0.392	2,202,347	No	220,317
CD-02.9-06E	0.562	0.540	0.392	0.392	2,202,347	No	220,317
CD-02.9-02E	0.562	0.540	0.392	0.392	2,202,347	No	220,317
CD-02.9-09P	0.562	0.543	0.392	0.392	2,598,907	No	220,317
CD-02.9-03P	0.562	0.543	0.392	0.392	2,598,907	No	220,317
CD-02.9-14P	0.562	0.547	0.392	0.392	3,420,580	No	220,317
CD-02.9-12P	0.562	0.547	0.392	0.392	3,420,580	No	220,317
CD-02.9-07P	0.562	0.547	0.392	0.392	3,420,580	No	220,317
CD-02.9-05P	0.562	0.549	0.392	0.392	3,932,791	No	220,317
CD-02.9-01P	0.562	0.550	0.392	0.392	4,359,634	No	220,317
CD-02.9-15P	0.562	0.555	0.392	0.392	8,201,220	No	220,317
CD-02.9-10P	0.562	0.555	0.392	0.392	8,201,220	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: CD: S/G BLWDN HX OUT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.247

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
=====>Grouped by Line: CD-02.11 SGBD HX3 to FWH HDR							
CD-02.11-02P	0.322	0.200	0.188	0.188	32,593	No	220,317
CD-02.11-13T (BR/SE)	0.000	0.239	0.174	0.174	102,509	No	220,317
CD-02.11-12E	0.322	0.270	0.188	0.188	163,702	No	220,317
CD-02.11-10E	0.322	0.277	0.188	0.188	177,724	Yes	220,317
CD-02.11-05E	0.322	0.269	0.188	0.188	182,827	Yes	220,317
CD-02.11-03E	0.322	0.279	0.188	0.188	182,903	Yes	220,317
CD-02.11-07E	0.322	0.285	0.188	0.188	194,657	Yes	220,317
CD-02.11-08P	0.322	0.277	0.188	0.188	265,386	Yes	220,317
CD-02.11-04P	0.322	0.284	0.188	0.188	283,920	Yes	220,317
CD-02.11-11P	0.322	0.284	0.188	0.188	286,032	Yes	220,317
CD-02.11-06P	0.322	0.286	0.188	0.188	331,341	Yes	220,317
CD-02.11-01N	0.812	0.523	0.188	0.188	389,466	No	220,317
CD-02.12-04V	0.562	0.506	0.420	0.420	514,649	No	220,317
CD-02.11-09P	0.322	0.272	0.188	0.188	568,204	No	220,317
CD-02.11-13T (D/S)	0.000	0.538	0.392	0.392	869,642	Yes	220,317
CD-02.12-02E	0.562	0.520	0.392	0.392	1,035,037	No	220,317
CD-02.12-08E	0.562	0.520	0.392	0.392	1,035,037	No	220,317
CD-02.12-10E	0.562	0.520	0.392	0.392	1,035,037	No	220,317
CD-02.12-01P	0.562	0.528	0.392	0.392	1,354,861	No	220,317
CD-02.12-03P	0.562	0.534	0.392	0.392	1,692,961	No	220,317
CD-02.12-07P	0.562	0.534	0.392	0.392	1,692,961	No	220,317
CD-02.12-09P	0.562	0.534	0.392	0.392	1,692,961	No	220,317
CD-02.12-11P	0.562	0.534	0.392	0.392	1,692,961	No	220,317
CD-02.12-05P	0.562	0.537	0.392	0.392	1,969,838	Yes	220,317
CD-02.12-06E	0.562	0.680	0.392	0.392	2,319,464	Yes	220,317

Sorted By: Remaining Life

Note:
 [1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: ES: BFPT DRN TO COND
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: EX-07.1 BFPT 31 Drain to Cond							
EX-07.1-01N	0.000	0.618	0.080	0.080	16,192,661	No	220,317
EX-07.1-10EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.1-08EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.1-03EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.1-06P	0.000	0.620	0.080	0.080	25,489,944	No	220,317
EX-07.1-02E	0.000	0.621	0.080	0.080	26,233,440	No	220,317
EX-07.1-05E	0.000	0.621	0.080	0.080	28,830,762	No	220,317
EX-07.1-07E	0.000	0.621	0.080	0.080	30,591,206	No	220,317
EX-07.1-11R	0.000	0.622	0.080	0.080	38,993,804	No	220,317
EX-07.1-12N	0.000	0.622	0.090	0.090	46,054,212	No	220,317
EX-07.1-09P	0.000	0.623	0.080	0.080	66,364,080	No	220,317
EX-07.1-04P	0.000	0.623	0.080	0.080	66,364,080	No	220,317
EX-07.1-11R (D/S)	0.000	0.623	0.090	0.090	69,036,992	No	220,317
====>Grouped by Line: EX-07.2 BFPT 32 Drain to Cond							
EX-07.2-01N	0.000	0.618	0.080	0.080	16,192,661	No	220,317
EX-07.2-10EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.2-08EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.2-03EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.2-06P	0.000	0.620	0.080	0.080	25,489,944	No	220,317
EX-07.2-02E	0.000	0.621	0.080	0.080	26,233,440	No	220,317
EX-07.2-05E	0.000	0.621	0.080	0.080	28,830,762	No	220,317
EX-07.2-07E	0.000	0.621	0.080	0.080	30,591,206	No	220,317
EX-07.2-11R	0.000	0.622	0.080	0.080	38,993,804	No	220,317
EX-07.2-12N	0.000	0.622	0.090	0.090	46,054,212	No	220,317
EX-07.2-09P	0.000	0.623	0.080	0.080	66,364,080	No	220,317
EX-07.2-04P	0.000	0.623	0.080	0.080	66,364,080	No	220,317
EX-07.2-11R (D/S)	0.000	0.623	0.090	0.090	69,036,992	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Run Name: ES: HDR TO 35 HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.988

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Ihoop				
====>Grouped by Line: EX-02.16 HDR 35 to FWH 35A							
EX-02.16-05V	0.312	-0.269	0.160	0.160	-153,839	No	220,317
EX-02.16-09N	0.293	-0.237	0.149	0.149	-151,408	No	220,317
EX-02.16-08E	0.924	0.641	0.149	0.149	162,962	Yes	181,524
EX-02.16-02P	0.284	0.283	0.149	0.149	15,998,001	No	99,292
EX-02.16-06E	0.000	0.374	0.149	0.149	21,644,146	No	99,292
EX-02.16-07P	0.380	0.403	0.149	0.149	23,390,240	No	99,292
EX-02.16-04P	0.346	0.345	0.149	0.149	28,067,710	No	99,292
EX-02.16-03E	0.455	0.454	0.149	0.149	29,086,284	No	99,292
EX-02.16-01R (D/S)	0.000	0.513	0.149	0.149	38,975,992	No	141,668
EX-02.19-01P	0.375	0.375	0.232	0.232	41,397,136	No	141,668
EX-02.16-01R	0.000	0.603	0.232	0.232	50,130,776	No	141,668
Sorted By: Remaining Life							
====>Grouped by Line: EX-02.17 HDR 35 to FWH 35B							
EX-02.17-02V	0.312	-0.269	0.160	0.160	-153,839	No	220,317
EX-02.17-05E	0.968	0.110	0.149	0.149	-12,940	Yes	181,524
EX-02.17-06N	0.293	0.442	0.149	0.149	103,229	Yes	220,317
EX-02.17-04P	0.378	0.393	0.149	0.149	22,489,822	No	99,292
EX-02.17-03E	0.375	0.466	0.149	0.149	30,478,688	No	99,292
EX-02.17-01P	0.375	0.374	0.149	0.149	55,970,908	No	141,668
Sorted By: Remaining Life							
====>Grouped by Line: EX-02.18 HDR 35 to FWH 35C							
EX-02.18-02V	0.312	-0.269	0.160	0.160	-153,839	No	220,317
EX-02.18-06N	0.293	0.433	0.149	0.149	100,098	No	220,317
EX-02.18-05E	0.312	0.675	0.149	0.149	186,681	Yes	181,524
EX-02.18-04P	0.375	0.383	0.149	0.149	24,036,804	No	141,668
EX-02.18-03E	0.375	0.558	0.149	0.149	39,313,304	No	141,668
EX-02.18-01P	0.375	0.374	0.149	0.149	55,970,908	No	141,668
Sorted By: Remaining Life							

Note:
 [1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: ES: HDR TO 36 HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.686

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			
====>Grouped by Line: EX-01.5A HP EX HDR to FWH 36A						
EX-01.5A-11V	0.330	0.100	0.202	0.202	No	220,317
EX-01.5A-10P	0.330	0.330	0.195	0.195	No	128,112
EX-01.5A-12P	0.387	0.387	0.195	0.195	No	128,112
EX-01.5A-13E	0.426	0.426	0.195	0.195	No	128,112
EX-01.5A-17P	0.335	0.335	0.195	0.195	No	128,112
EX-01.5A-14E	0.470	0.470	0.195	0.195	No	128,112
EX-01.5A-15N	0.309	1.170	0.195	0.195	No	128,112
EX-01.5A-01R	0.000	0.438	0.275	0.275	No	128,112
EX-01.5A-01R (D/S)	0.293	0.293	0.195	0.195	No	128,112
EX-01.5A-02P	0.374	0.374	0.195	0.195	No	128,112
EX-01.7-01P	0.438	0.438	0.275	0.275	No	128,112
EX-01.5A-03E	0.000	0.375	0.195	0.195	No	128,112
EX-01.5A-04P	0.411	0.411	0.195	0.195	No	128,112
EX-01.5A-05E	0.419	0.419	0.195	0.195	No	128,112
EX-01.5A-06P	0.000	0.375	0.195	0.195	No	128,112
EX-01.5A-16L	0.000	0.375	0.195	0.195	No	128,112
EX-01.5A-16L (D/S)	0.000	0.375	0.195	0.195	No	128,112
EX-01.5A-07L	0.000	0.375	0.195	0.195	No	128,112
EX-01.5A-07L (D/S)	0.000	0.375	0.195	0.195	No	128,112
EX-01.5A-08P	0.000	0.375	0.195	0.195	No	128,112
EX-01.5A-09E	0.000	0.375	0.195	0.195	No	128,112
====>Grouped by Line: EX-01.5B HP EX HDR to FWH 36B						
EX-01.5B-09V	0.330	0.100	0.202	0.202	No	220,317
EX-01.5B-01P	0.363	0.363	0.195	0.195	No	128,112
EX-01.5B-02E	0.477	0.477	0.195	0.195	No	128,112
EX-01.5B-03P	0.330	0.330	0.195	0.195	No	128,112
EX-01.5B-14L	0.330	0.330	0.195	0.195	No	128,112
EX-01.5B-14L (D/S)	0.000	0.330	0.195	0.195	No	128,112
EX-01.5B-04L	0.330	0.330	0.195	0.195	No	128,112

Component Name	Init.	Pred.[1]	Thoop	Thickness (in)	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: EX-01.5B HP EX HDR to FWH 36B								
EX-01.5B-04L (D/S)	0.000	0.330	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5B-05P	0.330	0.330	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5B-06E	0.330	0.330	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5B-07E	0.330	0.330	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5B-08P	0.330	0.330	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5B-10P	0.374	0.374	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5B-11E	0.452	0.452	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5B-15P	0.386	0.386	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5B-12E	0.543	0.543	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5B-13N	0.309	0.377	0.195	0.195	0.195	100,000,000	No	128,112
====> Grouped by Line: EX-01.5C HP EX HDR to FWH 36C								
EX-01.5C-09V	0.330	0.100	0.202	0.202	0.202	-140,420	No	220,317
EX-01.5C-01P	0.450	0.450	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5C-02E	0.423	0.423	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5C-03P	0.377	0.377	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5C-14L	0.373	0.373	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5C-14L (D/S)	0.373	0.373	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5C-04L	0.364	0.364	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5C-04L (D/S)	0.000	0.330	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5C-05P	0.373	0.373	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5C-06E	0.431	0.431	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5C-07E	0.416	0.416	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5C-08P	0.356	0.356	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5C-10P	0.358	0.358	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5C-11E	0.448	0.448	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5C-15P	0.337	0.337	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5C-12E	0.485	0.485	0.195	0.195	0.195	100,000,000	No	128,112
EX-01.5C-13N	0.309	1.166	0.195	0.195	0.195	100,000,000	No	128,112

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Run Name: ES: HTR 36 HEADER
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.751

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			
====>Grouped by Line: EX-01.1 HP EXT to FWH 36 HDR						
EX-01.1-01N	0.330	0.335	0.189	161,434	No	220,317
EX-01.6-01P	0.378	0.378	0.275	100,000,000	No	128,112
EX-01.1-08R (D/S)	0.000	0.438	0.275	100,000,000	No	128,112
EX-01.1-08R	0.000	0.330	0.195	100,000,000	No	128,112
EX-01.1-07P	0.330	0.330	0.195	100,000,000	No	128,112
EX-01.1-04E	0.450	0.450	0.195	100,000,000	No	128,112
EX-01.1-03P	0.352	0.352	0.195	100,000,000	No	128,112
EX-01.1-02E	0.446	0.446	0.195	100,000,000	No	128,112
EX-01.1-05P	0.368	0.368	0.195	100,000,000	No	128,112
EX-01.1-06E	0.330	0.330	0.195	100,000,000	No	128,112
Sorted By: Remaining Life						
====>Grouped by Line: EX-01.2 HP EXT to FWH 36 HDR						
EX-01.2-01N	0.330	-0.099	0.189	-179,595	No	220,317
EX-01.2-02E	0.000	0.330	0.195	100,000,000	No	128,112
EX-01.2-06E	0.330	0.330	0.195	100,000,000	No	128,112
EX-01.2-05P	0.330	0.330	0.195	100,000,000	No	128,112
EX-01.2-07P	0.330	0.330	0.195	100,000,000	No	128,112
EX-01.2-08E	0.330	0.330	0.195	100,000,000	No	128,112
EX-01.2-09P	0.357	0.357	0.195	100,000,000	No	128,112
EX-01.2-04E	0.330	0.330	0.195	100,000,000	No	128,112
EX-01.2-03P	0.385	0.385	0.195	100,000,000	No	128,112
Sorted By: Remaining Life						
====>Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER						
EX-01.3-07V	0.438	0.110	0.286	-158,958	No	220,317
EX-01.3-08V	0.438	0.110	0.286	-158,958	No	220,317
EX-01.3-06V	0.438	0.137	0.286	-150,643	No	220,317
EX-01.2-10L	0.482	0.543	0.275	100,000,000	No	128,112
EX-01.2-10L (BR/SE)	0.391	0.422	0.195	100,000,000	No	128,112
EX-01.2-10L (D/S)	0.482	0.543	0.275	100,000,000	No	128,112
EX-01.3-01P	0.456	0.456	0.275	100,000,000	No	128,112

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
Sorted By: Remaining Life							
====>Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER							
EX-01.3-02E	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-03P	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-04T	0.468	0.468	0.275	0.275	100,000,000	No	128,112
EX-01.3-04T (D/S)	0.468	0.468	0.275	0.275	100,000,000	No	128,112
EX-01.3-05P	0.464	0.464	0.275	0.275	100,000,000	No	128,112
EX-01.3-09E	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-10P	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-11T	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-11T (D/S)	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-12P	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-13E	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-14P	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-15E	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-16P	0.460	0.460	0.275	0.275	100,000,000	No	128,112
EX-01.3-17T	0.501	0.501	0.275	0.275	100,000,000	No	128,112
EX-01.3-17T (D/S)	0.501	0.501	0.275	0.275	100,000,000	No	128,112
EX-01.3-19E	0.000	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-20P	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-21E	0.438	0.438	0.275	0.275	100,000,000	No	128,112
EX-01.3-22P	0.528	0.528	0.275	0.275	100,000,000	No	128,112
EX-01.3-23T (D/S)	0.539	0.539	0.275	0.275	100,000,000	No	128,112
EX-01.3-23T (BR/SE)	0.566	0.566	0.195	0.195	100,000,000	No	128,112
EX-01.3-23T	0.539	0.539	0.275	0.275	240,061,088	No	128,112
Sorted By: Remaining Life							
====>Grouped by Line: EX-01.4 HP EXT FWH 36 HEADER							
EX-01.4-01P	0.528	0.528	0.275	0.275	100,000,000	No	128,112
EX-01.4-02T	0.439	0.551	0.275	0.275	100,000,000	No	128,112
EX-01.4-02T (D/S)	0.439	0.551	0.275	0.275	100,000,000	No	128,112
EX-01.4-02T (BR/SE)	0.363	0.421	0.195	0.195	100,000,000	No	128,112

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: ES: LP TO 31 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.811

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: EX-06.1A LP EXT 19 to FWH 31A							
EX-06.1A-01N	0.400	0.242	0.043	0.043	No	320,539	220,317
EX-06.1A-02E	0.313	0.219	0.043	0.043	No	481,199	220,317
EX-06.1A-03E	0.313	0.219	0.043	0.043	No	481,199	220,317
EX-06.1A-04N	0.375	0.271	0.043	0.043	No	555,528	220,317
====>Grouped by Line: EX-06.1B LP EXT 19 to FWH 31B							
EX-06.1B-01N	0.400	0.242	0.043	0.043	No	320,539	220,317
EX-06.1B-02E	0.313	0.219	0.043	0.043	No	481,199	220,317
EX-06.1B-03E	0.313	0.219	0.043	0.043	No	481,199	220,317
EX-06.1B-04N	0.375	0.271	0.043	0.043	No	555,528	220,317
====>Grouped by Line: EX-06.1C LP EXT 19 to FWH 31C							
EX-06.1C-01N	0.400	0.242	0.043	0.043	No	320,539	220,317
EX-06.1C-02E	0.313	0.219	0.043	0.043	No	481,199	220,317
EX-06.1C-03E	0.313	0.219	0.043	0.043	No	481,199	220,317
EX-06.1C-04N	0.375	0.271	0.043	0.043	No	555,528	220,317
====>Grouped by Line: EX-06.2A LP EXT 17 to FWH 31A							
EX-06.2A-01N	0.400	0.242	0.043	0.043	No	320,539	220,317
EX-06.2A-02E	0.313	0.219	0.043	0.043	No	481,199	220,317
EX-06.2A-03E	0.313	0.219	0.043	0.043	No	481,199	220,317
EX-06.2A-04N	0.375	0.315	0.043	0.043	Yes	662,948	220,317
====>Grouped by Line: EX-06.2B LP EXT 17 to FWH 31B							
EX-06.2B-01N	0.400	0.242	0.043	0.043	No	320,539	220,317
EX-06.2B-02E	0.313	0.219	0.043	0.043	No	481,199	220,317
EX-06.2B-03E	0.313	0.219	0.043	0.043	No	481,199	220,317
EX-06.2B-04N	0.375	0.271	0.043	0.043	No	555,528	220,317

Sorted By: Remaining Life

Sorted By: Remaining Life

Sorted By: Remaining Life

Sorted By: Remaining Life

Sorted By: Remaining Life

Sorted By: Remaining Life

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
Sorted By: Remaining Life							
====> Grouped by Line: EX-06.2C LP EXT 17 to FWH 31C							
EX-06.2C-01N	0.400	0.242	0.043	0.043	320,539	No	220,317
EX-06.2C-03E	0.313	0.219	0.043	0.043	481,199	No	220,317
EX-06.2C-02E	0.313	0.219	0.043	0.043	481,199	No	220,317
EX-06.2C-04N	0.375	0.271	0.043	0.043	555,528	No	220,317
Sorted By: Remaining Life							
====> Grouped by Line: EX-06.3A LP EXT 20 to FWH 31A							
EX-06.3A-01N	0.400	0.242	0.043	0.043	320,539	No	220,317
EX-06.3A-03P	0.313	0.216	0.058	0.058	413,021	No	220,317
EX-06.3A-02E	0.313	0.219	0.043	0.043	481,199	No	220,317
EX-06.3A-04E	0.313	0.233	0.043	0.043	604,515	No	220,317
EX-06.3A-05N	0.375	0.309	0.043	0.043	648,300	Yes	220,317
Sorted By: Remaining Life							
====> Grouped by Line: EX-06.3B LP EXT 20 to FWH 31B							
EX-06.3B-01N	0.400	0.242	0.043	0.043	320,539	No	220,317
EX-06.3B-03P	0.313	0.216	0.058	0.058	413,021	No	220,317
EX-06.3B-02E	0.313	0.219	0.043	0.043	481,199	No	220,317
EX-06.3B-04E	0.313	0.219	0.043	0.043	481,199	No	220,317
EX-06.3B-05N	0.375	0.271	0.043	0.043	555,528	No	220,317
Sorted By: Remaining Life							
====> Grouped by Line: EX-06.3C LP EXT 20 to FWH 31C							
EX-06.3C-01N	0.400	0.242	0.043	0.043	320,539	No	220,317
EX-06.3C-03P	0.313	0.216	0.058	0.058	413,021	No	220,317
EX-06.3C-02E	0.313	0.219	0.043	0.043	481,199	No	220,317
EX-06.3C-04E	0.313	0.219	0.043	0.043	481,199	No	220,317
EX-06.3C-05N	0.375	0.271	0.043	0.043	555,528	No	220,317
Sorted By: Remaining Life							
====> Grouped by Line: EX-06.4A LP EXT 18 to FWH 31A							
EX-06.4A-01N	0.400	0.242	0.043	0.043	320,539	No	220,317
EX-06.4A-04E	0.313	0.219	0.043	0.043	481,199	No	220,317
EX-06.4A-02E	0.313	0.228	0.043	0.043	555,367	No	220,317
EX-06.4A-05N	0.375	0.271	0.043	0.043	555,528	No	220,317
EX-06.4A-03P	0.313	0.284	0.058	0.058	2,329,368	No	220,317
Sorted By: Remaining Life							
====> Grouped by Line: EX-06.4B LP EXT 18 to FWH 31B							
EX-06.4B-01N	0.400	0.242	0.043	0.043	320,539	No	220,317
EX-06.4B-04E	0.313	0.219	0.043	0.043	481,199	No	220,317
EX-06.4B-02E	0.313	0.228	0.043	0.043	555,367	No	220,317
EX-06.4B-05N	0.375	0.271	0.043	0.043	555,528	No	220,317
EX-06.4B-03P	0.313	0.284	0.058	0.058	2,329,368	No	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: EX-06.4C LP EXT 18 to FWH 31C								
EX-06.4C-01N	0.400	0.242	0.043	0.043	0.043	320,539	No	220,317
EX-06.4C-04E	0.313	0.219	0.043	0.043	0.043	481,199	No	220,317
EX-06.4C-02E	0.313	0.228	0.043	0.043	0.043	555,367	No	220,317
EX-06.4C-05N	0.375	0.271	0.043	0.043	0.043	555,528	No	220,317
EX-06.4C-03P	0.313	0.284	0.058	0.058	0.058	2,329,368	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Run Name: ES: LP TO 32 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.318

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Ihoop				
====>Grouped by Line: EX-05.1A LP EXT 16 to FWH 32A							
EX-05.1A-01N	0.400	0.206	0.037	0.037	No	362,250	220,317
EX-05.1A-03E	0.250	0.139	0.037	0.037	No	377,855	220,317
EX-05.1A-04N	0.375	0.245	0.037	0.037	No	665,066	220,317
EX-05.1A-02P	0.250	0.215	0.037	0.037	No	1,602,787	220,317
====>Grouped by Line: EX-05.1B LP EXT 16 to FWH 32B							
EX-05.1B-01N	0.400	0.334	0.037	0.037	No	638,748	220,317
EX-05.1B-03E	0.250	0.251	0.037	0.037	Yes	792,267	220,317
EX-05.1B-04N	0.375	0.324	0.037	0.037	Yes	917,709	220,317
EX-05.1B-02P	0.250	0.284	0.037	0.037	No	2,221,553	220,317
====>Grouped by Line: EX-05.1C LP EXT 16 to FWH 32C							
EX-05.1C-01N	0.400	0.206	0.037	0.037	No	362,250	220,317
EX-05.1C-03E	0.250	0.139	0.037	0.037	No	377,855	220,317
EX-05.1C-04N	0.375	0.273	0.037	0.037	Yes	755,584	220,317
EX-05.1C-02P	0.250	0.215	0.037	0.037	No	1,602,787	220,317
====>Grouped by Line: EX-05.2A LP EXT 15 to FWH 32A							
EX-05.2A-02E	0.250	0.128	0.037	0.037	No	305,468	220,317
EX-05.2A-01N	0.400	0.206	0.037	0.037	No	362,250	220,317
EX-05.2A-03E	0.250	0.139	0.037	0.037	No	377,855	220,317
EX-05.2A-05E	0.250	0.145	0.037	0.037	No	425,705	220,317
EX-05.2A-04P	0.250	0.150	0.037	0.037	No	468,980	220,317
EX-05.2A-06N	0.375	0.245	0.037	0.037	No	665,066	220,317
====>Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B							
EX-05.2B-01N	0.400	0.278	0.037	0.037	Yes	518,663	220,317
EX-05.2B-06N	0.375	0.256	0.037	0.037	Yes	699,381	220,317
EX-05.2B-02E	0.250	0.256	0.037	0.037	Yes	736,941	220,317
EX-05.2B-03E	0.250	0.241	0.037	0.037	Yes	755,266	220,317

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B							
EX-05.2B-05E	0.250	0.247	0.037	0.037	824,757	Yes	220,317
EX-05.2B-04P	0.250	0.244	0.037	0.037	854,268	Yes	220,317
====> Grouped by Line: EX-05.2C LP EXT 15 to FWH 32C							
EX-05.2C-02E	0.250	0.128	0.037	0.037	305,468	No	220,317
EX-05.2C-01N	0.400	0.206	0.037	0.037	362,250	No	220,317
EX-05.2C-03E	0.250	0.139	0.037	0.037	377,855	No	220,317
EX-05.2C-05E	0.250	0.145	0.037	0.037	425,705	No	220,317
EX-05.2C-04P	0.250	0.150	0.037	0.037	468,980	No	220,317
EX-05.2C-06N	0.375	0.245	0.037	0.037	665,066	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: ES:LP TO 33 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.383

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Ihoop				
====>Grouped by Line: EX-04.1 LPEX14 to FWH33A HDR							
EX-04.1-06T (BR/SE)	0.250	0.120	0.045	0.045	No	104,402	220,317
EX-04.1-05E	0.250	0.121	0.033	0.033	No	123,247	220,317
EX-04.1-01N	0.400	0.207	0.033	0.033	No	164,815	220,317
EX-04.1-02E	0.250	0.141	0.033	0.033	No	179,496	220,317
EX-04.1-03E	0.250	0.141	0.033	0.033	No	179,496	220,317
EX-04.1-04P	0.250	0.152	0.033	0.033	No	221,061	220,317
EX-04.1-06T (D/S)	0.000	0.193	0.063	0.063	No	227,213	220,317
EX-04.1-08X	0.000	0.174	0.033	0.033	No	439,015	220,317
EX-04.1-07P	0.250	0.195	0.033	0.033	No	689,254	220,317
EX-04.3-01P	0.313	0.270	0.063	0.063	No	995,908	220,317
Sorted By: Remaining Life							
====>Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR							
EX-04.9-09T (D/S)	0.000	0.068	0.063	0.063	No	4,487	220,317
EX-04.9-09T (BR/SE)	0.250	0.108	0.045	0.045	No	81,313	220,317
EX-04.11-06V	0.313	0.134	0.050	0.050	No	89,496	220,317
EX-04.11-19T	0.313	0.214	0.063	0.063	No	100,750	220,317
EX-04.9-09T	0.313	0.156	0.063	0.063	No	125,486	220,317
EX-04.11-13E	0.313	0.165	0.047	0.047	No	153,113	220,317
EX-04.11-15E	0.313	0.165	0.047	0.047	No	153,113	220,317
EX-04.11-04V	0.313	0.179	0.050	0.050	No	181,087	220,317
EX-04.11-09E	0.313	0.188	0.047	0.047	No	216,539	220,317
EX-04.11-11E	0.313	0.188	0.047	0.047	No	216,539	220,317
EX-04.11-19T (D/S)	0.000	0.254	0.063	0.063	No	218,105	220,317
EX-04.11-19T (BR/SE)	0.259	0.163	0.045	0.045	Yes	234,646	220,317
EX-04.11-12P	0.313	0.201	0.063	0.063	No	236,100	220,317
EX-04.11-02T	0.313	0.201	0.063	0.063	No	236,879	220,317
EX-04.11-17T	0.313	0.201	0.063	0.063	No	236,879	220,317
EX-04.11-03P	0.313	0.202	0.063	0.063	No	241,951	220,317
EX-04.11-18P	0.313	0.202	0.063	0.063	No	241,951	220,317
EX-04.11-02T (D/S)	0.000	0.214	0.063	0.063	No	294,134	220,317
Sorted By: Remaining Life							

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR								
EX-04.11-17T (D/S)	0.000	0.214	0.063	0.063	0.063	294,134	No	220,317
EX-04.11-16P	0.313	0.219	0.063	0.063	0.063	321,373	No	220,317
EX-04.11-08E	0.313	0.370	0.047	0.047	0.047	417,914	Yes	220,317
EX-04.11-07P	0.313	0.247	0.063	0.063	0.063	536,484	No	220,317
EX-04.11-05P	0.313	0.259	0.063	0.063	0.063	689,747	No	220,317
EX-04.11-10P	0.313	0.249	0.063	0.063	0.063	690,304	No	220,317
EX-04.11-14P	0.313	0.259	0.063	0.063	0.063	875,592	No	220,317
EX-04.11-01P	0.313	0.268	0.063	0.063	0.063	877,462	No	220,317
EX-04.11-20P	0.313	0.328	0.063	0.063	0.063	1,545,924	No	220,317
Sorted By: Remaining Life								
====> Grouped by Line: EX-04.13 LP EXT 32 to FWH 33B								
EX-04.13-06N	0.250	0.120	0.033	0.033	0.033	120,336	No	220,317
EX-04.13-03E	0.250	0.121	0.033	0.033	0.033	123,247	No	220,317
EX-04.13-05E	0.250	0.121	0.033	0.033	0.033	123,247	No	220,317
EX-04.13-01R (D/S)	0.000	0.165	0.033	0.033	0.033	219,845	No	220,317
EX-04.13-02P	0.255	0.173	0.033	0.033	0.033	258,856	Yes	220,317
EX-04.13-07T (D/S)	0.000	0.164	0.033	0.033	0.033	275,853	No	220,317
EX-04.13-07T	0.250	0.195	0.033	0.033	0.033	299,857	No	220,317
EX-04.13-04P	0.250	0.169	0.033	0.033	0.033	307,373	No	220,317
EX-04.13-01R	0.000	0.356	0.047	0.047	0.047	875,612	No	220,317
EX-04.12-01P	0.313	0.274	0.063	0.063	0.063	1,150,917	No	220,317
Sorted By: Remaining Life								
====> Grouped by Line: EX-04.14 LP EXT 32 to FWH 33B								
EX-04.14-03N	0.250	0.120	0.033	0.033	0.033	120,336	No	220,317
EX-04.14-02E	0.250	0.358	0.033	0.033	0.033	456,925	Yes	220,317
EX-04.14-01P	0.276	0.204	0.033	0.033	0.033	602,830	Yes	220,317
Sorted By: Remaining Life								
====> Grouped by Line: EX-04.15 LPEX14 to FWH33C HDR								
EX-04.15-06T (BR/SE)	0.250	0.120	0.045	0.045	0.045	104,402	No	220,317
EX-04.15-05E	0.250	0.130	0.033	0.033	0.033	146,364	No	220,317
EX-04.15-01N	0.400	0.207	0.033	0.033	0.033	164,815	No	220,317
EX-04.15-02E	0.250	0.141	0.033	0.033	0.033	179,496	No	220,317
EX-04.15-03E	0.250	0.141	0.033	0.033	0.033	179,496	No	220,317
EX-04.15-04P	0.250	0.152	0.033	0.033	0.033	221,061	No	220,317
EX-04.15-06T (D/S)	0.000	0.193	0.063	0.063	0.063	227,213	No	220,317
EX-04.15-07P	0.250	0.169	0.033	0.033	0.033	301,533	No	220,317
EX-04.15-08X	0.000	0.174	0.033	0.033	0.033	439,015	No	220,317
EX-04.17-01P	0.313	0.270	0.063	0.063	0.063	995,908	No	220,317
Sorted By: Remaining Life								

Component Name	Init.	Thicknss (in)	Hoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: EX-04.16 LPEX13 to FWH33C HDR							
EX-04.16-07E	0.250	0.130	0.033	0.033	146,364	No	220,317
EX-04.16-01N	0.400	0.207	0.033	0.033	164,815	No	220,317
EX-04.16-02E	0.250	0.141	0.033	0.033	179,496	No	220,317
EX-04.16-03E	0.250	0.141	0.033	0.033	179,496	No	220,317
EX-04.16-05E	0.250	0.141	0.033	0.033	179,496	No	220,317
EX-04.16-04P	0.250	0.152	0.033	0.033	221,061	No	220,317
EX-04.16-06P	0.250	0.152	0.033	0.033	221,061	No	220,317
EX-04.16-10X	0.000	0.174	0.033	0.033	439,015	No	220,317
EX-04.16-08P	0.250	0.195	0.033	0.033	689,254	No	220,317
Sorted By: Remaining Life							
====> Grouped by Line: EX-04.18 LPEX FWH 33C IN HDR							
EX-04.18-09T (D/S)	0.000	0.068	0.063	0.063	4,487	No	220,317
EX-04.18-09T (BR/SE)	0.250	0.108	0.045	0.045	81,313	No	220,317
EX-04.18-06V	0.313	0.134	0.050	0.050	89,496	No	220,317
EX-04.20-16T	0.384	0.200	0.063	0.063	92,185	No	220,317
EX-04.16-09T	0.313	0.156	0.063	0.063	125,486	No	220,317
EX-04.20-07P	0.313	0.170	0.063	0.063	142,721	No	220,317
EX-04.20-02E	0.313	0.165	0.047	0.047	153,113	No	220,317
EX-04.20-04E	0.313	0.165	0.047	0.047	153,113	No	220,317
EX-04.20-06E	0.313	0.165	0.047	0.047	153,113	No	220,317
EX-04.20-08E	0.313	0.165	0.047	0.047	153,113	No	220,317
EX-04.20-10E	0.313	0.165	0.047	0.047	153,113	No	220,317
EX-04.20-12E	0.313	0.165	0.047	0.047	153,113	No	220,317
EX-04.18-04V	0.313	0.179	0.050	0.050	181,087	No	220,317
EX-04.19-01R (D/S)	0.000	0.150	0.040	0.040	208,536	No	220,317
EX-04.20-16T (D/S)	0.384	0.256	0.063	0.063	214,683	No	220,317
EX-04.20-16T (BR/SE)	0.000	0.163	0.045	0.045	234,920	No	220,317
EX-04.18-02T	0.313	0.201	0.063	0.063	236,879	No	220,317
EX-04.20-14T	0.313	0.201	0.063	0.063	236,879	No	220,317
EX-04.18-03P	0.313	0.202	0.063	0.063	241,951	No	220,317
EX-04.20-15P	0.313	0.202	0.063	0.063	241,951	No	220,317
EX-04.19-01R	0.000	0.198	0.047	0.047	251,487	No	220,317
EX-04.18-02T (D/S)	0.000	0.214	0.063	0.063	294,134	No	220,317
EX-04.20-14T (D/S)	0.000	0.214	0.063	0.063	294,134	No	220,317
EX-04.20-05P	0.313	0.219	0.063	0.063	321,373	No	220,317
EX-04.20-09P	0.313	0.219	0.063	0.063	321,373	No	220,317
EX-04.20-13P	0.313	0.219	0.063	0.063	321,373	No	220,317
EX-04.19-03R (D/S)	0.000	0.214	0.047	0.047	325,196	No	220,317
EX-04.19-03R	0.000	0.176	0.040	0.040	348,472	No	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: EX-04.18 LPEX FWH 33C IN HDR								
EX-04.19-02V	0.313	0.222	0.043	0.043	0.043	380,272	No	220,317
EX-04.20-01P	0.313	0.238	0.063	0.063	0.063	449,214	No	220,317
EX-04.18-05P	0.313	0.259	0.063	0.063	0.063	689,747	No	220,317
EX-04.20-03P	0.313	0.259	0.063	0.063	0.063	875,592	No	220,317
EX-04.20-11P	0.313	0.259	0.063	0.063	0.063	875,592	No	220,317
EX-04.18-01P	0.313	0.268	0.063	0.063	0.063	877,462	No	220,317
====> Grouped by Line: EX-04.2 LPEX13 to FWH33A HDR								
EX-04.2-07E	0.250	0.130	0.033	0.033	0.033	146,364	No	220,317
EX-04.2-01N	0.400	0.207	0.033	0.033	0.033	164,815	No	220,317
EX-04.2-02E	0.250	0.141	0.033	0.033	0.033	179,496	No	220,317
EX-04.2-03E	0.250	0.141	0.033	0.033	0.033	179,496	No	220,317
EX-04.2-05E	0.250	0.141	0.033	0.033	0.033	179,496	No	220,317
EX-04.2-04P	0.250	0.152	0.033	0.033	0.033	221,061	No	220,317
EX-04.2-06P	0.250	0.152	0.033	0.033	0.033	221,061	No	220,317
EX-04.2-10X	0.000	0.174	0.033	0.033	0.033	439,015	No	220,317
EX-04.2-08P	0.250	0.195	0.033	0.033	0.033	689,254	No	220,317
====> Grouped by Line: EX-04.21 LP EXT 31 to FWH 33C								
EX-04.21-06N	0.250	0.120	0.033	0.033	0.033	120,336	No	220,317
EX-04.21-02P	0.267	0.138	0.033	0.033	0.033	194,398	Yes	220,317
EX-04.21-07T	0.250	0.160	0.033	0.033	0.033	235,935	Yes	220,317
EX-04.21-01R (D/S)	0.000	0.178	0.033	0.033	0.033	242,164	No	220,317
EX-04.21-03E	0.250	0.240	0.033	0.033	0.033	291,350	Yes	220,317
EX-04.21-04P	0.250	0.169	0.033	0.033	0.033	307,373	Yes	220,317
EX-04.21-07T (D/S)	0.000	0.182	0.033	0.033	0.033	313,085	Yes	220,317
EX-04.21-05E	0.250	0.345	0.033	0.033	0.033	438,634	Yes	220,317
EX-04.21-01R	0.000	0.330	0.047	0.047	0.047	802,771	Yes	220,317
EX-04.20-17P	0.313	0.274	0.063	0.063	0.063	1,150,917	No	220,317
====> Grouped by Line: EX-04.22 LP EXT 31 to FWH 33C								
EX-04.22-02E	0.250	0.121	0.033	0.033	0.033	123,247	No	220,317
EX-04.22-03N	0.250	0.219	0.033	0.033	0.033	258,515	No	220,317
EX-04.22-01P	0.271	0.219	0.033	0.033	0.033	657,235	Yes	220,317
====> Grouped by Line: EX-04.4 LPEX FWH 33A IN HDR								
EX-04.2-09T (D/S)	0.000	0.068	0.063	0.063	0.063	4,487	No	220,317
EX-04.4-06V	0.313	0.134	0.050	0.050	0.050	89,496	No	220,317
EX-04.4-22T	0.352	0.215	0.063	0.063	0.063	101,544	No	220,317

Component Name	Init.	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop			
Sorted By: Remaining Life						
====> Grouped by Line: EX-04.4 LPEX FWH 33A IN HDR						
EX-04.4-13P	0.313	0.170	0.063	0.063	143,397	No
EX-04.4-10E	0.313	0.165	0.047	0.047	153,113	No
EX-04.4-12E	0.313	0.165	0.047	0.047	153,113	No
EX-04.4-14E	0.313	0.165	0.047	0.047	153,113	No
EX-04.4-16E	0.313	0.165	0.047	0.047	153,113	No
EX-04.4-18E	0.313	0.165	0.047	0.047	153,113	No
EX-04.4-04V	0.313	0.179	0.050	0.050	181,087	No
EX-04.4-22T (D/S)	0.352	0.247	0.063	0.063	207,310	No
EX-04.4-02T	0.313	0.201	0.063	0.063	236,879	No
EX-04.4-20T	0.313	0.201	0.063	0.063	236,879	No
EX-04.4-03P	0.313	0.203	0.063	0.063	242,826	No
EX-04.4-21P	0.313	0.203	0.063	0.063	242,826	No
EX-04.4-22T (BR/SE)	0.259	0.177	0.045	0.045	263,429	No
EX-04.2-09T (BR/SE)	0.250	0.271	0.045	0.045	290,350	Yes
EX-04.4-02T (D/S)	0.000	0.214	0.063	0.063	294,134	No
EX-04.4-20T (D/S)	0.000	0.214	0.063	0.063	294,134	No
EX-04.4-11P	0.313	0.220	0.063	0.063	322,408	No
EX-04.4-15P	0.313	0.220	0.063	0.063	322,408	No
EX-04.4-19P	0.313	0.220	0.063	0.063	322,408	No
EX-04.2-09T	0.313	0.329	0.063	0.063	356,378	No
EX-04.4-08E	0.313	0.394	0.047	0.047	448,953	Yes
EX-04.4-07P	0.313	0.247	0.063	0.063	537,950	No
EX-04.4-05P	0.313	0.260	0.063	0.063	691,503	No
EX-04.4-01P	0.313	0.268	0.063	0.063	877,462	No
EX-04.4-09P	0.313	0.260	0.063	0.063	877,766	No
EX-04.4-17P	0.313	0.260	0.063	0.063	877,766	No
EX-04.4-23P	0.313	0.280	0.063	0.063	1,267,791	No
Sorted By: Remaining Life						
====> Grouped by Line: EX-04.6 LP EXT to FWH 33A						
EX-04.6-02P	0.264	0.177	0.033	0.033	266,826	Yes
EX-04.6-07T	0.262	0.182	0.033	0.033	276,868	Yes
EX-04.6-01R (D/S)	0.000	0.212	0.033	0.033	299,114	No
EX-04.6-03E	0.461	0.240	0.033	0.033	300,427	Yes
EX-04.6-07T (D/S)	0.262	0.197	0.033	0.033	344,818	No
EX-04.6-05E	0.250	0.293	0.033	0.033	364,773	Yes
EX-04.6-04P	0.279	0.201	0.033	0.033	380,242	Yes
EX-04.6-06N	0.250	0.413	0.033	0.033	528,532	Yes
EX-04.6-01R	0.000	0.314	0.047	0.047	757,463	Yes
EX-04.5-01P	0.313	0.275	0.063	0.063	1,153,390	No

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: EX-04.7 LP EXT to FWH 33A								
EX-04.7-03N	0.250	0.120	0.033	0.033	0.033	120,336	No	220,317
EX-04.7-02E	0.250	0.121	0.033	0.033	0.033	123,247	No	220,317
EX-04.7-01P	0.264	0.224	0.033	0.033	0.033	672,918	Yes	220,317
====> Grouped by Line: EX-04.8 LPEX14 to FWH33B HDR								
EX-04.8-06T (BR/SE)	0.250	0.120	0.045	0.045	0.045	104,402	No	220,317
EX-04.8-05E	0.250	0.121	0.033	0.033	0.033	123,247	No	220,317
EX-04.8-01N	0.400	0.207	0.033	0.033	0.033	164,815	No	220,317
EX-04.8-02E	0.250	0.141	0.033	0.033	0.033	179,496	No	220,317
EX-04.8-03E	0.250	0.141	0.033	0.033	0.033	179,496	No	220,317
EX-04.8-04P	0.250	0.152	0.033	0.033	0.033	221,061	No	220,317
EX-04.8-06T (D/S)	0.000	0.193	0.063	0.063	0.063	227,213	No	220,317
EX-04.8-08X	0.000	0.174	0.033	0.033	0.033	439,015	No	220,317
EX-04.8-07P	0.250	0.195	0.033	0.033	0.033	689,254	No	220,317
EX-04.10-01P	0.313	0.270	0.063	0.063	0.063	995,908	No	220,317
====> Grouped by Line: EX-04.9 LPEX13 to FWH33B HDR								
EX-04.9-07E	0.250	0.130	0.033	0.033	0.033	146,364	No	220,317
EX-04.9-01N	0.400	0.207	0.033	0.033	0.033	164,815	No	220,317
EX-04.9-02E	0.250	0.141	0.033	0.033	0.033	179,496	No	220,317
EX-04.9-03E	0.250	0.141	0.033	0.033	0.033	179,496	No	220,317
EX-04.9-05E	0.250	0.141	0.033	0.033	0.033	179,496	No	220,317
EX-04.9-04P	0.250	0.152	0.033	0.033	0.033	221,061	No	220,317
EX-04.9-06P	0.250	0.152	0.033	0.033	0.033	221,061	No	220,317
EX-04.9-10X	0.000	0.174	0.033	0.033	0.033	439,015	No	220,317
EX-04.9-08P	0.250	0.195	0.033	0.033	0.033	689,254	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Run Name: ES: PRESEP TO 35 HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.229

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: EX-02.1 PSEP 2A 10" to 35 HDR							
EX-02.5-01P	0.500	0.500	0.152	0.152	100,000,000	No	66,848
EX-02.1-01N	0.365	0.365	0.072	0.072	117,014,920	No	171,511
EX-02.1-02P	0.378	0.378	0.091	0.091	159,064,784	No	66,848
EX-02.1-06T (BR/SE)	0.365	0.365	0.091	0.091	164,317,024	No	66,848
EX-02.1-05O	0.365	0.365	0.091	0.091	164,388,624	No	66,848
EX-02.1-04P	0.365	0.365	0.091	0.091	171,191,616	No	66,848
EX-02.1-06T (D/S)	0.500	0.500	0.152	0.152	206,013,568	No	66,848
EX-02.1-03E	0.425	0.425	0.091	0.091	215,357,760	No	66,848
====>Grouped by Line: EX-02.11 PSEP1B 14" to 35 HDR							
EX-02.11-07P	0.000	0.375	0.118	0.118	100,000,000	No	66,848
EX-02.11-02P	0.375	0.375	0.118	0.118	100,000,000	No	66,848
EX-02.11-06O	0.375	0.375	0.118	0.118	113,164,072	No	66,848
EX-02.11-04P	0.375	0.375	0.118	0.118	123,147,360	No	66,848
EX-02.11-03E	0.375	0.375	0.118	0.118	128,396,928	No	66,848
====>Grouped by Line: EX-02.12 PSEP 1B&2B to 35 HDR							
EX-02.12-01P	0.500	0.500	0.152	0.152	100,000,000	No	66,848
EX-02.9-10T (D/S)	0.500	0.500	0.152	0.152	104,125,656	No	66,848
EX-02.9-10T (BR/SE)	0.365	0.365	0.091	0.091	151,050,384	No	66,848
EX-02.9-10T	0.500	0.500	0.152	0.152	157,129,744	No	66,848
====>Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR							
EX-02.13-06R	0.000	0.311	0.149	0.149	32,753,584	No	171,511
EX-02.13-06R (D/S)	0.000	0.374	0.232	0.232	39,084,248	No	171,511
EX-02.13-01P	0.500	0.500	0.152	0.152	100,000,000	No	66,848
EX-02.11-05T	0.500	0.500	0.152	0.152	104,125,656	No	66,848
EX-02.11-05T (D/S)	0.500	0.500	0.152	0.152	104,125,656	No	66,848
EX-02.11-05T (BR/SE)	0.375	0.375	0.118	0.118	108,655,880	No	66,848
EX-02.13-03E	0.375	0.375	0.152	0.152	112,255,552	No	66,848

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
=====> Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR							
EX-02.13-04E	0.375	0.375	0.152	0.152	123,845,304	No	66,848
EX-02.13-05P	0.375	0.375	0.152	0.152	148,286,992	No	66,848
EX-02.13-02B	0.500	0.500	0.152	0.152	216,606,656	No	66,848
EX-02.13-03P	0.000	0.500	0.152	0.152	241,211,600	No	66,848
=====> Grouped by Line: EX-02.14 FWH 35 HEADER							
EX-02.14-05P	0.375	0.102	0.311	0.311	-171,501	No	220,317
EX-02.14-10V	0.375	-0.112	0.248	0.248	-165,350	No	220,317
EX-02.14-03P	0.375	0.144	0.311	0.311	-161,843	No	220,317
EX-02.14-09P	0.375	0.144	0.311	0.311	-161,843	No	220,317
EX-02.14-11V	0.375	-0.069	0.248	0.248	-160,108	No	220,317
EX-02.14-13V	0.375	-0.069	0.248	0.248	-160,108	No	220,317
EX-02.14-16E	0.375	0.185	0.232	0.232	-27,060	Yes	220,317
EX-02.14-19P	0.375	0.298	0.311	0.311	-11,792	No	220,317
EX-02.14-32T	0.375	0.298	0.311	0.311	-9,681	No	220,317
EX-02.14-04T	0.375	0.299	0.311	0.311	-9,079	No	220,317
EX-02.14-32T (D/S)	0.000	0.303	0.311	0.311	-7,072	No	220,317
EX-02.14-27E	0.000	0.239	0.232	0.232	3,944	Yes	220,317
EX-02.14-12P	0.375	0.321	0.311	0.311	12,638	Yes	220,317
EX-02.14-07P	0.375	0.326	0.311	0.311	13,779	No	220,317
EX-02.14-18E	0.375	0.260	0.232	0.232	16,274	Yes	220,317
EX-02.14-21P	0.375	0.341	0.311	0.311	18,229	No	220,317
EX-02.14-26P	0.375	0.350	0.311	0.311	23,314	No	220,317
EX-02.14-24E	0.375	0.281	0.232	0.232	28,205	Yes	220,317
EX-02.14-04T (D/S)	0.375	0.345	0.311	0.311	29,277	No	220,317
EX-02.14-02E	0.375	0.301	0.232	0.232	43,161	No	171,511
EX-02.14-06E	0.000	0.321	0.232	0.232	55,272	No	33,725
EX-02.14-08E	0.000	0.321	0.232	0.232	55,272	No	33,725
EX-02.14-20E	0.375	0.340	0.232	0.232	62,286	Yes	220,317
EX-02.14-25E	0.000	0.345	0.232	0.232	65,205	No	17,520
EX-02.14-31P	0.375	0.377	0.311	0.311	86,092	No	220,317
EX-02.14-14E	0.375	0.431	0.232	0.232	136,542	Yes	220,317
EX-02.14-17P	0.375	0.400	0.311	0.311	137,577	No	220,317
EX-02.14-01P	0.375	0.388	0.311	0.311	147,665	No	220,317
EX-02.14-29T	0.375	0.373	0.232	0.232	11,905,519	No	141,668
EX-02.7-02T (D/S)	0.375	0.374	0.232	0.232	13,998,550	No	141,668
EX-02.14-29T (D/S)	0.000	0.374	0.232	0.232	14,072,971	No	141,668
EX-02.7-02T	0.375	0.374	0.232	0.232	17,483,966	No	141,668
EX-02.7-02T (BR/SE)	0.375	0.374	0.149	0.149	28,449,874	No	141,668

Sorted By: Remaining Life

Sorted By: Remaining Life

Component Name	Init.	Pred.[1]	Thickness (in)	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: EX-02.14 FWH 35 HEADER							
EX-02.14-22T	0.375	0.374	0.232	0.232	30,758,210	No	141,668
EX-02.14-23P	0.375	0.374	0.232	0.232	31,183,902	No	141,668
EX-02.14-22T (D/S)	0.000	0.374	0.232	0.232	34,966,720	No	141,668
EX-02.14-28P	0.375	0.374	0.232	0.232	36,936,388	No	141,668
EX-02.14-29T (BR/SE)	0.312	0.311	0.149	0.149	38,232,188	No	141,668
EX-02.14-33P	0.375	0.375	0.232	0.232	63,956,600	No	141,668
====> Grouped by Line: EX-02.15 FWH 35 HEADER							
EX-02.15-02T (BR/SE)	0.312	0.311	0.149	0.149	38,232,188	No	141,668
EX-02.15-02T	0.656	0.655	0.232	0.232	41,272,092	No	141,668
EX-02.15-02T (D/S)	0.656	0.655	0.232	0.232	42,551,804	No	141,668
EX-02.15-01P	0.625	0.625	0.232	0.232	184,839,920	No	141,668
====> Grouped by Line: EX-02.2 PSEP 1A 10" to 35 HDR							
EX-02.2-04P	0.365	0.365	0.091	0.091	100,000,000	No	66,848
EX-02.2-02P	0.365	0.365	0.091	0.091	152,190,832	No	66,848
EX-02.2-03E	0.365	0.365	0.091	0.091	178,485,040	No	66,848
EX-02.2-05E	0.365	0.365	0.091	0.091	178,485,040	No	66,848
EX-02.2-08O	0.365	0.365	0.091	0.091	218,982,880	No	66,848
EX-02.2-06P	0.365	0.365	0.091	0.091	262,948,000	No	66,848
====> Grouped by Line: EX-02.4 PSEP2A 14" to 35 HDR							
EX-02.4-02P	0.375	0.375	0.118	0.118	100,000,000	No	66,848
EX-02.4-07P	0.000	0.375	0.118	0.118	100,000,000	No	66,848
EX-02.4-06O	0.375	0.375	0.118	0.118	113,164,072	No	66,848
EX-02.4-04P	0.375	0.375	0.118	0.118	123,147,360	No	66,848
EX-02.4-03E	0.375	0.375	0.118	0.118	128,396,928	No	66,848
====> Grouped by Line: EX-02.6 PSEP 1A&2A to 35 HDR							
EX-02.6-01P	0.500	0.500	0.152	0.152	100,000,000	No	66,848
EX-02.2-07T (D/S)	0.500	0.500	0.152	0.152	104,125,656	No	66,848
EX-02.2-07T (BR/SE)	0.365	0.365	0.091	0.091	151,050,384	No	66,848
EX-02.2-07T	0.500	0.500	0.152	0.152	157,129,744	No	66,848
====> Grouped by Line: EX-02.7 PSEP 1A&2A to 35 HDR							
EX-02.7-01P	0.500	0.500	0.152	0.152	100,000,000	No	66,848
EX-02.4-05T	0.500	0.500	0.152	0.152	104,125,656	No	66,848
EX-02.4-05T (D/S)	0.500	0.500	0.152	0.152	104,125,656	No	66,848
EX-02.4-05T (BR/SE)	0.375	0.375	0.118	0.118	108,655,880	No	66,848

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: EX-02.8 PSEP 2B 10" to 35 HDR								
EX-02.8-03P	0.365	0.365	0.091	0.091	0.091	100,000,000	No	66,848
EX-02.8-05P	0.365	0.365	0.091	0.091	0.091	100,000,000	No	66,848
EX-02.8-01N	0.365	0.365	0.072	0.072	0.072	117,014,920	No	171,511
EX-02.8-08T (BR/SE)	0.365	0.365	0.091	0.091	0.091	164,317,024	No	66,848
EX-02.8-07O	0.365	0.365	0.091	0.091	0.091	164,388,624	No	66,848
EX-02.8-02E	0.365	0.365	0.091	0.091	0.091	196,519,840	No	66,848
EX-02.8-06E	0.365	0.365	0.091	0.091	0.091	196,519,840	No	66,848
EX-02.8-08T (D/S)	0.500	0.500	0.152	0.152	0.152	206,013,568	No	66,848
EX-02.8-04E	0.365	0.365	0.091	0.091	0.091	208,434,240	No	66,848
EX-02.8-09P	0.000	0.365	0.091	0.091	0.091	219,144,304	No	66,848
====> Grouped by Line: EX-02.9 PSEP 1B 10" to 35 HDR								
EX-02.9-04P	0.365	0.365	0.091	0.091	0.091	100,000,000	No	66,848
EX-02.9-01N	0.365	0.365	0.072	0.072	0.072	117,014,920	No	171,511
EX-02.9-02P	0.365	0.365	0.091	0.091	0.091	152,190,832	No	66,848
EX-02.9-08P	0.365	0.365	0.091	0.091	0.091	171,191,616	No	66,848
EX-02.9-10P	0.000	0.365	0.091	0.091	0.091	172,292,944	No	66,848
EX-02.9-03E	0.365	0.365	0.091	0.091	0.091	178,485,040	No	66,848
EX-02.9-05E	0.365	0.365	0.091	0.091	0.091	178,485,040	No	66,848
EX-02.9-07E	0.365	0.365	0.091	0.091	0.091	178,485,040	No	66,848
EX-02.9-09E	0.365	0.365	0.091	0.091	0.091	178,485,040	No	66,848
EX-02.9-11O	0.365	0.365	0.091	0.091	0.091	218,982,880	No	66,848
EX-02.9-06P	0.365	0.365	0.091	0.091	0.091	262,948,000	No	66,848

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: FW: 36 HTR TO SG HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.451

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Ihoop				

====>Grouped by Line: FW-02.1A FWH 36A to SG HDR

FW-02.1A-05V	0.938	0.560	0.889	0.889	-206,308	No	220,317
FW-02.1A-01N	0.938	0.671	0.717	0.717	-62,043	No	220,317
FW-02.1A-07E	0.938	0.740	0.717	0.717	43,034	No	220,317
FW-02.1A-09E	0.938	0.840	0.717	0.717	228,845	Yes	220,317
FW-02.1A-08P	0.938	0.804	0.717	0.717	240,563	No	220,317
FW-02.1A-11E	0.938	0.875	0.717	0.717	294,010	Yes	220,317
FW-02.1A-06P	0.938	0.820	0.717	0.717	323,615	No	220,317
FW-02.1A-13R	0.000	0.866	0.717	0.717	366,984	Yes	220,317
FW-02.1A-03P	0.938	0.892	0.717	0.717	377,023	Yes	220,317
FW-02.1A-04E	0.938	0.940	0.717	0.717	415,939	Yes	220,317
FW-02.1A-10P	0.938	0.873	0.717	0.717	429,278	Yes	220,317
FW-02.1A-02E	0.938	0.979	0.717	0.717	488,551	Yes	220,317
FW-02.1A-12P	0.938	0.901	0.717	0.717	506,433	Yes	220,317
FW-02.1A-13R (D/S)	0.000	1.336	1.195	1.195	672,436	No	220,317

Sorted By: Remaining Life

====>Grouped by Line: FW-02.1B FWH 36B to SG HDR

FW-02.1B-05V	0.938	0.560	0.889	0.889	-206,308	No	220,317
FW-02.1B-07E	0.938	0.740	0.717	0.717	43,034	No	220,317
FW-02.1B-09E	0.938	0.740	0.717	0.717	43,034	No	220,317
FW-02.1B-08P	0.938	0.804	0.717	0.717	240,563	No	220,317
FW-02.1B-03P	0.938	0.886	0.717	0.717	363,526	Yes	220,317
FW-02.1B-10P	0.965	0.855	0.717	0.717	377,938	Yes	220,317
FW-02.1B-04E	0.938	0.946	0.717	0.717	425,890	Yes	220,317
FW-02.1B-02E	0.938	0.957	0.717	0.717	446,370	Yes	220,317
FW-02.1B-06P	0.938	0.860	0.717	0.717	448,097	Yes	220,317
FW-02.1B-01N	0.938	2.433	0.717	0.717	2,364,017	No	220,317

Sorted By: Remaining Life

====>Grouped by Line: FW-02.1C FWH 36C to SG HDR

FW-02.1C-05V	0.938	0.560	0.889	0.889	-206,308	No	220,317
FW-02.1C-07E	0.938	0.740	0.717	0.717	43,034	No	220,317

Sorted By: Remaining Life

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
===> Grouped by Line: FW-02.1C FWH 36C to SG HDR							
FW-02.1C-09E	0.938	0.740	0.717	0.717	43,034	No	220,317
FW-02.1C-04E	0.938	0.740	0.717	0.717	43,034	No	220,317
FW-02.1C-08P	0.938	0.804	0.717	0.717	240,563	No	220,317
FW-02.1C-02E	0.938	0.866	0.717	0.717	277,314	Yes	220,317
FW-02.1C-06P	0.938	0.820	0.717	0.717	323,615	No	220,317
FW-02.1C-03P	0.938	0.883	0.717	0.717	357,264	Yes	220,317
FW-02.1C-10P	0.998	0.925	0.717	0.717	566,721	Yes	220,317
FW-02.1C-01N	0.938	1.131	0.717	0.717	570,280	Yes	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Run Name: FW: BFP TO 36 HTR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.893

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	I_hoop				
====>Grouped by Line: FW-01.1A BFP 31 to RCIRC T							
FW-01.1A-03R (D/S)	1.095	0.956	0.924	0.924	101,634	Yes	220,317
FW-01.2A-03T (BR/SE)	0.000	0.802	0.264	0.264	229,787	No	4,406
FW-01.2A-01E	1.031	0.970	0.797	0.797	452,882	Yes	220,317
FW-01.2A-02P	1.043	0.969	0.797	0.797	520,626	Yes	220,317
FW-01.1A-02P	1.075	0.963	0.740	0.740	578,013	Yes	220,317
FW-01.2A-03T (D/S)	1.039	1.000	0.797	0.797	652,723	Yes	220,317
FW-01.2A-03T	1.039	1.002	0.797	0.797	659,156	No	220,317
FW-01.1A-03R	1.095	1.037	0.740	0.740	738,861	Yes	220,317
FW-01.1A-01N	1.031	1.001	0.620	0.620	290,505,056	No	220,317
Sorted By: Remaining Life							
====>Grouped by Line: FW-01.1B BFP 32 to RCIRC T							
FW-01.2B-05T (BR/SE)	0.000	0.846	0.264	0.264	248,484	No	4,406
FW-01.2B-01E	1.031	0.906	0.797	0.797	285,011	Yes	220,317
FW-01.1B-03R (D/S)	1.095	1.022	0.924	0.924	312,548	Yes	220,317
FW-01.2B-02P	1.031	0.904	0.797	0.797	322,912	No	220,317
FW-01.2B-05T	1.036	0.973	0.797	0.797	567,233	No	220,317
FW-01.1B-02P	1.176	0.982	0.740	0.740	614,767	No	220,317
FW-01.2B-05T (D/S)	1.036	0.988	0.797	0.797	615,504	No	220,317
FW-01.1B-03R	1.095	1.006	0.740	0.740	662,510	Yes	220,317
FW-01.2B-03E	1.251	1.033	0.797	0.797	671,008	Yes	220,317
FW-01.2B-04P	1.032	0.981	0.797	0.797	810,889	Yes	220,317
FW-01.1B-01N	1.031	0.990	0.620	0.620	282,013,792	No	220,317
Sorted By: Remaining Life							
====>Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR							
FW-01.2A-06V	1.031	0.753	0.988	0.988	-202,887	No	220,317
FW-01.2A-05V	1.031	0.808	0.988	0.988	-198,875	No	220,317
FW-01.2A-12E	1.031	0.884	0.797	0.797	227,297	No	220,317
FW-01.2A-14E	1.031	0.884	0.797	0.797	227,297	No	220,317
FW-01.2A-16E	1.031	0.884	0.797	0.797	227,297	No	220,317
FW-01.2A-18E	1.031	0.884	0.797	0.797	227,297	No	220,317

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
===> Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR					
FW-01.2A-20E	1.031	0.884	0.797	0.797	227,297
FW-01.2A-22E	1.031	0.884	0.797	0.797	227,297
FW-01.2A-07E	1.031	0.884	0.797	0.797	227,297
FW-01.2A-08T	1.031	0.912	0.797	0.797	370,082
FW-01.2A-08T (D/S)	0.000	0.912	0.797	0.797	370,082
FW-01.2A-11P	1.031	0.931	0.797	0.797	521,027
FW-01.2A-13P	1.031	0.931	0.797	0.797	521,027
FW-01.2A-15P_1	1.031	0.931	0.797	0.797	521,027
FW-01.2A-17P	1.031	0.931	0.797	0.797	521,027
FW-01.2A-19P	1.031	0.931	0.797	0.797	521,027
FW-01.2A-21P	1.031	0.931	0.797	0.797	521,027
FW-01.2A-10E	1.031	1.019	0.797	0.797	581,363
FW-01.2A-23P	1.053	0.978	0.797	0.797	700,437
FW-01.2A-09P	1.031	0.951	0.797	0.797	747,444
FW-01.2A-04P	1.039	0.995	0.797	0.797	957,164
FW-01.2A-15P_2	1.031	0.972	0.797	0.797	1,135,794
Sorted By: Remaining Life					
===> Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR					
FW-01.2B-08V	1.031	0.753	0.988	0.988	-202,887
FW-01.2B-07V	1.031	0.808	0.988	0.988	-198,875
FW-01.2B-09E	1.031	0.884	0.797	0.797	227,297
FW-01.2B-13E	1.031	0.884	0.797	0.797	227,297
FW-01.2B-15E	1.031	0.884	0.797	0.797	227,297
FW-01.2B-17E	1.031	0.884	0.797	0.797	227,297
FW-01.2B-19E	1.031	0.884	0.797	0.797	227,297
FW-01.2B-21E	1.031	0.884	0.797	0.797	227,297
FW-01.2B-23E	1.031	0.884	0.797	0.797	227,297
FW-01.2B-25E	1.031	0.884	0.797	0.797	227,297
FW-01.2B-10P	1.031	0.904	0.797	0.797	322,912
FW-01.2B-11T	1.031	0.912	0.797	0.797	370,082
FW-01.2B-11T (D/S)	0.000	0.912	0.797	0.797	370,082
FW-01.2B-27R (D/S)	0.000	1.285	1.195	1.195	494,902
FW-01.2B-14P	1.031	0.931	0.797	0.797	521,027
FW-01.2B-16P	1.031	0.931	0.797	0.797	521,027
FW-01.2B-18P	1.031	0.931	0.797	0.797	521,027
FW-01.2B-20P	1.031	0.931	0.797	0.797	521,027
FW-01.2B-22P	1.031	0.931	0.797	0.797	521,027
FW-01.2B-24P	1.031	0.931	0.797	0.797	521,027
FW-01.2B-26P	1.031	0.931	0.797	0.797	521,027
Sorted By: Remaining Life					

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR							
FW-01.2B-12P	1.031	0.951	0.797	0.797	747,444	No	220,317
FW-01.2B-06P	1.057	0.977	0.797	0.797	868,452	No	220,317
FW-01.2B-27R	0.000	1.538	0.797	0.797	2,557,683	Yes	220,317
====> Grouped by Line: FW-01.3 BFP DISCHARGE HDR							
FW-01.4-01T	1.351	1.334	1.195	1.195	281,802	No	220,317
FW-01.3-12E	1.260	1.296	1.195	1.195	306,864	Yes	220,317
FW-01.3-01T	1.375	1.279	1.195	1.195	333,253	No	220,317
FW-01.4-01T (BR/SE)	1.019	0.834	0.717	0.717	349,247	Yes	220,317
FW-01.3-10E	1.260	1.313	1.195	1.195	357,155	Yes	220,317
FW-01.4-01T (D/S)	1.351	1.338	1.195	1.195	361,960	No	220,317
FW-01.3-16P	1.260	1.304	1.195	1.195	382,503	Yes	220,317
FW-01.3-01T (D/S)	1.375	1.343	1.195	1.195	401,938	Yes	220,317
FW-01.3-15E	1.260	1.328	1.195	1.195	403,918	Yes	220,317
FW-01.3-01T (BR/SE)	1.042	0.949	0.797	0.797	433,466	Yes	220,317
FW-01.3-06E	1.260	1.348	1.195	1.195	463,486	Yes	220,317
FW-01.3-03E	1.514	1.354	1.195	1.195	469,715	Yes	220,317
FW-01.3-17T (D/S)	1.260	1.327	1.195	1.195	491,783	Yes	220,317
FW-01.3-14E	1.260	1.358	1.195	1.195	494,238	Yes	220,317
FW-01.3-17T	1.260	1.333	1.195	1.195	514,212	Yes	220,317
FW-01.3-08E	1.260	1.371	1.195	1.195	533,198	Yes	220,317
FW-01.3-04E	1.638	1.383	1.195	1.195	551,691	Yes	220,317
FW-01.3-09P	1.260	1.354	1.195	1.195	558,698	Yes	220,317
FW-01.3-05P	1.260	1.355	1.195	1.195	562,203	Yes	220,317
FW-01.3-07P	1.260	1.338	1.195	1.195	641,224	Yes	220,317
FW-01.3-11P	1.260	1.340	1.195	1.195	650,373	No	220,317
FW-01.3-13P	1.260	1.360	1.195	1.195	738,234	No	220,317
FW-01.3-18P	1.348	1.339	1.195	1.195	798,829	Yes	220,317
FW-01.3-02P	1.371	1.360	1.195	1.195	917,490	Yes	220,317
====> Grouped by Line: FW-01.4 BFP DISCHARGE HDR							
FW-01.5-01T	1.385	1.331	1.195	1.195	343,026	No	220,317
FW-01.5-01T (BR/SE)	1.015	0.838	0.717	0.717	361,462	Yes	220,317
FW-01.5-01T (D/S)	1.385	1.343	1.195	1.195	587,887	Yes	220,317
FW-01.4-02P	1.341	1.286	1.195	1.195	634,700	No	220,317
====> Grouped by Line: FW-01.6A BFP HDR to FWH 36A							
FW-01.6A-07V	0.938	0.682	0.889	0.889	-199,149	No	220,317
FW-01.6A-03E	0.938	0.804	0.717	0.717	248,782	No	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: FW-01.6A BFP HDR to FWH 36A								
FW-01.6A-05E	0.938	0.804	0.717	0.717	0.717	248,782	No	220,317
FW-01.6A-08E	0.938	0.804	0.717	0.717	0.717	248,782	No	220,317
FW-01.6A-10E	0.938	0.811	0.717	0.717	0.717	284,978	No	220,317
FW-01.6A-09P	0.938	0.822	0.717	0.717	0.717	347,755	No	220,317
FW-01.6A-04P	0.938	0.847	0.717	0.717	0.717	552,826	No	220,317
FW-01.6A-06P	0.938	0.847	0.717	0.717	0.717	552,826	No	220,317
FW-01.6A-11P	0.938	0.847	0.717	0.717	0.717	552,826	No	220,317
FW-01.6A-02P	1.009	0.874	0.717	0.717	0.717	658,034	Yes	220,317
FW-01.6A-01R	0.000	1.301	1.195	1.195	1.195	676,339	No	220,317
FW-01.6A-01R (D/S)	0.000	1.431	0.717	0.717	0.717	2,367,443	No	220,317
FW-01.6A-12N	0.938	2.599	0.717	0.717	0.717	4,987,928	Yes	220,317
====> Grouped by Line: FW-01.6B BFP HDR to FWH 36B								
FW-01.6B-05V	0.938	0.682	0.889	0.889	0.889	-199,149	No	220,317
FW-01.6B-03E	0.938	0.804	0.717	0.717	0.717	248,782	No	220,317
FW-01.6B-07P	0.938	0.827	0.717	0.717	0.717	365,241	Yes	220,317
FW-01.6B-04P	0.938	0.847	0.717	0.717	0.717	552,826	No	220,317
FW-01.6B-08E	0.938	0.958	0.717	0.717	0.717	729,540	Yes	220,317
FW-01.6B-02P	0.930	0.876	0.717	0.717	0.717	843,757	Yes	220,317
FW-01.6B-06E	0.938	1.050	0.717	0.717	0.717	954,870	Yes	220,317
FW-01.6B-10N	0.938	2.709	0.717	0.717	0.717	5,279,954	Yes	220,317
====> Grouped by Line: FW-01.6C BFP HDR to FWH 36C								
FW-01.6C-05V	0.938	0.682	0.889	0.889	0.889	-199,149	No	220,317
FW-01.6C-03E	0.938	0.804	0.717	0.717	0.717	248,782	No	220,317
FW-01.6C-06E	0.938	0.804	0.717	0.717	0.717	248,782	No	220,317
FW-01.6C-08E	0.938	0.811	0.717	0.717	0.717	284,978	No	220,317
FW-01.6C-04P	0.938	0.847	0.717	0.717	0.717	552,826	No	220,317
FW-01.6C-02P	0.938	0.878	0.717	0.717	0.717	851,813	Yes	220,317
FW-01.6C-10N	0.938	2.772	0.717	0.717	0.717	5,446,529	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: FW: FW RECIRC
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :0.020

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	I_hoop				
===>Grouped by Line: FW-04.1A BFP 31 RECIRC							
FW-04.2A-09P_2	0.674	0.674	0.208	0.208	15,858,906	No	4,406
FW-04.2A-07P_2	0.674	0.674	0.208	0.208	15,858,906	No	4,406
FW-05.1A-01V	0.864	0.864	0.327	0.327	16,342,465	No	4,406
FW-05.1A-03V	0.864	0.864	0.327	0.327	16,342,465	No	4,406
FW-04.2A-22B	0.782	0.610	0.208	0.208	17,753,050	No	4,406
FW-04.2A-08B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2A-10B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2A-12B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2A-14B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2A-16B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2A-18B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2A-20B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2A-03B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2A-04E	0.674	0.674	0.176	0.176	25,401,824	No	4,406
FW-04.2A-06E	0.674	0.674	0.176	0.176	26,941,862	No	4,406
FW-04.2A-24R	0.000	0.674	0.176	0.176	31,754,480	No	4,406
FW-04.2A-09P_1	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2A-11P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2A-13P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2A-15P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2A-17P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2A-19P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2A-05P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2A-21P	0.700	0.700	0.208	0.208	34,430,652	No	4,406
FW-04.2A-23P	0.724	0.724	0.208	0.208	35,408,516	No	4,406
FW-04.2A-07P_1	0.674	0.674	0.208	0.208	37,842,628	No	4,406
FW-04.1A-01E	0.954	0.779	0.260	0.260	41,657,756	No	4,406
FW-04.1A-06P_2	0.864	0.864	0.306	0.306	43,091,844	No	4,406
FW-04.1A-04P_2	0.864	0.864	0.306	0.306	43,091,844	No	4,406
FW-04.2A-02P	0.709	0.709	0.208	0.208	43,508,052	No	4,406

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
===> Grouped by Line: FW-04.1A BFP 31 RECIRC							
FW-04.2A-01R (D/S)	0.000	0.674	0.176	0.176	49,400,748	No	4,406
FW-04.1A-03E	0.864	0.864	0.260	0.260	50,804,780	No	4,406
FW-04.1A-07E	0.864	0.864	0.260	0.260	50,804,780	No	4,406
FW-04.1A-08E	0.864	0.864	0.260	0.260	50,804,780	No	4,406
FW-04.1A-05E	0.864	0.864	0.260	0.260	50,804,780	No	4,406
FW-04.1A-02P	0.864	0.864	0.306	0.306	54,208,532	No	4,406
FW-04.1A-09P	0.896	0.896	0.306	0.306	56,378,176	No	4,406
FW-05.2A-01N	0.875	0.875	0.399	0.399	56,749,260	No	4,406
FW-05.1A-04R	0.000	0.864	0.306	0.306	61,953,872	No	4,406
FW-04.2A-24R (D/S)	0.000	0.864	0.260	0.260	62,661,288	No	4,406
FW-04.1A-04P_1	0.864	0.864	0.306	0.306	69,389,392	No	4,406
FW-04.1A-06P_1	0.864	0.864	0.306	0.306	69,389,392	No	4,406
FW-05.1A-02P	0.886	0.811	0.306	0.306	70,561,488	No	4,406
FW-04.2A-01R	0.000	0.864	0.260	0.260	75,195,304	No	4,406
FW-05.1A-04R (D/S)	0.000	0.875	0.399	0.399	75,668,616	No	4,406
FW-04.1A-10P	0.864	0.864	0.306	0.306	86,738,936	No	4,406
Sorted By: Remaining Life							
===> Grouped by Line: FW-04.1B BFP 32 RECIRC							
FW-04.2B-08P_2	0.674	0.674	0.208	0.208	15,858,906	No	4,406
FW-04.2B-10P_2	0.674	0.674	0.208	0.208	15,858,906	No	4,406
FW-05.1B-01V	0.864	0.864	0.327	0.327	16,342,465	No	4,406
FW-05.1B-03V	0.864	0.864	0.327	0.327	16,342,465	No	4,406
FW-04.2B-03B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2B-09B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2B-11B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2B-13B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2B-15B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2B-17B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2B-19B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2B-21B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2B-05E	0.674	0.674	0.176	0.176	26,941,862	No	4,406
FW-04.2B-07E	0.674	0.674	0.176	0.176	26,941,862	No	4,406
FW-04.2B-04P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2B-10P_1	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2B-12P_1	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2B-14P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2B-16P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2B-18P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2B-20P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
Sorted By: Remaining Life							

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
===> Grouped by Line: FW-04.1B BFP 32 RECIRC							
FW-04.2B-22P	0.716	0.716	0.208	0.208	35,089,508	No	4,406
FW-04.2B-06P	0.674	0.674	0.208	0.208	37,842,628	No	4,406
FW-04.2B-08P_1	0.674	0.674	0.208	0.208	37,842,628	No	4,406
FW-04.2B-23R	0.000	0.778	0.176	0.176	38,397,360	No	4,406
FW-04.1B-01E	0.979	0.753	0.260	0.260	39,042,476	No	4,406
FW-04.1B-03E	1.083	0.800	0.260	0.260	40,379,424	No	4,406
FW-04.2B-02P	0.674	0.674	0.208	0.208	41,627,772	No	4,406
FW-04.1B-04P_2	0.864	0.864	0.306	0.306	43,091,844	No	4,406
FW-04.1B-06P_2	0.864	0.864	0.306	0.306	43,091,844	No	4,406
FW-04.2B-01R (D/S)	0.000	0.674	0.176	0.176	49,400,748	No	4,406
FW-04.1B-05E	0.864	0.864	0.260	0.260	50,804,780	No	4,406
FW-04.1B-07E	0.864	0.864	0.260	0.260	50,804,780	No	4,406
FW-04.1B-08E	0.864	0.864	0.260	0.260	50,804,780	No	4,406
FW-04.1B-04P_1	0.864	0.864	0.306	0.306	54,208,532	No	4,406
FW-04.1B-09P	0.864	0.864	0.306	0.306	54,208,532	No	4,406
FW-05.2B-01N	0.875	0.875	0.399	0.399	56,749,260	No	4,406
FW-04.2B-23R (D/S)	0.962	0.839	0.260	0.260	57,065,304	No	4,406
FW-04.1B-02P	0.912	0.912	0.306	0.306	57,425,944	No	4,406
FW-05.1B-04R	0.000	0.864	0.306	0.306	61,953,872	No	4,406
FW-04.1B-06P_1	0.864	0.864	0.306	0.306	69,389,392	No	4,406
FW-04.2B-01R	0.000	0.864	0.260	0.260	75,195,304	No	4,406
FW-05.1B-04R (D/S)	0.000	0.875	0.399	0.399	75,668,616	No	4,406
FW-05.1B-02P	0.864	0.864	0.306	0.306	78,852,776	No	4,406
FW-04.1B-10P	0.864	0.864	0.306	0.306	86,738,936	No	4,406

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: FW: SG HEADERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.162

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Ihoop				
====>Grouped by Line: FW-02.3 SG INLET HEADER							
FW-02.1B-11T (D/S)	1.398	1.322	1.195	1.195	No	305,103	220,317
FW-02.1B-11T (BR/SE)	0.974	0.875	0.717	0.717	Yes	346,967	220,317
FW-02.1B-11T	1.398	1.347	1.195	1.195	Yes	566,684	220,317
FW-02.3-01P	1.380	1.348	1.195	1.195	No	752,638	220,317
====>Grouped by Line: FW-02.4 SG INLET HEADER							
FW-02.4-13E	1.260	1.089	1.195	1.195	No	-173,468	220,317
FW-02.4-14P	1.260	1.144	1.195	1.195	No	-143,953	220,317
FW-02.4-12P_1	1.260	1.144	1.195	1.195	No	-143,953	220,317
FW-02.4-03P	1.260	1.167	1.195	1.195	No	-111,911	220,317
FW-02.4-12P_2	1.260	1.194	1.195	1.195	No	-4,758	220,317
FW-02.1C-11T (D/S)	1.375	1.275	1.195	1.195	No	153,329	220,317
FW-02.4-17E	1.260	1.273	1.195	1.195	Yes	167,415	220,317
FW-02.4-15E	1.260	1.291	1.195	1.195	Yes	205,866	220,317
FW-02.4-19T	1.368	1.342	1.195	1.195	No	210,107	220,317
FW-02.4-19T (D/S)	1.368	1.340	1.195	1.195	No	243,097	220,317
FW-02.4-09E	1.260	1.331	1.195	1.195	Yes	292,975	220,317
FW-02.4-11E	1.260	1.333	1.195	1.195	Yes	296,753	220,317
FW-02.4-02T	1.260	1.320	1.195	1.195	Yes	331,240	220,317
FW-02.4-05E	1.260	1.350	1.195	1.195	Yes	332,816	220,317
FW-02.1C-11T	1.375	1.335	1.195	1.195	No	336,287	220,317
FW-02.4-19T (BR/SE)	0.974	0.857	0.717	0.717	Yes	351,060	220,317
FW-02.1C-11T (BR/SE)	0.975	0.880	0.717	0.717	No	358,423	220,317
FW-02.4-02T (D/S)	0.000	1.332	1.195	1.195	Yes	363,041	220,317
FW-02.4-08P	1.260	1.321	1.195	1.195	No	402,395	220,317
FW-02.4-16P	1.260	1.325	1.195	1.195	No	415,111	220,317
FW-02.4-07E	1.260	1.399	1.195	1.195	Yes	438,102	220,317
FW-02.4-10P	1.260	1.334	1.195	1.195	Yes	443,431	220,317
FW-02.4-18P	1.365	1.340	1.195	1.195	Yes	457,076	220,317
FW-02.4-04E	1.260	1.409	1.195	1.195	Yes	459,542	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
Sorted By: Remaining Life								
====> Grouped by Line: FW-02.4 SG INLET HEADER	1.260	1.385	1.195	1.195	1.195	472,026	Yes	220,317
====> Grouped by Line: FW-02.5 SG INLET HEADER	0.000	1.142	1.195	1.195	1.195	-145,915	No	220,317
FW-02.5-03T (D/S)	1.260	1.181	1.195	1.195	1.195	-62,848	No	220,317
FW-02.5-04T	1.368	1.311	1.195	1.195	1.195	194,801	No	220,317
FW-02.5-04T (D/S)	1.368	1.327	1.195	1.195	1.195	278,457	No	220,317
FW-02.5-01T	1.372	1.323	1.195	1.195	1.195	394,967	No	220,317
FW-02.5-01T (D/S)	1.372	1.330	1.195	1.195	1.195	416,531	No	220,317
FW-02.5-06P	1.365	1.285	1.195	1.195	1.195	417,769	No	220,317
FW-02.5-03T	1.260	1.329	1.195	1.195	1.195	418,682	No	220,317
FW-02.5-04T (BR/SE)	1.002	0.902	0.717	0.717	0.717	462,361	Yes	220,317
Sorted By: Remaining Life								
====> Grouped by Line: FW-02.6 SG INLET HEADER	1.361	1.346	1.195	1.195	1.195	318,722	No	220,317
FW-02.6-03T	1.006	0.846	0.717	0.717	0.717	323,030	Yes	220,317
FW-02.6-03T (BR/SE)	1.361	1.334	1.195	1.195	1.195	496,539	Yes	220,317
FW-02.6-03T (D/S)	1.361	1.297	1.195	1.195	1.195	594,944	No	220,317
====> Grouped by Line: FW-02.8A SG HDR to SG 31	0.938	0.643	0.889	0.889	0.889	-203,071	No	220,317
FW-02.8A-04V	0.938	0.627	0.717	0.717	0.717	-108,237	No	220,317
FW-02.8A-19V	0.938	0.664	0.717	0.717	0.717	-68,937	No	220,317
FW-02.8A-18V	0.938	0.699	0.717	0.717	0.717	-27,194	No	220,317
FW-02.8A-12F	0.000	0.642	0.589	0.589	0.589	103,383	Yes	220,317
FW-02.8A-26R	0.750	0.600	0.544	0.544	0.544	136,014	No	220,317
FW-02.8A-22E	0.750	0.600	0.544	0.544	0.544	136,014	No	220,317
FW-02.8A-23E	0.750	0.600	0.544	0.544	0.544	136,014	No	220,317
FW-03.1A-02E	0.938	0.783	0.717	0.717	0.717	158,614	No	220,317
FW-02.8A-10E	0.938	0.783	0.717	0.717	0.717	158,614	No	220,317
FW-02.8A-16E	0.750	0.608	0.544	0.544	0.544	164,842	No	220,317
FW-03.1A-05B	0.750	0.613	0.544	0.544	0.544	185,058	No	220,317
FW-02.8A-20P	0.750	0.616	0.544	0.544	0.544	197,165	No	220,317
FW-03.1A-04B	0.750	0.616	0.544	0.544	0.544	197,165	No	220,317
FW-03.1A-07B	0.750	0.620	0.544	0.544	0.544	214,841	No	220,317
FW-02.8A-24P	0.938	0.800	0.717	0.717	0.717	222,505	No	220,317
FW-02.8A-14E	0.000	0.925	0.832	0.832	0.832	233,381	No	33,725
FW-02.8A-25R	0.938	0.804	0.717	0.717	0.717	240,973	No	220,317
FW-02.8A-11P_1	0.750	0.628	0.544	0.544	0.544	253,730	No	220,317
FW-02.8A-21T								

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: FW-02.8A SG HDR to SG 31						
FW-02.8A-21T (D/S)	0.000	0.628	0.544	0.544	No	253,730
FW-02.8A-08T	0.938	0.813	0.717	0.717	No	281,604
FW-02.8A-08T (D/S)	0.000	0.813	0.717	0.717	No	281,604
FW-02.8A-05V	1.312	0.937	0.630	0.630	No	302,061
FW-02.8A-03T	0.938	0.834	0.717	0.717	Yes	345,191
FW-03.1A-01P	0.750	0.649	0.544	0.544	No	378,172
FW-03.1A-03P	0.750	0.649	0.544	0.544	No	378,172
FW-03.1A-06P_1	0.750	0.649	0.544	0.544	No	378,172
FW-02.8A-06E	0.938	0.877	0.717	0.717	Yes	380,788
FW-02.8A-25R (D/S)	0.000	0.824	0.589	0.589	No	403,345
FW-02.8A-17P	0.938	0.834	0.717	0.717	No	411,621
FW-02.8A-07P	0.938	0.872	0.717	0.717	Yes	428,643
FW-02.8A-03T (D/S)	0.000	0.867	0.717	0.717	Yes	442,251
FW-02.8A-02E	0.938	0.921	0.717	0.717	Yes	485,718
FW-02.8A-15P	0.938	0.846	0.717	0.717	No	517,999
FW-02.8A-09P	0.938	0.854	0.717	0.717	No	606,647
FW-02.8A-01P	0.968	0.884	0.717	0.717	Yes	733,820
FW-03.1A-08B	0.750	0.966	0.544	0.544	Yes	1,035,406
FW-03.1A-06P_2	0.750	0.698	0.544	0.544	No	1,081,515
FW-02.8A-11P_2	0.938	0.884	0.717	0.717	No	1,125,436
FW-02.8A-13P	0.938	0.901	0.717	0.717	Yes	1,417,945
FW-02.8A-26R (D/S)	0.000	1.334	0.832	0.832	Yes	1,476,469
FW-03.1A-09N	0.750	0.745	0.478	0.478	No	41,441,756
====> Grouped by Line: FW-02.8B SG HDR to SG 32						
FW-02.8B-05V	0.938	0.643	0.889	0.889	No	-203,071
FW-02.8B-20V	0.938	0.627	0.717	0.717	No	-108,237
FW-02.8B-19V	0.938	0.664	0.717	0.717	No	-68,937
FW-02.8B-13F	0.938	0.775	0.717	0.717	Yes	89,122
FW-03.1B-02E	0.750	0.600	0.544	0.544	No	136,014
FW-02.8B-02E	0.938	0.783	0.717	0.717	No	158,614
FW-02.8B-11E	0.938	0.783	0.717	0.717	No	158,614
FW-02.8B-17E	0.938	0.783	0.717	0.717	No	158,614
FW-03.1B-05B	0.750	0.608	0.544	0.544	No	164,842
FW-03.1B-11E	0.750	0.608	0.544	0.544	No	164,842
FW-02.8B-21P	0.750	0.613	0.544	0.544	No	185,058
FW-03.1B-04B	0.750	0.616	0.544	0.544	No	197,165
FW-03.1B-07B	0.750	0.616	0.544	0.544	No	197,165
FW-03.1B-10E	0.750	0.616	0.544	0.544	No	197,165

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====> Grouped by Line: FW-02.8B SG HDR to SG 32					
FW-02.8B-24P	0.750	0.620	0.544	0.544	214,841
FW-02.8B-15E	0.938	0.800	0.717	0.717	222,505
FW-02.8B-07E	0.938	0.814	0.717	0.717	231,049
FW-03.1B-08E	0.750	0.644	0.544	0.544	243,973
FW-02.8B-26R (D/S)	0.000	0.927	0.832	0.832	277,898
FW-02.8B-04T	0.938	0.813	0.717	0.717	281,604
FW-02.8B-04T (D/S)	0.000	0.813	0.717	0.717	281,604
FW-02.8B-06V	1.312	0.937	0.630	0.630	302,061
FW-02.8B-23E	0.924	0.679	0.544	0.544	321,195
FW-02.8B-08P	0.938	0.837	0.717	0.717	331,867
FW-02.8B-22T (D/S)	0.000	0.654	0.544	0.544	332,485
FW-03.1B-01P	0.750	0.649	0.544	0.544	378,172
FW-03.1B-03P	0.750	0.649	0.544	0.544	378,172
FW-03.1B-06P	0.750	0.649	0.544	0.544	378,172
FW-02.8B-12P_1	0.998	0.863	0.717	0.717	399,168
FW-02.8B-09T	0.938	0.855	0.717	0.717	406,956
FW-02.8B-03P	0.938	0.834	0.717	0.717	411,621
FW-02.8B-18P	0.938	0.834	0.717	0.717	411,621
FW-02.8B-25R (D/S)	1.312	0.864	0.589	0.589	421,156
FW-02.8B-09T (D/S)	0.000	0.868	0.717	0.717	445,192
FW-02.8B-26R	0.000	0.827	0.589	0.589	465,784
FW-02.8B-22T	0.000	0.701	0.544	0.544	474,789
FW-02.8B-16P	0.938	0.846	0.717	0.717	517,999
FW-02.8B-10P	0.938	0.854	0.717	0.717	606,647
FW-02.8B-01P	0.938	0.900	0.717	0.717	807,609
FW-02.8B-14P	0.990	0.859	0.717	0.717	1,099,136
FW-02.8B-12P_2	0.938	0.884	0.717	0.717	1,125,436
FW-03.1B-09P	0.750	0.857	0.544	0.544	1,135,411
FW-02.8B-25R	0.000	1.888	0.832	0.832	2,662,217
FW-03.1B-12N	0.750	0.748	0.478	0.478	41,824,940
====> Grouped by Line: FW-02.8C SG HDR to SG 34					
FW-02.8C-19V	0.938	0.627	0.717	0.717	-108,237
FW-02.8C-18V	0.938	0.664	0.717	0.717	-68,937
FW-02.8C-13F	0.938	0.699	0.717	0.717	-27,194
FW-03.1C-05B	0.750	0.600	0.544	0.544	136,014
FW-02.8C-22E	0.750	0.600	0.544	0.544	136,014
FW-03.1C-02E	0.750	0.600	0.544	0.544	136,014
FW-02.8C-02E	0.938	0.783	0.717	0.717	158,614

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
Sorted By: Remaining Life							
====> Grouped by Line: FW-02.8C SG HDR to SG 34							
FW-02.8C-11E	0.938	0.783	0.717	0.717	158,614	No	220,317
FW-02.8C-16E	0.938	0.783	0.717	0.717	158,614	No	220,317
FW-02.8C-25R	0.000	0.677	0.589	0.589	172,042	No	220,317
FW-03.1C-07B	0.750	0.616	0.544	0.544	197,165	No	220,317
FW-03.1C-04B	0.750	0.616	0.544	0.544	197,165	No	220,317
FW-02.8C-23P	0.750	0.620	0.544	0.544	214,841	No	220,317
FW-02.8C-15E	0.938	0.800	0.717	0.717	222,505	No	220,317
FW-02.8C-12P_1	0.938	0.804	0.717	0.717	240,973	No	220,317
FW-02.8C-21T	0.750	0.628	0.544	0.544	253,730	No	220,317
FW-02.8C-21T (D/S)	0.000	0.628	0.544	0.544	253,730	No	220,317
FW-02.8C-04T	0.938	0.813	0.717	0.717	281,604	No	220,317
FW-02.8C-04T (D/S)	0.000	0.813	0.717	0.717	281,604	No	220,317
FW-02.8C-09T	0.938	0.813	0.717	0.717	281,604	No	220,317
FW-02.8C-09T (D/S)	0.000	0.813	0.717	0.717	281,604	No	220,317
FW-03.1C-13P	0.750	0.627	0.544	0.544	338,748	Yes	220,317
FW-03.1C-11P	0.750	0.677	0.544	0.544	376,963	Yes	220,317
FW-03.1C-06P_1	0.750	0.649	0.544	0.544	378,172	No	220,317
FW-03.1C-01P	0.750	0.649	0.544	0.544	378,172	No	220,317
FW-03.1C-03P	0.750	0.649	0.544	0.544	378,172	No	220,317
FW-02.8C-05V	0.938	1.192	0.889	0.889	378,679	No	220,317
FW-02.8C-24R (D/S)	0.000	0.820	0.589	0.589	395,454	Yes	220,317
FW-02.8C-08P	0.938	0.862	0.717	0.717	400,901	Yes	220,317
FW-02.8C-03P	0.938	0.834	0.717	0.717	411,621	No	220,317
FW-02.8C-17P	0.938	0.834	0.717	0.717	411,621	No	220,317
FW-02.8C-20P	0.750	0.710	0.544	0.544	447,134	No	220,317
FW-03.1C-16P_1	0.750	0.661	0.544	0.544	479,989	No	220,317
FW-03.1C-09P	0.750	0.661	0.544	0.544	479,989	No	220,317
FW-02.8C-07E	0.938	0.921	0.717	0.717	486,071	Yes	220,317
FW-03.1C-14E	0.750	0.726	0.544	0.544	498,583	No	220,317
FW-03.1C-10E	0.750	0.753	0.544	0.544	511,024	Yes	220,317
FW-02.8C-10P	0.938	0.854	0.717	0.717	606,647	No	220,317
FW-03.1C-12E	0.750	0.766	0.544	0.544	608,993	Yes	220,317
FW-02.8C-01P	0.946	0.862	0.717	0.717	640,680	Yes	220,317
FW-02.8C-06V	1.312	1.715	0.630	0.630	1,066,691	No	220,317
FW-03.1C-16P_2	0.750	0.698	0.544	0.544	1,081,515	No	220,317
FW-03.1C-06P_2	0.750	0.698	0.544	0.544	1,081,515	No	220,317
FW-02.8C-12P_2	0.938	0.884	0.717	0.717	1,125,436	No	220,317
FW-02.8C-14P	0.938	0.899	0.717	0.717	1,402,504	Yes	220,317
FW-02.8C-24R	0.000	1.579	0.832	0.832	1,883,149	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: FW-02.8C SG HDR to SG 34						
FW-02.8C-25R (D/S)	0.000	1.691	0.832	2,526,481	No	220,317
FW-03.1C-15N	0.750	0.703	0.478	34,976,612	No	220,317
====> Grouped by Line: FW-02.8D SG HDR to SG 33						
FW-02.8D-05V	0.938	0.643	0.889	-203,071	No	220,317
FW-02.8D-18V	0.938	0.627	0.717	-108,237	No	220,317
FW-02.8D-17V	0.938	0.664	0.717	-68,937	No	220,317
FW-02.8D-13F	0.938	0.699	0.717	-27,194	No	220,317
FW-02.8D-25R (D/S)	0.000	0.854	0.832	63,190	Yes	220,317
FW-02.6-02T	1.260	1.205	1.195	69,783	No	220,317
FW-02.6-02T (D/S)	0.000	1.205	1.195	69,783	No	220,317
FW-02.7-02T	1.260	1.205	1.195	69,783	No	220,317
FW-02.7-02T (D/S)	0.000	1.205	1.195	69,783	No	220,317
FW-02.8D-21E	0.750	0.600	0.544	136,014	No	220,317
FW-02.8D-22E	0.750	0.600	0.544	136,014	No	220,317
FW-03.1D-02E	0.750	0.600	0.544	136,014	No	220,317
FW-02.8D-02E	0.938	0.783	0.717	158,614	No	220,317
FW-02.8D-11E	0.938	0.783	0.717	158,614	No	220,317
FW-02.8D-15E	0.938	0.783	0.717	158,614	No	220,317
FW-03.1D-05B	0.750	0.608	0.544	164,842	No	220,317
FW-02.8D-25R	1.312	0.693	0.589	181,519	Yes	220,317
FW-03.1D-04B	0.750	0.616	0.544	197,165	No	220,317
FW-03.1D-07B	0.750	0.616	0.544	197,165	No	220,317
FW-02.8D-23P	0.750	0.620	0.544	214,841	No	220,317
FW-02.8D-12P_1	0.938	0.804	0.717	240,973	No	220,317
FW-02.8D-20T	0.750	0.628	0.544	253,730	No	220,317
FW-02.8D-20T (D/S)	0.000	0.628	0.544	253,730	No	220,317
FW-02.8D-04T	0.938	0.813	0.717	281,604	No	220,317
FW-02.8D-04T (D/S)	0.000	0.813	0.717	281,604	No	220,317
FW-02.8D-09T	0.938	0.813	0.717	281,604	No	220,317
FW-02.8D-09T (D/S)	0.000	0.813	0.717	281,604	No	220,317
FW-02.8D-06V	1.312	0.937	0.630	302,061	No	220,317
FW-02.7-04T (BR/SE)	1.013	0.867	0.717	373,724	Yes	220,317
FW-03.1D-01P	0.750	0.649	0.544	378,172	No	220,317
FW-03.1D-03P	0.750	0.649	0.544	378,172	No	220,317
FW-03.1D-06P_1	0.750	0.649	0.544	378,172	No	220,317
FW-03.1D-09P	0.750	0.649	0.544	378,172	No	220,317
FW-02.8D-24R (D/S)	1.312	0.837	0.589	379,689	No	220,317
FW-02.8D-03P	0.938	0.834	0.717	411,621	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
===> Grouped by Line: FW-02.8D SG HDR to SG 33						
FW-02.8D-16P	0.938	0.834	0.717	0.717	No	220,317
FW-02.8D-07E	0.938	0.891	0.717	0.717	Yes	220,317
FW-02.8D-19P	0.750	0.699	0.544	0.544	Yes	220,317
FW-02.8D-08P	0.938	0.870	0.717	0.717	Yes	220,317
FW-03.1D-08B	0.750	0.709	0.544	0.544	Yes	220,317
FW-02.7-04T	1.395	1.352	1.195	1.195	No	220,317
FW-02.8D-10P	0.938	0.854	0.717	0.717	No	220,317
FW-02.8D-01P	0.964	0.880	0.717	0.717	Yes	220,317
FW-03.1D-06P_2	0.750	0.698	0.544	0.544	No	220,317
FW-02.8D-12P_2	0.938	0.884	0.717	0.717	No	220,317
FW-02.7-01P	1.372	1.335	1.195	1.195	No	220,317
FW-02.7-03P	1.372	1.335	1.195	1.195	No	220,317
FW-02.8D-14P	0.938	0.901	0.717	0.717	Yes	220,317
FW-02.8D-24R	0.000	1.509	0.832	0.832	No	220,317
FW-03.1D-10N	0.750	0.748	0.478	0.478	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Run Name: HD: HD PMP TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.733

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: HD-11.1A HD PMP 31 to HDR							
HD-12.1A-01V	0.500	0.238	0.220	0.220	29,679	No	220,317
HD-11.1A-02V	0.500	0.380	0.326	0.326	155,379	No	220,317
HD-12.2A-01V	0.500	0.380	0.326	0.326	155,379	No	220,317
HD-12.1A-02R	0.000	0.257	0.206	0.206	160,170	Yes	220,317
HD-12.2A-06O	0.500	0.484	0.304	0.304	286,037	No	220,317
HD-11.2A-01R (D/S)	0.000	0.327	0.206	0.206	329,625	No	220,317
HD-11.1A-01N	0.500	0.473	0.304	0.304	479,424	No	220,317
HD-12.2A-03E	0.500	0.452	0.304	0.304	569,007	Yes	220,317
HD-12.2A-04T	0.500	0.428	0.304	0.304	586,762	No	220,317
HD-12.2A-04T (D/S)	0.000	0.428	0.304	0.304	586,762	No	220,317
HD-12.1A-02R (D/S)	0.000	0.464	0.304	0.304	755,992	Yes	220,317
HD-11.2A-01R	0.000	0.512	0.304	0.304	842,135	Yes	220,317
HD-12.2A-02P	0.500	0.447	0.304	0.304	923,897	No	220,317
HD-12.2A-07P	0.569	0.447	0.304	0.304	1,131,366	Yes	220,317
HD-12.2A-05P	0.664	0.614	0.304	0.304	2,126,449	No	220,317
Sorted By: Remaining Life							
====>Grouped by Line: HD-11.1B HD PMP 32 to HDR							
HD-12.2B-06O	0.500	0.286	0.304	0.304	-29,263	No	220,317
HD-12.1B-01V	0.322	0.280	0.220	0.220	103,526	No	220,317
HD-11.1B-02V	0.500	0.380	0.326	0.326	155,379	No	220,317
HD-12.2B-01V	0.500	0.380	0.326	0.326	155,379	No	220,317
HD-11.1B-01N	0.500	0.380	0.304	0.304	215,913	No	220,317
HD-11.2B-01R (D/S)	0.000	0.314	0.206	0.206	294,128	Yes	220,317
HD-12.1B-02R	0.000	0.318	0.206	0.206	349,905	No	220,317
HD-12.2B-08T (BR/SE)	0.000	0.444	0.304	0.304	496,589	Yes	220,317
HD-12.2B-03E	0.535	0.438	0.304	0.304	510,281	Yes	220,317
HD-12.1B-02R (D/S)	0.000	0.467	0.304	0.304	768,420	Yes	220,317
HD-11.2B-01R	0.000	0.505	0.304	0.304	813,706	Yes	220,317
HD-12.2B-08T (D/S)	0.000	0.634	0.382	0.382	950,288	Yes	220,317
HD-12.2B-02P	0.539	0.469	0.304	0.304	1,057,919	Yes	220,317
Sorted By: Remaining Life							

Component Name	Init.	Thickmess (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: HD-11.1B HD PMP 32 to HDR							
HD-12.2B-04T (D/S)	0.000	0.532	0.304	0.304	1,078,181	No	220,317
HD-12.2B-07P	0.527	0.451	0.304	0.304	1,164,343	Yes	220,317
HD-12.2B-05P	0.516	0.472	0.304	0.304	1,189,290	Yes	220,317
HD-12.2B-04T	0.500	0.562	0.304	0.304	1,220,324	No	220,317
HD-12.3-01P	0.654	0.628	0.382	0.382	1,545,838	Yes	220,317
====>Grouped by Line: HD-12.2A HD PMP HDR to CD SYS							
HD-12.2A-08T (D/S)	0.000	0.524	0.382	0.382	441,603	No	220,317
HD-12.4-03E	0.656	0.537	0.382	0.382	533,937	No	220,317
HD-12.4-07E	0.656	0.537	0.382	0.382	533,937	No	220,317
HD-12.4-09E	0.656	0.537	0.382	0.382	533,937	No	220,317
HD-12.4-11E	0.656	0.537	0.382	0.382	533,937	No	220,317
HD-12.4-13E	0.656	0.537	0.382	0.382	533,937	No	220,317
HD-12.4-17E	0.656	0.537	0.382	0.382	533,937	No	220,317
HD-12.2A-08T (BR/SE)	0.000	0.457	0.304	0.304	637,115	Yes	220,317
HD-12.4-05E	0.656	0.549	0.382	0.382	648,656	No	220,317
HD-12.4-02P	0.656	0.553	0.382	0.382	681,817	No	220,317
HD-12.4-15T	0.656	0.559	0.382	0.382	754,771	No	220,317
HD-12.4-15T (D/S)	0.000	0.559	0.382	0.382	754,771	No	220,317
HD-12.4-01E	0.789	0.610	0.382	0.382	769,716	Yes	220,317
HD-12.4-04P	0.656	0.575	0.382	0.382	988,224	No	220,317
HD-12.4-08P	0.656	0.575	0.382	0.382	988,224	No	220,317
HD-12.4-10P_1	0.656	0.575	0.382	0.382	988,224	No	220,317
HD-12.4-12P	0.656	0.575	0.382	0.382	988,224	No	220,317
HD-12.4-14P	0.656	0.575	0.382	0.382	988,224	No	220,317
HD-12.4-18P	0.656	0.575	0.382	0.382	988,224	No	220,317
HD-12.2A-08T	0.700	0.617	0.382	0.382	1,069,916	Yes	220,317
HD-12.4-06P	0.656	0.585	0.382	0.382	1,179,231	No	220,317
HD-12.4-16P	0.656	0.591	0.382	0.382	1,338,403	No	220,317
HD-12.4-10P_2	0.656	0.611	0.382	0.382	2,059,043	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: HD: HTR 31 TO COND
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit		
=====>Grouped by Line: HD-13.1 FWH 31A to Cond 33					
HD-13.1-19V	0.000	0.188	0.015	989,301	220,317
HD-13.1-01N	0.000	0.219	0.025	2,220,907	220,317
HD-13.1-21V	0.000	0.219	0.023	2,245,279	220,317
HD-13.1-09V	0.000	0.219	0.023	2,245,279	220,317
HD-13.1-23N	0.000	0.225	0.025	2,865,487	220,317
HD-13.1-16E	0.000	0.227	0.021	3,183,163	220,317
HD-13.1-14E	0.000	0.227	0.021	3,183,163	220,317
HD-13.1-03E	0.000	0.227	0.021	3,183,163	220,317
HD-13.1-10E	0.000	0.227	0.021	3,183,163	220,317
HD-13.1-11E	0.000	0.227	0.021	3,183,163	220,317
HD-13.1-08E	0.000	0.227	0.021	3,183,163	220,317
HD-13.1-05E	0.000	0.227	0.021	3,183,163	220,317
HD-13.1-12E	0.000	0.228	0.021	3,385,482	220,317
HD-13.1-04P	0.000	0.230	0.025	3,671,211	220,317
HD-13.1-20R (D/S)	0.000	0.231	0.021	4,009,297	220,317
HD-13.1-07T (D/S)	0.000	0.231	0.021	4,009,297	220,317
HD-13.1-07T	0.000	0.231	0.021	4,009,297	220,317
HD-13.1-02P	0.000	0.233	0.025	4,417,253	220,317
HD-13.1-17P	0.000	0.234	0.025	4,799,226	220,317
HD-13.1-13P	0.000	0.234	0.025	4,799,226	220,317
HD-13.1-15P	0.000	0.234	0.025	4,799,226	220,317
HD-13.1-06P	0.000	0.234	0.025	4,799,226	220,317
HD-13.1-18E	0.000	0.234	0.021	4,882,639	220,317
HD-13.1-22P	0.000	0.236	0.025	5,502,404	220,317
HD-13.1-18E (D/S)	0.000	2.393	0.014	7,986,195	220,317
HD-13.1-20R	0.000	2.403	0.014	8,880,289	220,317
=====>Grouped by Line: HD-13.2 FWH 31B to Cond 32					
HD-13.2-17V	0.000	0.188	0.015	995,971	220,317
HD-13.2-16E (D/S)	0.000	0.211	0.014	1,835,965	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====> Grouped by Line: HD-13.2 FWH 31B to Cond 32					
HD-13.2-18R	0.000	0.215	0.014	0.014	2,071,138
HD-13.2-01N	0.000	0.219	0.025	0.025	2,240,979
HD-13.2-08V	0.000	0.219	0.023	0.023	2,265,545
HD-13.2-19V	0.000	0.219	0.023	0.023	2,265,545
HD-13.2-07T	0.000	0.225	0.021	0.021	2,862,724
HD-13.2-21N	0.000	0.225	0.025	0.025	2,890,690
HD-13.2-09E	0.000	0.227	0.021	0.021	3,210,895
HD-13.2-10E	0.000	0.227	0.021	0.021	3,210,895
HD-13.2-03E	0.000	0.227	0.021	0.021	3,210,895
HD-13.2-12E	0.000	0.227	0.021	0.021	3,210,895
HD-13.2-14E	0.000	0.227	0.021	0.021	3,210,895
HD-13.2-07T (BR/SE)	0.000	0.229	0.021	0.021	3,525,786
HD-13.2-05E	0.000	0.230	0.021	0.021	3,643,473
HD-13.2-11P	0.000	0.230	0.025	0.025	3,702,829
HD-13.2-04P	0.000	0.230	0.025	0.025	3,702,829
HD-13.2-18R (D/S)	0.000	0.231	0.021	0.021	4,043,606
HD-13.2-02P	0.000	0.233	0.025	0.025	4,454,809
HD-13.2-13P	0.000	0.234	0.025	0.025	4,839,823
HD-13.2-15P	0.000	0.234	0.025	0.025	4,839,823
HD-13.2-16E	0.000	0.234	0.021	0.021	4,923,901
HD-13.2-06P	0.000	0.236	0.025	0.025	5,548,599
HD-13.2-20P	0.000	0.236	0.025	0.025	5,548,599
====> Grouped by Line: HD-13.3 FWH 31C to Cond 31					
HD-13.3-17V	0.000	0.188	0.015	0.015	992,099
HD-13.3-16E (D/S)	0.000	0.211	0.014	0.014	1,829,273
HD-13.3-18R	0.000	0.215	0.014	0.014	2,063,656
HD-13.3-01N	0.000	0.219	0.025	0.025	2,228,603
HD-13.3-19V	0.000	0.219	0.023	0.023	2,253,042
HD-13.3-08V	0.000	0.219	0.023	0.023	2,253,042
HD-13.3-07T	0.000	0.225	0.021	0.021	2,847,138
HD-13.3-21N	0.000	0.225	0.025	0.025	2,874,960
HD-13.3-12E	0.000	0.227	0.021	0.021	3,193,513
HD-13.3-14E	0.000	0.227	0.021	0.021	3,193,513
HD-13.3-03E	0.000	0.227	0.021	0.021	3,193,513
HD-13.3-09E	0.000	0.227	0.021	0.021	3,193,513
HD-13.3-10E	0.000	0.227	0.021	0.021	3,193,513
HD-13.3-07T (BR/SE)	0.000	0.229	0.021	0.021	3,506,778
HD-13.3-05E	0.000	0.229	0.021	0.021	3,623,857

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: HD-13.3 FWH 31C to Cond 31								
HD-13.3-04P	0.000	0.230	0.025	0.025	0.025	3,682,907	No	220,317
HD-13.3-11P	0.000	0.230	0.025	0.025	0.025	3,682,907	No	220,317
HD-13.3-18R (D/S)	0.000	0.231	0.021	0.021	0.021	4,021,926	No	220,317
HD-13.3-02P	0.000	0.233	0.025	0.025	0.025	4,431,006	No	220,317
HD-13.3-13P	0.000	0.234	0.025	0.025	0.025	4,814,032	No	220,317
HD-13.3-15P	0.000	0.234	0.025	0.025	0.025	4,814,032	No	220,317
HD-13.3-16E	0.000	0.234	0.021	0.021	0.021	4,897,676	No	220,317
HD-13.3-20P	0.000	0.236	0.025	0.025	0.025	5,519,150	No	220,317
HD-13.3-06P	0.000	0.236	0.025	0.025	0.025	5,519,150	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: HD: HTR 32 TO HTR 31
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.863

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Ihoop				
====>Grouped by Line: HD-08.1A FWH 32A to FWH 31A							
HD-09.1A-01V	0.250	0.037	0.019	0.019	75,928	No	220,317
HD-8.1A-10V	0.250	0.098	0.023	0.023	452,074	No	220,317
HD-09.2A-01V	0.250	0.098	0.023	0.023	452,074	No	220,317
HD-8.1A-07T (D/S)	0.000	0.098	0.021	0.021	461,188	No	220,317
HD-8.2A-01R (D/S)	0.000	0.114	0.018	0.018	645,780	No	220,317
HD-8.1A-07T (BR/SE)	0.000	0.128	0.021	0.021	805,592	No	220,317
HD-8.1A-09E	0.250	0.137	0.021	0.021	945,215	No	220,317
HD-8.1A-05E	0.250	0.137	0.021	0.021	945,215	No	220,317
HD-8.1A-03E	0.250	0.137	0.021	0.021	945,215	No	220,317
HD-8.2A-01R	0.000	0.143	0.021	0.021	1,051,595	No	220,317
HD-8.1A-01N	0.375	0.217	0.021	0.021	1,132,961	No	220,317
HD-8.1A-04P	0.250	0.153	0.021	0.021	1,236,097	No	220,317
HD-8.1A-08P	0.250	0.156	0.021	0.021	1,351,794	No	220,317
HD-8.1A-02P	0.250	0.159	0.021	0.021	1,541,283	No	220,317
HD-8.1A-06P	0.250	0.174	0.021	0.021	1,838,803	No	220,317
HD-09.1A-02R	0.000	0.265	0.018	0.018	1,904,014	No	220,317
HD-09.1A-02R (D/S)	0.000	0.245	0.021	0.021	2,248,733	Yes	220,317
HD-09.2A-02P	0.406	0.406	0.020	0.020	100,000,000	No	220,317
HD-09.2A-03E	0.406	0.406	0.020	0.020	100,000,000	No	220,317
HD-09.2A-04T	0.406	0.406	0.020	0.020	100,000,000	No	220,317
HD-09.2A-04T (BR/SE)	0.000	0.406	0.020	0.020	100,000,000	No	220,317
HD-09.2A-04T (D/S)	0.000	0.406	0.020	0.020	100,000,000	No	220,317
====>Grouped by Line: HD-08.1B FWH 32B to FWH 31B							
HD-09.1B-01V	0.250	0.037	0.019	0.019	75,928	No	220,317
HD-8.1B-10V	0.250	0.098	0.023	0.023	452,074	No	220,317
HD-09.2B-01V	0.250	0.098	0.023	0.023	452,074	No	220,317
HD-8.1B-07T (D/S)	0.000	0.098	0.021	0.021	461,188	No	220,317
HD-8.2B-01R (D/S)	0.000	0.114	0.018	0.018	645,780	No	220,317
HD-8.1B-07T (BR/SE)	0.000	0.128	0.021	0.021	805,592	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
===> Grouped by Line: HD-08.1B FWH 32B to FWH 31B						
HD-8.1B-03E	0.250	0.137	0.021	0.021	No	220,317
HD-8.1B-05E	0.250	0.137	0.021	0.021	No	220,317
HD-8.1B-09E	0.250	0.137	0.021	0.021	No	220,317
HD-8.2B-01R	0.000	0.143	0.021	0.021	No	220,317
HD-8.1B-01N	0.375	0.217	0.021	0.021	No	220,317
HD-8.1B-04P	0.250	0.153	0.021	0.021	No	220,317
HD-8.1B-08P	0.250	0.156	0.021	0.021	No	220,317
HD-8.1B-02P	0.250	0.159	0.021	0.021	No	220,317
HD-09.1B-02R	0.000	0.220	0.018	0.018	Yes	220,317
HD-8.1B-06P	0.250	0.174	0.021	0.021	No	220,317
HD-09.1B-02R (D/S)	0.000	0.314	0.021	0.021	Yes	220,317
HD-09.2B-02P	0.406	0.406	0.020	0.020	No	220,317
HD-09.2B-03E	0.406	0.406	0.020	0.020	No	220,317
HD-09.2B-04T	0.406	0.406	0.020	0.020	No	220,317
HD-09.2B-04T (BR/SE)	0.000	0.406	0.020	0.020	No	220,317
HD-09.2B-04T (D/S)	0.000	0.406	0.020	0.020	No	220,317
Sorted By: Remaining Life						
===> Grouped by Line: HD-08.1C FWH 32C to FWH 31C						
HD-09.1C-01V	0.250	0.037	0.019	0.019	No	220,317
HD-8.1C-10V	0.250	0.098	0.023	0.023	No	220,317
HD-09.2C-01V	0.250	0.098	0.023	0.023	No	220,317
HD-8.1C-07T (D/S)	0.000	0.098	0.021	0.021	No	220,317
HD-8.2C-01R (D/S)	0.000	0.114	0.018	0.018	No	220,317
HD-8.1C-07T (BR/SE)	0.000	0.128	0.021	0.021	No	220,317
HD-8.1C-03E	0.250	0.137	0.021	0.021	No	220,317
HD-8.1C-05E	0.250	0.137	0.021	0.021	No	220,317
HD-8.1C-09E	0.250	0.137	0.021	0.021	No	220,317
HD-8.2C-01R	0.000	0.143	0.021	0.021	No	220,317
HD-8.1C-01N	0.375	0.217	0.021	0.021	No	220,317
HD-8.1C-04P	0.250	0.153	0.021	0.021	No	220,317
HD-8.1C-08P	0.250	0.156	0.021	0.021	No	220,317
HD-8.1C-02P	0.250	0.159	0.021	0.021	No	220,317
HD-09.1C-02R	0.000	0.229	0.018	0.018	No	220,317
HD-8.1C-06P	0.250	0.174	0.021	0.021	No	220,317
HD-09.1C-02R (D/S)	0.000	0.260	0.021	0.021	No	220,317
HD-09.2C-02P	0.406	0.406	0.020	0.020	No	220,317
HD-09.2C-03E	0.406	0.406	0.020	0.020	No	220,317
HD-09.2C-04T	0.406	0.406	0.020	0.020	No	220,317
HD-09.2C-04T (BR/SE)	0.000	0.406	0.020	0.020	No	220,317
Sorted By: Remaining Life						

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: HD-08.1C FWH 32C to FWH 31C								
HD-09.2C-04T (D/S)	0.000	0.406	0.020	0.020	0.020	100,000,000	No	220,317
====> Grouped by Line: HD-09.3A FWH 32A to FWH 31A								
HD-09.3A-01P	0.409	0.409	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.3A-02N	0.406	0.363	0.020	0.020	0.020	100,000,000	No	220,317
====> Grouped by Line: HD-09.3B FWH 32B to FWH 31B								
HD-09.3B-01P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.3B-02N	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
====> Grouped by Line: HD-09.3C FWH 32C to FWH 31C								
HD-09.3C-01P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.3C-02N	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
====> Grouped by Line: HD-09.4A FWH 32A to FWH 31A								
HD-09.4A-01P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4A-02E	0.462	0.462	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4A-03P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4A-04N	0.375	0.354	0.020	0.020	0.020	100,000,000	No	220,317
====> Grouped by Line: HD-09.4B FWH 32B to FWH 31B								
HD-09.4B-01P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4B-02E	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4B-03P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4B-04N	0.375	0.375	0.020	0.020	0.020	100,000,000	No	220,317
====> Grouped by Line: HD-09.4C FWH 32C to FWH 31C								
HD-09.4C-01P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4C-02E	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4C-03P	0.406	0.406	0.020	0.020	0.020	100,000,000	No	220,317
HD-09.4C-04N	0.375	0.375	0.020	0.020	0.020	100,000,000	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: HD: HTR 33 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.045

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit		
=====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A					
HD-07.1A-01V	0.280	0.022	0.012	No	220,317
HD-07.2A-01V	0.250	0.106	0.015	No	220,317
HD-6.1A-01N	0.250	0.106	0.014	No	220,317
HD-6.1A-26E	0.250	0.143	0.014	No	220,317
HD-6.1A-24E	0.250	0.143	0.014	No	220,317
HD-6.1A-22E	0.250	0.143	0.014	No	220,317
HD-6.1A-20E	0.250	0.143	0.014	No	220,317
HD-6.1A-18E	0.250	0.143	0.014	No	220,317
HD-6.1A-16E	0.250	0.143	0.014	No	220,317
HD-6.1A-14E	0.250	0.143	0.014	No	220,317
HD-6.1A-13E	0.250	0.143	0.014	No	220,317
HD-6.1A-11E	0.250	0.143	0.014	No	220,317
HD-6.1A-09E	0.250	0.143	0.014	No	220,317
HD-6.1A-07E	0.250	0.143	0.014	No	220,317
HD-6.1A-05E	0.250	0.143	0.014	No	220,317
HD-6.1A-03E	0.250	0.143	0.014	No	220,317
HD-6.1A-30E	0.250	0.143	0.014	No	220,317
HD-6.1A-32E	0.250	0.143	0.014	No	220,317
HD-6.1A-34E	0.250	0.143	0.014	No	220,317
HD-6.1A-37E	0.250	0.149	0.014	No	220,317
HD-6.1A-15P	0.250	0.146	0.014	No	220,317
HD-6.1A-39E	0.250	0.155	0.014	No	220,317
HD-6.1A-10P	0.250	0.158	0.014	No	220,317
HD-6.1A-28T	0.250	0.163	0.014	No	220,317
HD-6.1A-28T (D/S)	0.000	0.163	0.014	No	220,317
HD-6.1A-44T	0.250	0.163	0.014	No	220,317
HD-6.1A-44T (D/S)	0.000	0.163	0.014	No	220,317
HD-07.2A-05R	0.000	0.167	0.014	No	220,317
HD-6.1A-02P	0.250	0.162	0.014	No	220,317
HD-6.2A-01E (D/S)	0.000	0.330	0.011	Yes	220,317

Sorted By: Remaining Life

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
Sorted By: Remaining Life							
====> Grouped by Line: HD-06.1A FWH 33A to FWH 32A							
HD-6.1A-19P	0.250	0.169	0.014	0.014	1,545,026	No	220,317
HD-6.1A-08P	0.250	0.169	0.014	0.014	1,545,026	No	220,317
HD-6.1A-31P	0.250	0.174	0.014	0.014	1,602,413	No	220,317
HD-6.1A-38P	0.250	0.176	0.014	0.014	1,620,547	No	220,317
HD-6.1A-25P_1	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-23P_1	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-21P_1	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-17P_1	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-43P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-12P_1	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-06P_1	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-04P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-27P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-33P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-41E	0.250	0.256	0.014	0.014	1,637,958	Yes	220,317
HD-6.1A-42P	0.250	0.232	0.014	0.014	1,703,758	Yes	220,317
HD-07.1A.02R	0.000	0.338	0.011	0.011	1,738,043	Yes	220,317
HD-07.2A-03T (BR/SE)	0.000	0.375	0.014	0.014	1,804,030	Yes	220,317
HD-6.1A-40P	0.250	0.187	0.014	0.014	1,958,935	No	220,317
HD-07.1A.02R (D/S)	0.000	0.257	0.014	0.014	2,023,262	Yes	220,317
HD-07.2A-02P	0.250	0.208	0.014	0.014	2,198,171	Yes	220,317
HD-07.2A-04P	0.250	0.190	0.014	0.014	2,203,380	No	220,317
HD-6.1A-29P	0.250	0.192	0.014	0.014	2,227,063	No	220,317
HD-07.2A-05R (D/S)	0.000	0.192	0.018	0.018	2,239,172	No	220,317
HD-07.2A-03T	0.250	0.470	0.014	0.014	2,279,653	Yes	220,317
HD-07.3A-01N	0.365	0.287	0.018	0.018	2,491,262	No	220,317
HD-6.2A-01E	0.000	0.423	0.014	0.014	4,087,039	Yes	220,317
HD-6.1A-25P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
HD-6.1A-21P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
HD-6.1A-17P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
HD-6.1A-12P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
HD-6.1A-06P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
Sorted By: Remaining Life							
====> Grouped by Line: HD-06.1B FWH 33B to FWH 32B							
HD-07.1B-01V	0.280	0.033	0.012	0.012	63,064	No	220,317
HD-07.2B-01V	0.250	0.106	0.015	0.015	452,288	No	220,317
HD-6.1B-01N	0.250	0.106	0.014	0.014	457,415	No	220,317
HD-6.2B-01E (D/S)	0.000	0.127	0.011	0.011	556,135	No	220,317
HD-6.1B-06E	0.250	0.143	0.014	0.014	871,927	No	220,317

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: HD-06.1B FWH 33B to FWH 32B							
HD-6.1B-08E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-12E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-13E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-15E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-17E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-19E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-21E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-25E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-27E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-29E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-36E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-03E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-04E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-10E	0.250	0.149	0.014	0.014	963,029	No	220,317
HD-6.1B-32E	0.250	0.149	0.014	0.014	963,029	No	220,317
HD-6.1B-14P	0.250	0.146	0.014	0.014	1,028,879	No	220,317
HD-6.1B-34E	0.250	0.155	0.014	0.014	1,065,173	No	220,317
HD-6.1B-09P	0.250	0.158	0.014	0.014	1,121,033	No	220,317
HD-6.1B-16P_1	0.250	0.158	0.014	0.014	1,121,033	No	220,317
HD-6.1B-37P	0.250	0.158	0.014	0.014	1,121,033	No	220,317
HD-6.1B-05P_1	0.250	0.158	0.014	0.014	1,121,033	No	220,317
HD-6.1B-23T	0.250	0.163	0.014	0.014	1,243,925	No	220,317
HD-6.1B-23T (D/S)	0.000	0.163	0.014	0.014	1,243,925	No	220,317
HD-6.1B-38T	0.250	0.163	0.014	0.014	1,243,925	No	220,317
HD-6.1B-38T (D/S)	0.000	0.163	0.014	0.014	1,243,925	No	220,317
HD-07.1B-02R	0.000	0.261	0.011	0.011	1,328,305	Yes	220,317
HD-07.2B-05R	0.000	0.167	0.014	0.014	1,360,690	No	220,317
HD-6.1B-02P	0.250	0.162	0.014	0.014	1,370,246	No	220,317
HD-6.1B-07P	0.250	0.169	0.014	0.014	1,545,026	No	220,317
HD-6.1B-20P	0.250	0.169	0.014	0.014	1,545,026	No	220,317
HD-6.1B-26P	0.250	0.174	0.014	0.014	1,602,413	No	220,317
HD-6.1B-33P	0.250	0.176	0.014	0.014	1,620,547	No	220,317
HD-6.1B-11P_1	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1B-18P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1B-22P_1	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1B-28P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.2B-01E	0.000	0.178	0.014	0.014	1,637,180	No	220,317
HD-07.2B-03T (BR/SE)	0.000	0.354	0.014	0.014	1,698,892	Yes	220,317
HD-07.1B-02R (D/S)	0.000	0.238	0.014	0.014	1,863,343	Yes	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)	
	Init.	Pred.[1]					
====> Grouped by Line: HD-06.1B FWH 33B to FWH 32B							
HD-6.1B-35P	0.250	0.187	0.014	0.014	1,958,935	No	220,317
HD-07.2B-02P	0.250	0.187	0.014	0.014	1,958,935	No	220,317
HD-07.2B-03T	0.250	0.445	0.014	0.014	2,154,489	Yes	220,317
HD-07.2B-04P	0.250	0.190	0.014	0.014	2,203,380	No	220,317
HD-6.1B-24P	0.250	0.192	0.014	0.014	2,227,063	No	220,317
HD-07.2B-05R (D/S)	0.000	0.192	0.018	0.018	2,239,172	No	220,317
HD-07.3B-01N	0.365	0.287	0.018	0.018	2,491,262	No	220,317
HD-6.1B-11P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
HD-6.1B-16P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
HD-6.1B-22P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
HD-6.1B-05P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
====> Grouped by Line: HD-06.1C FWH 33C to FWH 32C							
HD-6.1C-01N	0.250	0.106	0.014	0.014	457,415	No	220,317
HD-6.1C-03E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1C-05E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1C-07E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1C-09E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1C-11E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1C-13E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1C-15E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1C-17E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1C-21E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1C-23E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1C-25E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1C-32E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1C-28E	0.250	0.149	0.014	0.014	963,029	No	220,317
HD-6.1C-30E	0.250	0.155	0.014	0.014	1,065,173	No	220,317
HD-6.1C-33P	0.250	0.153	0.014	0.014	1,086,266	No	220,317
HD-6.1C-08P_1	0.250	0.158	0.014	0.014	1,121,033	No	220,317
HD-6.1C-19T	0.250	0.163	0.014	0.014	1,243,925	No	220,317
HD-6.1C-19T (D/S)	0.000	0.163	0.014	0.014	1,243,925	No	220,317
HD-6.1C-34T	0.250	0.163	0.014	0.014	1,243,925	No	220,317
HD-6.1C-34T (D/S)	0.000	0.163	0.014	0.014	1,243,925	No	220,317
HD-07.2C-03T	0.250	0.277	0.014	0.014	1,313,388	Yes	220,317
HD-07.2C-05R	0.000	0.167	0.014	0.014	1,360,690	No	220,317
HD-6.1C-02P	0.250	0.162	0.014	0.014	1,370,246	No	220,317
HD-07.1C-02R	0.000	0.282	0.011	0.011	1,439,634	Yes	220,317
HD-07.1C-01V	0.280	0.506	0.012	0.012	1,472,439	No	220,317

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: HD-06.1C FWH 33C to FWH 32C							
HD-6.1C-06P	0.250	0.169	0.014	0.014	1,545,026	No	220,317
HD-6.1C-12P	0.250	0.169	0.014	0.014	1,545,026	No	220,317
HD-6.1C-22P	0.250	0.174	0.014	0.014	1,602,413	No	220,317
HD-6.1C-29P	0.250	0.176	0.014	0.014	1,620,547	No	220,317
HD-6.1C-04P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1C-10P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1C-14P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1C-16P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1C-18P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1C-24P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-07.1C-02R (D/S)	0.000	0.236	0.014	0.014	1,849,406	Yes	220,317
HD-6.2C-01E (D/S)	0.000	0.405	0.011	0.011	1,893,876	Yes	220,317
HD-6.1C-31P	0.250	0.187	0.014	0.014	1,958,935	No	220,317
HD-07.2C-03T (BR/SE)	0.000	0.430	0.014	0.014	2,079,391	Yes	220,317
HD-07.2C-04P	0.250	0.190	0.014	0.014	2,203,380	No	220,317
HD-6.1C-20P	0.250	0.192	0.014	0.014	2,227,063	No	220,317
HD-6.1C-35P	0.250	0.192	0.014	0.014	2,227,063	No	220,317
HD-07.2C-05R (D/S)	0.000	0.192	0.018	0.018	2,239,172	No	220,317
HD-07.2C-02P	0.250	0.219	0.014	0.014	2,325,466	Yes	220,317
HD-07.3C-01N	0.365	0.287	0.018	0.018	2,491,262	No	220,317
HD-07.2C-01V	0.250	0.633	0.015	0.015	3,090,431	No	220,317
HD-6.2C-01E	0.000	0.391	0.014	0.014	3,774,667	Yes	220,317
HD-6.1C-08P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: HD: HTR 34 TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.911

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
===>Grouped by Line: HD-04.1A FWH 34A to FWH 33A							
HD-4.2A-02V	0.237	-0.003	0.016	0.016	-36,452	No	220,317
HD-05.1A-02R	0.000	0.026	0.012	0.012	35,368	Yes	220,317
HD-05.1A-01V	0.216	0.171	0.012	0.012	213,992	No	220,317
HD-4.3A-01R (D/S)	0.000	0.175	0.012	0.012	345,422	No	220,317
HD-4.3A-01R	0.000	0.193	0.015	0.015	484,524	No	220,317
HD-4.1A-01N	0.280	0.161	0.022	0.022	515,316	No	220,317
HD-4.2A-01E (D/S)	0.000	0.225	0.015	0.015	643,254	No	220,317
HD-05.2A-01T	0.280	0.223	0.022	0.022	747,287	Yes	220,317
HD-05.2A-06N	0.280	0.184	0.022	0.022	755,203	No	220,317
HD-05.2A-01T (BR/SE)	0.000	0.247	0.022	0.022	836,556	Yes	220,317
HD-05.2A-04E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1A-14E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1A-12E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1A-10E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1A-08E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1A-05E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1A-06E	0.280	0.196	0.022	0.022	926,552	No	220,317
HD-05.2A-03E	0.280	0.201	0.022	0.022	1,009,630	No	220,317
HD-05.2A-05P	0.280	0.204	0.022	0.022	1,055,063	No	220,317
HD-4.1A-03T	0.280	0.196	0.022	0.022	1,077,242	No	220,317
HD-4.1A-03T (D/S)	0.000	0.196	0.022	0.022	1,077,242	No	220,317
HD-4.1A-02P	0.280	0.204	0.022	0.022	1,254,936	No	220,317
HD-4.1A-11P	0.280	0.216	0.022	0.022	1,441,491	No	220,317
HD-4.1A-15P	0.280	0.216	0.022	0.022	1,441,491	No	220,317
HD-4.1A-13P	0.280	0.220	0.022	0.022	1,474,866	No	220,317
HD-4.1A-09P_1	0.280	0.220	0.022	0.022	1,474,866	No	220,317
HD-4.1A-07P	0.280	0.220	0.022	0.022	1,474,866	No	220,317
HD-05.1A-02R (D/S)	0.000	0.261	0.022	0.022	1,483,413	Yes	220,317
HD-4.1A-04P	0.280	0.224	0.022	0.022	1,876,867	No	220,317
HD-05.2A-02P	0.280	0.230	0.022	0.022	1,930,908	Yes	220,317

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: HD-04.1A FWH 34A to FWH 33A							
HD-4.2A-01E	0.000	0.300	0.022	0.022	2,068,289	No	220,317
HD-4.1A-09P_2	0.280	0.254	0.022	0.022	3,917,358	No	220,317
====> Grouped by Line: HD-04.1B FWH 34B to FWH 33B							
HD-4.2B-02V	0.237	-0.003	0.016	0.016	-36,452	No	220,317
HD-05.1B-01V	0.216	0.217	0.012	0.012	275,911	No	220,317
HD-4.3B-01R (D/S)	0.000	0.177	0.012	0.012	348,073	No	220,317
HD-05.1B-02R	0.000	0.197	0.012	0.012	446,987	No	220,317
HD-4.3B-01R	0.000	0.203	0.015	0.015	509,439	Yes	220,317
HD-4.1B-01N	0.280	0.161	0.022	0.022	515,316	No	220,317
HD-4.1B-05T (D/S)	0.000	0.161	0.022	0.022	515,316	No	220,317
HD-4.2B-01E (D/S)	0.000	0.250	0.015	0.015	720,958	Yes	220,317
HD-05.1B-02R (D/S)	0.000	0.141	0.022	0.022	739,505	No	220,317
HD-05.2B-06N	0.280	0.184	0.022	0.022	755,203	No	220,317
HD-4.1B-05T (BR/SE)	0.000	0.184	0.022	0.022	755,203	No	220,317
HD-05.2B-04E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1B-07E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1B-09E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1B-12E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1B-14E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1B-16E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1B-10E	0.280	0.196	0.022	0.022	926,552	No	220,317
HD-05.2B-01T	0.280	0.276	0.022	0.022	945,380	Yes	220,317
HD-05.2B-03E	0.280	0.201	0.022	0.022	1,009,630	No	220,317
HD-4.1B-03E	0.280	0.201	0.022	0.022	1,009,630	No	220,317
HD-05.2B-05P	0.280	0.204	0.022	0.022	1,055,063	No	220,317
HD-05.2B-01T (BR/SE)	0.000	0.308	0.022	0.022	1,064,406	Yes	220,317
HD-4.1B-06P	0.280	0.208	0.022	0.022	1,155,016	No	220,317
HD-4.1B-02P	0.280	0.204	0.022	0.022	1,254,936	No	220,317
HD-4.1B-08P	0.280	0.210	0.022	0.022	1,397,092	No	220,317
HD-4.1B-13P	0.280	0.216	0.022	0.022	1,441,491	No	220,317
HD-4.1B-17P	0.280	0.216	0.022	0.022	1,441,491	No	220,317
HD-4.1B-11P_1	0.280	0.220	0.022	0.022	1,474,866	No	220,317
HD-4.1B-15P	0.280	0.220	0.022	0.022	1,474,866	No	220,317
HD-4.2B-01E	0.000	0.231	0.022	0.022	1,551,574	Yes	220,317
HD-4.1B-04P	0.280	0.218	0.022	0.022	1,658,788	No	220,317
HD-05.2B-02P	0.280	0.229	0.022	0.022	1,921,266	No	220,317
HD-4.1B-11P_2	0.280	0.254	0.022	0.022	3,917,358	No	220,317

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
Sorted By: Remaining Life							
====> Grouped by Line: HD-04.1C FWH 34C to FWH 33C							
HD-4.2C-02V	0.237	-0.003	0.016	0.016	-36,452	No	220,317
HD-05.1C-01V	0.216	0.149	0.012	0.012	183,674	No	220,317
HD-4.3C-01R (D/S)	0.000	0.202	0.012	0.012	400,793	No	220,317
HD-05.1C-02R	0.000	0.201	0.012	0.012	455,430	No	220,317
HD-4.3C-01R	0.000	0.185	0.015	0.015	460,590	No	220,317
HD-4.1C-01N	0.280	0.161	0.022	0.022	515,316	No	220,317
HD-05.1C-02R (D/S)	0.000	0.122	0.022	0.022	617,806	No	220,317
HD-4.2C-01E (D/S)	0.000	0.220	0.015	0.015	627,577	Yes	220,317
HD-05.2C-06N	0.280	0.184	0.022	0.022	755,203	No	220,317
HD-4.1C-03E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1C-05E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1C-08E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1C-10E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1C-12E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1C-14E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1C-16E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1C-18E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1C-20E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-4.1C-22E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-05.2C-04E	0.280	0.192	0.022	0.022	852,455	No	220,317
HD-05.2C-03E	0.280	0.201	0.022	0.022	1,009,630	No	220,317
HD-05.2C-01T	0.280	0.299	0.022	0.022	1,031,144	Yes	220,317
HD-4.1C-09P	0.280	0.204	0.022	0.022	1,055,063	No	220,317
HD-05.2C-05P	0.280	0.204	0.022	0.022	1,055,063	No	220,317
HD-4.1C-06T	0.280	0.196	0.022	0.022	1,077,242	No	220,317
HD-4.1C-06T (D/S)	0.000	0.196	0.022	0.022	1,077,242	No	220,317
HD-05.2C-01T (BR/SE)	0.000	0.328	0.022	0.022	1,139,011	Yes	220,317
HD-4.1C-02P	0.280	0.204	0.022	0.022	1,254,936	No	220,317
HD-4.1C-11P	0.280	0.210	0.022	0.022	1,397,092	No	220,317
HD-4.1C-19P	0.280	0.216	0.022	0.022	1,441,491	No	220,317
HD-4.1C-23P	0.280	0.216	0.022	0.022	1,441,491	No	220,317
HD-4.1C-04P	0.280	0.220	0.022	0.022	1,474,866	No	220,317
HD-4.1C-13P_1	0.280	0.220	0.022	0.022	1,474,866	No	220,317
HD-4.1C-15P	0.280	0.220	0.022	0.022	1,474,866	No	220,317
HD-4.1C-17P_1	0.280	0.220	0.022	0.022	1,474,866	No	220,317
HD-4.1C-21P	0.280	0.220	0.022	0.022	1,474,866	No	220,317
HD-4.2C-01E	0.000	0.226	0.022	0.022	1,514,661	Yes	220,317
HD-4.1C-07P	0.280	0.224	0.022	0.022	1,876,867	No	220,317
HD-05.2C-02P	0.280	0.229	0.022	0.022	1,921,266	No	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: HD-04.1C FWH 34C to FWH 33C								
HD-4.1C-13P_2	0.280	0.254	0.022	0.022	0.022	3,917,358	No	220,317
HD-4.1C-17P_2	0.280	0.254	0.022	0.022	0.022	3,917,358	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: HD: HTR 35 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.487

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			
=====>Grouped by Line: HD-03.1A FWH 35A to HD TK						
HD-03.1A-01N	0.240	0.150	0.089	243,564	No	220,317
HD-03.1A-15V	0.250	0.160	0.095	256,039	No	220,317
HD-03.1A-09E	0.250	0.183	0.089	505,869	No	220,317
HD-03.1A-07E	0.250	0.183	0.089	505,869	No	220,317
HD-03.1A-03E	0.250	0.183	0.089	505,869	No	220,317
HD-03.1A-05E	0.250	0.183	0.089	505,869	No	220,317
HD-03.1A-06P	0.250	0.192	0.089	640,937	No	220,317
HD-03.1A-11E	0.250	0.214	0.089	672,303	Yes	220,317
HD-03.1A-14E	0.250	0.227	0.089	742,099	Yes	220,317
HD-03.1A-13P	0.250	0.216	0.089	789,923	Yes	220,317
HD-03.1A-02P	0.250	0.201	0.089	826,032	No	220,317
HD-03.1A-12E	0.250	0.246	0.089	844,107	Yes	220,317
HD-03.1A-10P	0.250	0.205	0.089	920,800	No	220,317
HD-03.1A-08P	0.250	0.205	0.089	920,800	No	220,317
HD-03.1A-04P	0.250	0.205	0.089	920,800	No	220,317
HD-03.1A-16N	0.250	0.303	0.089	1,061,811	No	220,317
Sorted By: Remaining Life						
=====>Grouped by Line: HD-03.1B FWH 35B to HD TK						
HD-03.1B-01N	0.240	0.150	0.089	243,564	No	220,317
HD-03.1B-13V	0.250	0.160	0.095	256,039	No	220,317
HD-03.1B-14N	0.250	0.178	0.089	441,035	No	220,317
HD-03.1B-05E	0.250	0.183	0.089	505,869	No	220,317
HD-03.1B-07E	0.250	0.183	0.089	505,869	No	220,317
HD-03.1B-03E	0.250	0.183	0.089	505,869	No	220,317
HD-03.1B-10E	0.250	0.183	0.089	505,869	No	220,317
HD-03.1B-12E	0.250	0.183	0.089	505,869	No	220,317
HD-03.1B-11P	0.250	0.192	0.089	640,937	No	220,317
HD-03.1B-09E	0.250	0.232	0.089	770,022	Yes	220,317
HD-03.1B-02P	0.250	0.201	0.089	826,032	No	220,317
HD-03.1B-06P	0.250	0.205	0.089	920,800	No	220,317
Sorted By: Remaining Life						

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: HD-03.1B FWH 35B to HD TK								
HD-03.1B-04P	0.250	0.205	0.089	0.089	0.089	920,800	No	220,317
HD-03.1B-08P	0.250	0.205	0.089	0.089	0.089	920,800	No	220,317
====> Grouped by Line: HD-03.1C FWH 35C to HD TK								
HD-03.1C-01N	0.240	0.150	0.089	0.089	0.089	243,564	No	220,317
HD-03.1C-17V	0.250	0.160	0.095	0.095	0.095	256,039	No	220,317
HD-03.1C-18N	0.250	0.178	0.089	0.089	0.089	441,035	No	220,317
HD-03.1C-03E	0.250	0.183	0.089	0.089	0.089	505,869	No	220,317
HD-03.1C-05E	0.250	0.183	0.089	0.089	0.089	505,869	No	220,317
HD-03.1C-07E	0.250	0.183	0.089	0.089	0.089	505,869	No	220,317
HD-03.1C-09E	0.250	0.183	0.089	0.089	0.089	505,869	No	220,317
HD-03.1C-11E	0.250	0.183	0.089	0.089	0.089	505,869	No	220,317
HD-03.1C-14E	0.250	0.221	0.089	0.089	0.089	709,427	Yes	220,317
HD-03.1C-13E	0.250	0.241	0.089	0.089	0.089	816,805	Yes	220,317
HD-03.1C-02P	0.250	0.201	0.089	0.089	0.089	826,032	No	220,317
HD-03.1C-16E	0.250	0.244	0.089	0.089	0.089	832,911	Yes	220,317
HD-03.1C-15P	0.250	0.225	0.089	0.089	0.089	843,489	Yes	220,317
HD-03.1C-04P	0.250	0.205	0.089	0.089	0.089	920,800	No	220,317
HD-03.1C-06P	0.250	0.205	0.089	0.089	0.089	920,800	No	220,317
HD-03.1C-08P	0.250	0.205	0.089	0.089	0.089	920,800	No	220,317
HD-03.1C-10P	0.250	0.205	0.089	0.089	0.089	920,800	No	220,317
HD-03.1C-12P	0.250	0.205	0.089	0.089	0.089	920,800	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Run Name: HD: HTR 36 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.405

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			
=====>Grouped by Line: HD-01.1A FWH 36A to HD TK						
HD-01.1A-01N	0.288	0.166	0.137	90,577	No	220,317
HD-01.1A-03E	0.307	0.216	0.159	238,383	No	220,317
HD-01.1A-05E	0.307	0.216	0.159	238,383	No	220,317
HD-01.1A-07E	0.307	0.216	0.159	238,383	No	220,317
HD-01.2A-01R (D/S)	0.000	0.288	0.098	440,545	Yes	220,317
HD-01.1A-02P	0.307	0.240	0.159	469,353	No	220,317
HD-02.1A-02R	0.000	0.279	0.098	481,361	Yes	220,317
HD-01.1A-10P	0.307	0.245	0.159	537,720	No	220,317
HD-01.1A-08P	0.307	0.245	0.159	537,720	No	220,317
HD-01.1A-06P	0.307	0.245	0.159	537,720	No	220,317
HD-01.1A-04P	0.307	0.245	0.159	537,720	No	220,317
HD-01.2A-01R	0.000	0.313	0.159	683,817	Yes	220,317
HD-01.1A-09E	0.307	0.321	0.159	684,381	Yes	220,317
HD-02.2A-02N	0.365	0.341	0.137	781,685	Yes	220,317
HD-02.1A-02R (D/S)	0.000	0.348	0.159	961,492	Yes	220,317
HD-02.1A 01V	0.280	0.278	0.105	31,942,670	No	220,317
HD-02.2A-01V	0.365	0.364	0.171	73,483,920	No	220,317
=====>Grouped by Line: HD-01.1B FWH 36B to HD TK						
HD-01.1B-01N	0.288	0.166	0.137	90,577	No	220,317
HD-01.1B-05E	0.307	0.216	0.159	238,383	No	220,317
HD-01.1B-03E	0.307	0.216	0.159	238,383	No	220,317
HD-01.2B-01R (D/S)	0.000	0.236	0.098	319,992	Yes	220,317
HD-01.1B-02P	0.307	0.240	0.159	469,353	No	220,317
HD-02.2B-02N	0.365	0.264	0.137	487,326	No	220,317
HD-02.1B-02R	0.000	0.288	0.098	505,509	Yes	220,317
HD-01.1B-04P	0.307	0.245	0.159	537,720	No	220,317
HD-01.1B-06P	0.307	0.245	0.159	537,720	No	220,317
HD-01.1B-07E	0.307	0.317	0.159	664,996	Yes	220,317
HD-01.2B-01R	0.000	0.333	0.159	773,513	Yes	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: HD-01.1B FWH 36B to HD TK								
HD-02.1B-02R (D/S)	0.000	0.319	0.159	0.159	0.159	815,982	Yes	220,317
HD-02.1B-01V	0.280	0.440	0.105	0.105	0.105	61,972,848	No	220,317
HD-02.2B-01V	0.365	0.364	0.171	0.171	0.171	73,483,920	No	220,317
====> Grouped by Line: HD-01.1C FWH 36C to HD TK								
HD-01.1C-01N	0.288	0.166	0.137	0.137	0.137	90,577	No	220,317
HD-01.1C-05E	0.307	0.216	0.159	0.159	0.159	238,383	No	220,317
HD-01.1C-03E	0.307	0.216	0.159	0.159	0.159	238,383	No	220,317
HD-01.1C-07E	0.307	0.216	0.159	0.159	0.159	238,383	No	220,317
HD-01.1C-09E	0.307	0.216	0.159	0.159	0.159	238,383	No	220,317
HD-01.1C-08P	0.307	0.228	0.159	0.159	0.159	335,823	No	220,317
HD-01.2C-01R (D/S)	0.000	0.251	0.098	0.098	0.098	354,371	Yes	220,317
HD-01.1C-11E	0.421	0.263	0.159	0.159	0.159	418,028	Yes	220,317
HD-01.1C-02P	0.307	0.240	0.159	0.159	0.159	469,353	No	220,317
HD-01.1C-06P	0.307	0.245	0.159	0.159	0.159	537,720	No	220,317
HD-01.1C-04P	0.307	0.245	0.159	0.159	0.159	537,720	No	220,317
HD-01.1C-10P	0.307	0.245	0.159	0.159	0.159	537,720	No	220,317
HD-02.1C-02R	0.000	0.312	0.098	0.098	0.098	568,680	No	220,317
HD-02.1C-02R (D/S)	0.000	0.285	0.159	0.159	0.159	639,808	Yes	220,317
HD-01.2C-01R	0.000	0.304	0.159	0.159	0.159	645,712	Yes	220,317
HD-02.2C-02N	0.000	0.370	0.137	0.137	0.137	892,089	Yes	220,317
HD-02.1C-01V	0.280	0.278	0.105	0.105	0.105	31,942,670	No	220,317
HD-02.2C-01V	0.000	0.364	0.171	0.171	0.171	73,483,920	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: HD: HTR DN TO PUMPS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.912

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Ihoop				
====>Grouped by Line: HD-10.1A HD TK to HD PMP 31							
HD-10.2A-07X	0.312	0.153	0.149	0.149	5,909	No	220,317
HD-10.2A-04V	0.312	0.180	0.160	0.160	42,565	No	220,317
HD-10.2A-06N	0.312	0.207	0.149	0.149	147,163	No	220,317
HD-10.2A-05P	0.312	0.254	0.149	0.149	486,945	No	220,317
HD-10.2A-03P	0.312	0.290	0.149	0.149	575,417	Yes	220,317
HD-10.2A-02E	0.312	0.362	0.149	0.149	621,432	Yes	220,317
HD-10.2A-01E (D/S)	0.000	0.347	0.149	0.149	651,300	Yes	220,317
HD-10.1A-02P	0.375	0.345	0.199	0.199	952,073	No	220,317
HD-10.1A-01N	0.562	0.483	0.199	0.199	966,984	No	220,317
HD-10.2A-01E	0.000	0.353	0.199	0.199	1,082,782	Yes	220,317
Sorted By: Remaining Life							
====>Grouped by Line: HD-10.1B HD TK to HD PMP 32							
HD-10.2B-06X	0.312	0.153	0.149	0.149	5,909	No	220,317
HD-10.2B-03V	0.312	0.180	0.160	0.160	42,565	No	220,317
HD-10.2B-05N	0.312	0.207	0.149	0.149	147,163	No	220,317
HD-10.2B-02P	0.312	0.228	0.149	0.149	250,985	No	220,317
HD-10.2B-01E (D/S)	0.000	0.230	0.149	0.149	267,731	No	220,317
HD-10.2B-04P	0.312	0.254	0.149	0.149	486,945	No	220,317
HD-10.1B-02P	0.375	0.334	0.199	0.199	875,883	No	220,317
HD-10.1B-01N	0.562	0.483	0.199	0.199	966,984	No	220,317
HD-10.2B-01E	0.000	0.337	0.199	0.199	967,404	No	220,317
Sorted By: Remaining Life							

Note:
 [1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Run Name: MSD: MS 31 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 12.299

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: MSD-01.1A_1 MSEP 31A to HDR							
MSD-01.1A-01N	0.250	0.183	0.106	0.106	No		220,317
MSD-01.1A-03P	0.250	0.223	0.106	0.106	Yes	1,363,728	220,317
MSD-01.1A-02T (D/S)	0.000	0.311	0.106	0.106	No	1,431,232	220,317
MSD-01.1A-02T (BR/SE)	0.000	0.343	0.106	0.106	No	2,067,208	220,317
====>Grouped by Line: MSD-01.1A_2 MSEP 31A to HDR							
MSD-01.1A-04N	0.250	0.183	0.106	0.106	No	539,092	220,317
MSD-01.1A-08P	0.250	0.214	0.106	0.106	No	1,395,658	220,317
====>Grouped by Line: MSD-01.1A_3 MSEP 31A to HDR							
MSD-01.1A-05N	0.250	0.183	0.106	0.106	No	539,092	220,317
MSD-01.1A-06T (D/S)	0.000	0.183	0.106	0.106	No	539,092	220,317
MSD-01.1A-06T (BR/SE)	0.000	0.196	0.106	0.106	No	790,475	220,317
MSD-01.1A-07P	0.250	0.210	0.106	0.106	No	1,209,448	220,317
====>Grouped by Line: MSD-01.1B_1 MSEP 31B to HDR							
MSD-01.1B-01N	0.250	0.183	0.106	0.106	No	539,092	220,317
MSD-01.1B-02T (D/S)	0.000	0.183	0.106	0.106	No	539,092	220,317
MSD-01.1B-02T (BR/SE)	0.000	0.196	0.106	0.106	No	790,475	220,317
MSD-01.1B-03P	0.250	0.210	0.106	0.106	No	1,209,448	220,317
====>Grouped by Line: MSD-01.1B_2 MSEP 31B to HDR							
MSD-01.1B-04N	0.250	0.183	0.106	0.106	No	539,092	220,317
MSD-01.1B-08P	0.250	0.214	0.106	0.106	No	1,395,658	220,317
====>Grouped by Line: MSD-01.1B_3 MSEP 31B to HDR							
MSD-01.1B-05N	0.250	0.183	0.106	0.106	No	539,092	220,317
MSD-01.1B-06T (D/S)	0.000	0.183	0.106	0.106	No	539,092	220,317
MSD-01.1B-07P	0.250	0.210	0.106	0.106	No	1,209,448	220,317
MSD-01.1B-06T (BR/SE)	0.000	0.392	0.106	0.106	No	2,493,599	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: MSD-01.2A MSEP 31A DR HDR								
MSD-01.2A-01T (D/S)	0.000	0.151	0.106	0.106	0.106	214,398	No	220,317
MSD-01.2A-01T	0.250	0.195	0.106	0.106	0.106	759,819	No	220,317
MSD-01.2A-01T (BR/SE)	0.000	0.204	0.106	0.106	0.106	1,012,284	No	220,317
====>Grouped by Line: MSD-01.2B MSEP 31B DR HDR								
MSD-01.2B-01T (D/S)	0.000	0.151	0.106	0.106	0.106	214,398	No	220,317
MSD-01.2B-01T	0.250	0.195	0.106	0.106	0.106	759,819	No	220,317
MSD-01.2B-01T (BR/SE)	0.000	0.204	0.106	0.106	0.106	1,012,284	No	220,317
====>Grouped by Line: MSD-01.3A HDR to MSEP TK 31A								
MSD-01.3A-04V	0.250	0.079	0.113	0.113	0.113	-99,377	No	220,317
MSD-01.3A-06V	0.250	0.079	0.113	0.113	0.113	-99,377	No	220,317
MSD-01.3A-08N	0.250	0.113	0.106	0.106	0.106	24,698	No	220,317
MSD-01.3A-05P	0.250	0.175	0.106	0.106	0.106	426,546	No	220,317
MSD-01.3A-07P	0.250	0.175	0.106	0.106	0.106	426,546	No	220,317
MSD-01.3A-02P	0.250	0.211	0.106	0.106	0.106	528,701	Yes	220,317
MSD-01.3A-03E	0.250	0.348	0.106	0.106	0.106	889,393	Yes	220,317
MSD-01.3A-01T (BR/SE)	0.000	0.527	0.106	0.106	0.106	1,146,407	No	220,317
MSD-01.3A-01T	0.250	0.561	0.106	0.106	0.106	1,761,865	No	220,317
MSD-01.3A-01T (D/S)	0.000	0.406	0.106	0.106	0.106	2,093,091	No	220,317
====>Grouped by Line: MSD-01.3B HDR to MSEP TK 31B								
MSD-01.3B-04V	0.250	0.079	0.113	0.113	0.113	-99,377	No	220,317
MSD-01.3B-06V	0.250	0.079	0.113	0.113	0.113	-99,377	No	220,317
MSD-01.3B-01T (BR/SE)	0.000	0.079	0.106	0.106	0.106	-73,101	No	220,317
MSD-01.3B-01T	0.250	0.129	0.106	0.106	0.106	91,846	No	220,317
MSD-01.3B-02P	0.250	0.157	0.106	0.106	0.106	261,176	No	220,317
MSD-01.3B-08N	0.250	0.228	0.106	0.106	0.106	415,827	Yes	220,317
MSD-01.3B-05P	0.250	0.175	0.106	0.106	0.106	426,546	No	220,317
MSD-01.3B-07P	0.250	0.175	0.106	0.106	0.106	426,546	No	220,317
MSD-01.3B-01T (D/S)	0.000	0.183	0.106	0.106	0.106	539,092	No	220,317
MSD-01.3B-03E	0.250	0.306	0.106	0.106	0.106	737,177	Yes	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB
 Run Name: MSD: MS 32 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 12.801

Service Life Report

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Pass 2 Analysis Include Measured Wear

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: MSD-01.6A_1 MSEP 32A to HDR							
MSD-01.6A-01N	0.250	0.180	0.106	0.106	No		220,317
MSD-01.6A-02T (D/S)	0.000	0.180	0.106	0.106	No		220,317
MSD-01.6A-02T (BR/SE)	0.000	0.194	0.106	0.106	No		220,317
MSD-01.6A-03P	0.250	0.208	0.106	0.106	No		220,317
====>Grouped by Line: MSD-01.6A_2 MSEP 32A to HDR							
MSD-01.6A-08P	0.250	0.212	0.106	0.106	No		220,317
MSD-01.6A-04N	1.125	1.032	0.106	0.106	No		220,317
====>Grouped by Line: MSD-01.6A_3 MSEP 32A to HDR							
MSD-01.6A-06T (D/S)	0.000	0.180	0.106	0.106	No		220,317
MSD-01.6A-05N	0.250	0.180	0.106	0.106	No		220,317
MSD-01.6A-06T (BR/SE)	0.000	0.194	0.106	0.106	No		220,317
MSD-01.6A-07P	0.250	0.208	0.106	0.106	No		220,317
====>Grouped by Line: MSD-01.6B_1 MSEP 32B to HDR							
MSD-01.6B-01N	0.250	0.180	0.106	0.106	No		220,317
MSD-01.6B-02T (D/S)	0.000	0.180	0.106	0.106	No		220,317
MSD-01.6B-02T (BR/SE)	0.000	0.194	0.106	0.106	No		220,317
MSD-01.6B-03P	0.312	0.269	0.106	0.106	No		220,317
====>Grouped by Line: MSD-01.6B_2 MSEP 32B to HDR							
MSD-01.6B-08P	0.312	0.274	0.106	0.106	No		220,317
MSD-01.6B-04N	1.125	1.032	0.106	0.106	No		220,317
====>Grouped by Line: MSD-01.6B_3 MSEP 32B to HDR							
MSD-01.6B-06T (D/S)	0.000	0.180	0.106	0.106	No		220,317
MSD-01.6B-05N	0.250	0.180	0.106	0.106	No		220,317
MSD-01.6B-06T (BR/SE)	0.000	0.194	0.106	0.106	No		220,317
MSD-01.6B-07P	0.264	0.222	0.106	0.106	Yes		220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: MSD-01.7A MSEP 32A DR HDR						
MSD-01.7A-02P	0.250	0.213	0.106	0.106	994,499	220,317
MSD-01.7A-01T (D/S)	0.000	0.430	0.106	0.106	1,469,166	220,317
MSD-01.7A-01T	0.250	0.321	0.106	0.106	1,754,469	220,317
MSD-01.7A-01T (BR/SE)	0.000	0.509	0.106	0.106	3,968,795	220,317
====>Grouped by Line: MSD-01.7B MSEP 32B DR HDR						
MSD-01.7B-01T (D/S)	0.000	0.338	0.106	0.106	1,052,568	220,317
MSD-01.7B-02P	0.304	0.253	0.106	0.106	1,345,682	220,317
MSD-01.7B-01T (BR/SE)	0.000	0.270	0.106	0.106	1,618,262	220,317
MSD-01.7B-01T	0.250	0.321	0.106	0.106	1,754,469	220,317
====>Grouped by Line: MSD-01.8A HDR to MSEP TK 32A						
MSD-01.8A-04V	0.250	0.072	0.113	0.113	-117,250	220,317
MSD-01.8A-06V	0.250	0.072	0.113	0.113	-117,250	220,317
MSD-01.8A-08N	0.250	0.171	0.106	0.106	212,750	220,317
MSD-01.8A-01T	0.250	0.191	0.106	0.106	316,538	220,317
MSD-01.8A-07P	0.250	0.171	0.106	0.106	391,493	220,317
MSD-01.8A-01T (BR/SE)	0.000	0.282	0.106	0.106	462,291	220,317
MSD-01.8A-02P	0.250	0.219	0.106	0.106	548,861	220,317
MSD-01.8A-05P	0.250	0.211	0.106	0.106	627,010	220,317
MSD-01.8A-03E	0.250	0.367	0.106	0.106	922,076	220,317
MSD-01.8A-01T (D/S)	0.000	0.275	0.106	0.106	1,131,055	220,317
====>Grouped by Line: MSD-01.8B HDR to MSEP TK 32B						
MSD-01.8B-04V	0.250	0.072	0.113	0.113	-117,250	220,317
MSD-01.8B-06V	0.250	0.072	0.113	0.113	-117,250	220,317
MSD-01.8B-05P	0.250	0.171	0.106	0.106	391,493	220,317
MSD-01.8B-03E	0.250	0.240	0.106	0.106	476,404	220,317
MSD-01.8B-02P	0.285	0.212	0.106	0.106	511,643	220,317
MSD-01.8B-08N	0.250	0.270	0.106	0.106	536,014	220,317
MSD-01.8B-01T (BR/SE)	0.000	0.312	0.106	0.106	539,769	220,317
MSD-01.8B-01T	0.250	0.302	0.106	0.106	728,466	220,317
MSD-01.8B-07P	0.250	0.238	0.106	0.106	784,571	220,317
MSD-01.8B-01T (D/S)	0.000	0.325	0.106	0.106	1,467,444	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB
 Run Name: MSD: MS 33 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 8.046

Service Life Report

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Pass 2 Analysis Include Measured Wear

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: MSD-01.11A_1 MSEP 33A to HDR							
MSD-01.11A-01N	0.250	0.206	0.106	0.106	No		220,317
MSD-01.11A-02T (D/S)	0.000	0.206	0.106	0.106	No		220,317
MSD-01.11A-02T (BR/SE)	0.000	0.215	0.106	0.106	No		220,317
MSD-01.11A-03P	0.250	0.224	0.106	0.106	No		220,317
====>Grouped by Line: MSD-01.11A_2 MSEP 33A to HDR							
MSD-01.11A-04N	0.250	0.206	0.106	0.106	No		220,317
MSD-01.11A-08P	0.250	0.226	0.106	0.106	No		220,317
====>Grouped by Line: MSD-01.11A_3 MSEP 33A to HDR							
MSD-01.11A-06T (D/S)	0.000	0.206	0.106	0.106	No		220,317
MSD-01.11A-05N	0.250	0.206	0.106	0.106	No		220,317
MSD-01.11A-06T (BR/SE)	0.000	0.215	0.106	0.106	No		220,317
MSD-01.11A-07P	0.250	0.224	0.106	0.106	No		220,317
====>Grouped by Line: MSD-01.11B_1 MSEP 33B to HDR							
MSD-01.11B-02T (D/S)	0.000	0.206	0.106	0.106	No		220,317
MSD-01.11B-01N	0.250	0.206	0.106	0.106	No		220,317
MSD-01.11B-02T (BR/SE)	0.000	0.215	0.106	0.106	No		220,317
MSD-01.11B-03P	0.250	0.224	0.106	0.106	No		220,317
====>Grouped by Line: MSD-01.11B_2 MSEP 33B to HDR							
MSD-01.11B-04N	0.250	0.206	0.106	0.106	No		220,317
MSD-01.11B-08P	0.250	0.226	0.106	0.106	No		220,317
====>Grouped by Line: MSD-01.11B_3 MSEP 33B to HDR							
MSD-01.11B-06T (D/S)	0.000	0.206	0.106	0.106	No		220,317
MSD-01.11B-05N	0.250	0.206	0.106	0.106	No		220,317
MSD-01.11B-06T (BR/SE)	0.000	0.215	0.106	0.106	No		220,317
MSD-01.11B-07P	0.250	0.224	0.106	0.106	No		220,317

Component Name	Init.	Thicknss (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: MSD-01.12A MSEP 33A DR HDR							
MSD-01.12A-01T (D/S)	0.000	0.185	0.106	0.106	574,250	No	220,317
MSD-01.12A-01T	0.250	0.214	0.106	0.106	1,407,931	No	220,317
MSD-01.12A-02P	0.250	0.218	0.106	0.106	1,666,981	No	220,317
MSD-01.12A-01T (BR/SE)	0.000	0.220	0.106	0.106	1,793,831	No	220,317
====>Grouped by Line: MSD-01.12B MSEP 33B DR HDR							
MSD-01.12B-01T (D/S)	0.000	0.185	0.106	0.106	574,250	No	220,317
MSD-01.12B-01T	0.250	0.214	0.106	0.106	1,407,931	No	220,317
MSD-01.12B-02P	0.250	0.218	0.106	0.106	1,666,981	No	220,317
MSD-01.12B-01T (BR/SE)	0.000	0.220	0.106	0.106	1,793,831	No	220,317
====>Grouped by Line: MSD-01.13A HDR to MSEP TK 33A							
MSD-01.13A-04V	0.250	0.138	0.113	0.113	103,016	No	220,317
MSD-01.13A-06V	0.250	0.138	0.113	0.113	103,016	No	220,317
MSD-01.13A-10N	0.250	0.160	0.106	0.106	284,286	No	220,317
MSD-01.13A-08E	0.437	0.232	0.106	0.106	668,757	Yes	220,317
MSD-01.13A-02P	0.250	0.208	0.106	0.106	791,132	Yes	220,317
MSD-01.13A-01T (BR/SE)	0.000	0.318	0.106	0.106	882,422	No	220,317
MSD-01.13A-05P	0.250	0.201	0.106	0.106	898,526	No	220,317
MSD-01.13A-09P	0.382	0.227	0.106	0.106	968,035	Yes	220,317
MSD-01.13A-07P	0.268	0.218	0.106	0.106	1,060,232	Yes	220,317
MSD-01.13A-03E	0.250	0.342	0.106	0.106	1,331,226	Yes	220,317
MSD-01.13A-01T	0.250	0.361	0.106	0.106	1,509,315	No	220,317
MSD-01.13A-01T (D/S)	0.000	0.338	0.106	0.106	2,477,062	No	220,317
====>Grouped by Line: MSD-01.13B HDR to MSEP TK 33B							
MSD-01.13B-04V	0.250	0.138	0.113	0.113	103,016	No	220,317
MSD-01.13B-06V	0.250	0.138	0.113	0.113	103,016	No	220,317
MSD-01.13B-08E	0.250	0.167	0.106	0.106	345,157	No	220,317
MSD-01.13B-10N	0.250	0.236	0.106	0.106	676,049	Yes	220,317
MSD-01.13B-01T (BR/SE)	0.000	0.272	0.106	0.106	692,758	No	220,317
MSD-01.13B-09P	0.250	0.194	0.106	0.106	734,728	No	220,317
MSD-01.13B-02P	0.250	0.216	0.106	0.106	852,664	Yes	220,317
MSD-01.13B-05P	0.250	0.201	0.106	0.106	898,526	No	220,317
MSD-01.13B-07P	0.250	0.201	0.106	0.106	898,526	No	220,317
MSD-01.13B-03E	0.250	0.317	0.106	0.106	1,189,868	Yes	220,317
MSD-01.13B-01T (D/S)	0.000	0.292	0.106	0.106	1,986,529	No	220,317
MSD-01.13B-01T	0.250	0.515	0.106	0.106	2,419,131	Yes	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: MSD: MSDT 31 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.466

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	I_hoop				
=====>Grouped by Line: MSD-01.4A TK 31A to HD TK							
MSD-01.5A-27N	0.280	0.276	0.055	0.055	1,012,646	Yes	220,317
MSD-01.4A-01N	0.322	0.246	0.071	0.071	1,066,042	No	220,317
MSD-01.5A-15P_2	0.280	0.216	0.055	0.055	1,186,159	No	220,317
MSD-01.5A-28P_1	0.280	0.252	0.055	0.055	3,289,482	No	220,317
MSD-01.5A-02P	0.314	0.314	0.055	0.055	100,000,000	No	112,406
MSD-01.4A-04P	0.349	0.349	0.071	0.071	100,000,000	No	112,406
MSD-01.5A-01E	0.000	0.322	0.061	0.061	100,000,000	No	112,406
MSD-01.4A-03T	0.322	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.4A-03T (D/S)	0.000	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.5A-07P	0.289	0.289	0.055	0.055	100,000,000	No	112,406
MSD-01.5A-28P_2	0.280	0.280	0.055	0.055	100,000,000	No	112,406
MSD-01.5A-29P	0.280	0.280	0.055	0.055	100,000,000	No	112,406
MSD-01.4A-02P	0.322	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.5A-06V	0.280	0.280	0.059	0.059	100,751,304	No	112,406
MSD-01.5A-03E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-12E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-14E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-16E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-18E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-20E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-22E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-26E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-10E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-24E	0.302	0.302	0.047	0.047	154,819,808	No	112,406
MSD-01.5A-05E	0.319	0.319	0.047	0.047	163,418,752	No	112,406
MSD-01.5A-08E	0.319	0.319	0.047	0.047	163,418,752	No	112,406
MSD-01.5A-01E (D/S)	0.000	0.280	0.047	0.047	171,152,544	No	112,406
MSD-01.5A-09P	0.317	0.317	0.055	0.055	182,389,072	No	112,406
MSD-01.5A-11P	0.280	0.280	0.055	0.055	205,152,512	No	112,406
MSD-01.5A-13P	0.280	0.280	0.055	0.055	205,152,512	No	112,406

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: MSD-01.4A TK 31A to HD TK						
MSD-01.5A-15P_1	0.280	0.280	0.055	205,152,512	No	112,406
MSD-01.5A-17P	0.280	0.280	0.055	205,152,512	No	112,406
MSD-01.5A-19P	0.280	0.280	0.055	205,152,512	No	112,406
MSD-01.5A-21P	0.280	0.280	0.055	205,152,512	No	112,406
MSD-01.5A-23P	0.314	0.314	0.055	231,244,384	No	112,406
MSD-01.5A-25P	0.318	0.318	0.055	234,232,608	No	112,406
MSD-01.5A-04P	0.349	0.349	0.055	256,816,240	No	112,406
====>Grouped by Line: MSD-01.4B TK 31B to HD TK						
MSD-01.5B-28N	0.280	0.178	0.055	566,431	No	220,317
MSD-01.5B-14E	0.280	0.186	0.055	650,178	No	220,317
MSD-01.5B-12E	0.280	0.268	0.055	1,057,518	Yes	220,317
MSD-01.5B-11P_2	0.280	0.256	0.055	1,153,163	Yes	220,317
MSD-01.5B-15P	0.280	0.216	0.055	1,186,159	No	220,317
MSD-01.4B-01N	0.322	0.305	0.071	1,428,362	No	112,406
MSD-01.5B-13P	0.280	0.254	0.055	1,463,367	Yes	220,317
MSD-01.5B-29P	0.280	0.252	0.055	3,289,482	No	220,317
MSD-01.5B-30P_1	0.280	0.252	0.055	3,289,482	No	220,317
MSD-01.4B-02P	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.4B-03E	0.322	0.322	0.061	100,000,000	No	112,406
MSD-01.4B-04P	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.4B-05E	0.322	0.322	0.061	100,000,000	No	112,406
MSD-01.4B-07P	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.4B-06T	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.4B-06T (D/S)	0.000	0.322	0.071	100,000,000	No	112,406
MSD-01.4B-08P	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.5B-01R	0.000	0.322	0.061	100,000,000	No	112,406
MSD-01.5B-05P	0.307	0.307	0.055	100,000,000	No	112,406
MSD-01.5B-30P_2	0.000	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-17P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-19P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-21P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-23P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-31P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.5B-04V	0.280	0.280	0.059	100,751,304	No	112,406
MSD-01.5B-03E	0.280	0.280	0.047	143,381,184	No	112,406
MSD-01.5B-08E	0.280	0.280	0.047	143,381,184	No	112,406
MSD-01.5B-10E	0.280	0.280	0.047	143,381,184	No	112,406
MSD-01.5B-24E	0.280	0.280	0.047	143,381,184	No	112,406

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: MSD-01.4B TK 31B to HD TK							
MSD-01.5B-26E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5B-06E	0.303	0.303	0.047	0.047	155,331,424	No	112,406
MSD-01.5B-11P_1	0.280	0.280	0.055	0.055	160,252,640	No	112,406
MSD-01.5B-16E	0.280	0.280	0.047	0.047	160,773,344	No	112,406
MSD-01.5B-18E	0.280	0.280	0.047	0.047	160,773,344	No	112,406
MSD-01.5B-20E	0.280	0.280	0.047	0.047	160,773,344	No	112,406
MSD-01.5B-22E	0.280	0.280	0.047	0.047	160,773,344	No	112,406
MSD-01.5B-01R (D/S)	0.000	0.280	0.047	0.047	165,800,784	No	112,406
MSD-01.5B-02P	0.280	0.280	0.055	0.055	205,152,512	No	112,406
MSD-01.5B-09P	0.280	0.280	0.055	0.055	205,152,512	No	112,406
MSD-01.5B-25P	0.302	0.302	0.055	0.055	222,177,216	No	112,406
MSD-01.5B-32P	0.302	0.302	0.055	0.055	222,177,216	No	112,406
MSD-01.5B-27P	0.311	0.311	0.055	0.055	228,992,016	No	112,406
MSD-01.5B-07P	0.313	0.313	0.055	0.055	230,494,672	No	112,406

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: MSD: MSDT 32 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 4.384

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	I_hoop				
=====>Grouped by Line: MSD-01.9A TK 32A to HD TK							
MSD-01.9A-01N	0.322	0.186	0.071	0.071	395,385	No	220,317
MSD-01.10A-25N	0.280	0.244	0.055	0.055	488,532	No	220,317
MSD-01.10A-26P_2	0.280	0.230	0.055	0.055	1,645,791	No	220,317
MSD-01.10A-06V	0.280	0.280	0.059	0.059	56,614,424	No	112,406
MSD-01.10A-24E	0.280	0.280	0.047	0.047	80,588,392	No	112,406
MSD-01.10A-12E	0.280	0.280	0.047	0.047	80,588,392	No	112,406
MSD-01.10A-05E	0.280	0.280	0.047	0.047	80,588,392	No	112,406
MSD-01.10A-14E	0.280	0.280	0.047	0.047	80,588,392	No	112,406
MSD-01.10A-16E	0.280	0.280	0.047	0.047	80,588,392	No	112,406
MSD-01.10A-18E	0.280	0.280	0.047	0.047	80,588,392	No	112,406
MSD-01.10A-20E	0.280	0.280	0.047	0.047	80,588,392	No	112,406
MSD-01.10A-08E	0.307	0.307	0.047	0.047	88,455,656	No	112,406
MSD-01.10A-03E	0.309	0.309	0.047	0.047	89,026,592	No	112,406
MSD-01.10A-10E	0.280	0.280	0.047	0.047	90,369,304	No	112,406
MSD-01.10A-22E	0.317	0.317	0.047	0.047	91,294,160	No	112,406
MSD-01.10A-01E (D/S)	0.000	0.280	0.047	0.047	96,206,304	No	112,406
MSD-01.10A-26P_1	0.280	0.280	0.055	0.055	100,000,000	No	112,406
MSD-01.9A-04P	0.322	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.10A-26P_3	0.280	0.280	0.055	0.055	100,000,000	No	112,406
MSD-01.10A-27P	0.280	0.280	0.055	0.055	100,000,000	No	112,406
MSD-01.10A-04P	0.280	0.280	0.055	0.055	115,327,032	No	112,406
MSD-01.10A-13P	0.280	0.280	0.055	0.055	115,327,032	No	112,406
MSD-01.10A-15P	0.280	0.280	0.055	0.055	115,327,032	No	112,406
MSD-01.10A-17P	0.280	0.280	0.055	0.055	115,327,032	No	112,406
MSD-01.10A-19P	0.280	0.280	0.055	0.055	115,327,032	No	112,406
MSD-01.10A-23P	0.289	0.289	0.055	0.055	119,279,240	No	112,406
MSD-01.10A-09P	0.293	0.293	0.055	0.055	121,020,000	No	112,406
MSD-01.10A-21P	0.294	0.294	0.055	0.055	121,453,680	No	112,406
MSD-01.10A-11P	0.280	0.280	0.055	0.055	131,067,648	No	112,406
MSD-01.10A-07P	0.293	0.293	0.055	0.055	137,536,928	No	112,406

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: MSD-01.9A TK 32A to HD TK						
MSD-01.10A-02P	0.304	0.304	0.055	157,222,496	No	112,406
MSD-01.9A-03T (D/S)	0.000	0.322	0.071	178,297,968	No	112,406
MSD-01.9A-03T	0.322	0.322	0.071	178,297,968	No	112,406
MSD-01.9A-02P	0.322	0.322	0.071	198,120,432	No	112,406
MSD-01.10A-01E	0.000	0.322	0.061	222,642,384	No	112,406
====>Grouped by Line: MSD-01.9B TK 32B to HD TK						
MSD-01.10B-27N	0.280	0.099	0.055	114,415	No	220,317
MSD-01.10B-13E	0.280	0.113	0.055	161,513	No	220,317
MSD-01.10B-11E	0.280	0.182	0.055	355,642	Yes	220,317
MSD-01.9B-01N	0.322	0.186	0.071	395,385	No	220,317
MSD-01.10B-14P	0.280	0.167	0.055	462,935	No	220,317
MSD-01.10B-12P	0.280	0.205	0.055	620,919	Yes	220,317
MSD-01.10B-28P	0.280	0.230	0.055	1,645,791	No	220,317
MSD-01.10B-29P_1	0.280	0.230	0.055	1,645,791	No	220,317
MSD-01.10B-05V	0.280	0.280	0.059	56,614,424	No	112,406
MSD-01.10B-07E	0.328	0.251	0.047	68,563,704	No	112,406
MSD-01.10B-02E	0.280	0.252	0.047	70,975,864	No	112,406
MSD-01.10B-04E	0.280	0.280	0.047	80,588,392	No	112,406
MSD-01.10B-09E	0.280	0.280	0.047	80,588,392	No	112,406
MSD-01.10B-23E	0.280	0.280	0.047	80,588,392	No	112,406
MSD-01.10B-03P	0.280	0.280	0.055	90,076,472	No	112,406
MSD-01.10B-15E	0.280	0.280	0.047	90,369,304	No	112,406
MSD-01.10B-17E	0.280	0.280	0.047	90,369,304	No	112,406
MSD-01.10B-19E	0.280	0.280	0.047	90,369,304	No	112,406
MSD-01.10B-21E	0.280	0.280	0.047	90,369,304	No	112,406
MSD-01.10B-25E	0.316	0.316	0.047	91,012,136	No	112,406
MSD-01.10B-01E (D/S)	0.000	0.280	0.047	96,206,304	No	112,406
MSD-01.9B-04P	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.10B-29P_2	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.10B-30P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.10B-10P	0.280	0.280	0.055	115,327,032	No	112,406
MSD-01.10B-24P	0.285	0.285	0.055	117,528,776	No	112,406
MSD-01.10B-08P	0.289	0.289	0.055	119,279,240	No	112,406
MSD-01.10B-26P	0.290	0.290	0.055	119,715,344	No	112,406
MSD-01.10B-16P	0.280	0.280	0.055	131,067,648	No	112,406
MSD-01.10B-18P	0.280	0.280	0.055	131,067,648	No	112,406
MSD-01.10B-20P	0.280	0.280	0.055	131,067,648	No	112,406
MSD-01.10B-22P	0.280	0.280	0.055	131,067,648	No	112,406

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: MSD-01.9B TK 32B to HD TK								
MSD-01.10B-06P	0.299	0.299	0.055	0.055	0.055	140,483,456	No	112,406
MSD-01.9B-03T	0.322	0.322	0.071	0.071	0.071	178,297,968	No	112,406
MSD-01.9B-03T (D/S)	0.000	0.322	0.071	0.071	0.071	178,297,968	No	112,406
MSD-01.9B-02P	0.322	0.322	0.071	0.071	0.071	198,120,432	No	112,406
MSD-01.10B-01E	0.000	0.322	0.061	0.061	0.061	222,642,384	No	112,406

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: MSD: MSDT 33 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.770

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			
====>Grouped by Line: MSD-01.14A TK 33A to HD TK						
MSD-01.14A-01N	0.322	0.205	0.071	535,803	No	220,317
MSD-01.15A-20N	0.280	0.240	0.055	555,413	Yes	220,317
MSD-01.15A-02V	0.280	0.280	0.059	65,855,548	No	112,406
MSD-01.15A-17E	0.280	0.280	0.047	93,735,584	No	112,406
MSD-01.15A-19E	0.280	0.280	0.047	93,735,584	No	112,406
MSD-01.15A-07E	0.280	0.280	0.047	93,735,584	No	112,406
MSD-01.15A-11E	0.290	0.290	0.047	97,164,536	No	112,406
MSD-01.15A-21P	0.000	0.280	0.055	100,000,000	No	112,406
MSD-01.15A-22P	0.281	0.281	0.055	100,000,000	No	112,406
MSD-01.14A-04P	0.324	0.324	0.071	100,000,000	No	112,406
MSD-01.15A-01E	0.000	0.322	0.061	100,000,000	No	112,406
MSD-01.15A-09E	0.302	0.302	0.047	101,216,472	No	112,406
MSD-01.15A-06P	0.285	0.285	0.055	106,769,912	No	112,406
MSD-01.15A-05E	0.322	0.322	0.047	107,818,480	No	112,406
MSD-01.15A-15E	0.331	0.331	0.047	110,728,080	No	112,406
MSD-01.15A-13E	0.334	0.334	0.047	111,689,528	No	112,406
MSD-01.15A-01E (D/S)	0.000	0.280	0.047	111,898,120	No	112,406
MSD-01.15A-04E	0.341	0.341	0.047	113,916,600	No	112,406
MSD-01.15A-12P	0.272	0.272	0.055	130,000,616	No	112,406
MSD-01.15A-18P	0.280	0.280	0.055	134,134,176	No	112,406
MSD-01.15A-08P	0.280	0.280	0.055	134,134,176	No	112,406
MSD-01.15A-14P	0.281	0.281	0.055	134,647,712	No	112,406
MSD-01.15A-16P	0.284	0.284	0.055	136,184,000	No	112,406
MSD-01.15A-10P	0.306	0.306	0.055	147,256,224	No	112,406
MSD-01.15A-03P	0.280	0.280	0.055	152,439,408	No	112,406
MSD-01.14A-03T	0.322	0.322	0.071	207,364,944	No	112,406
MSD-01.14A-03T (D/S)	0.000	0.322	0.071	207,364,944	No	112,406
MSD-01.14A-02P	0.322	0.322	0.071	230,417,056	No	112,406

Sorted By: Remaining Life

Sorted By: Remaining Life

====>Grouped by Line: MSD-01.14B TK 33B to HD TK

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)	
	Init.	Pred.[1]				
====>Grouped by Line: MSD-01.14B TK 33B to HD TK						
MSD-01.15B-15E	0.280	0.169	0.055	370,492	Yes	220,317
MSD-01.15B-13E	0.280	0.209	0.055	500,229	Yes	220,317
MSD-01.14B-01N	0.322	0.205	0.071	535,803	No	220,317
MSD-01.15B-29N	0.280	0.243	0.055	564,414	Yes	220,317
MSD-01.15B-12P_2	0.280	0.183	0.055	614,360	No	220,317
MSD-01.15B-14P	0.280	0.203	0.055	713,371	Yes	220,317
MSD-01.15B-16P	0.280	0.254	0.055	958,184	Yes	220,317
MSD-01.15B-30P	0.280	0.237	0.055	1,989,937	No	220,317
MSD-01.15B-31P_1	0.280	0.237	0.055	1,989,937	No	220,317
MSD-01.15B-05V	0.280	0.280	0.059	65,855,548	No	112,406
MSD-01.15B-25E	0.280	0.280	0.047	93,735,584	No	112,406
MSD-01.15B-02E	0.280	0.280	0.047	93,735,584	No	112,406
MSD-01.15B-04E	0.280	0.280	0.047	93,735,584	No	112,406
MSD-01.15B-09E	0.280	0.280	0.047	93,735,584	No	112,406
MSD-01.15B-32P	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.14B-04P	0.322	0.322	0.071	100,000,000	No	112,406
MSD-01.15B-01E	0.000	0.322	0.061	100,000,000	No	112,406
MSD-01.15B-31P_2	0.280	0.280	0.055	100,000,000	No	112,406
MSD-01.15B-07E	0.309	0.309	0.047	103,548,616	No	112,406
MSD-01.15B-03P	0.280	0.280	0.055	104,769,552	No	112,406
MSD-01.15B-11E	0.280	0.280	0.047	105,110,104	No	112,406
MSD-01.15B-17E	0.280	0.280	0.047	105,110,104	No	112,406
MSD-01.15B-19E	0.280	0.280	0.047	105,110,104	No	112,406
MSD-01.15B-21E	0.280	0.280	0.047	105,110,104	No	112,406
MSD-01.15B-23E	0.280	0.280	0.047	105,110,104	No	112,406
MSD-01.15B-01E (D/S)	0.000	0.280	0.047	111,898,120	No	112,406
MSD-01.15B-08P	0.299	0.299	0.055	112,297,632	No	112,406
MSD-01.15B-27E	0.341	0.341	0.047	113,916,600	No	112,406
MSD-01.15B-26P	0.278	0.278	0.055	133,105,048	No	112,406
MSD-01.15B-10P	0.280	0.280	0.055	134,134,176	No	112,406
MSD-01.15B-28P	0.282	0.282	0.055	135,160,496	No	112,406
MSD-01.15B-06P	0.265	0.265	0.055	143,589,680	No	112,406
MSD-01.15B-12P_1	0.280	0.280	0.055	152,439,408	No	112,406
MSD-01.15B-18P	0.280	0.280	0.055	152,439,408	No	112,406
MSD-01.15B-20P	0.280	0.280	0.055	152,439,408	No	112,406
MSD-01.15B-22P	0.280	0.280	0.055	152,439,408	No	112,406
MSD-01.15B-24P	0.280	0.280	0.055	152,439,408	No	112,406
MSD-01.14B-03T	0.322	0.322	0.071	207,364,944	No	112,406
MSD-01.14B-03T (D/S)	0.000	0.322	0.071	207,364,944	No	112,406

Sorted By: Remaining Life

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: MSD-01.14B TK 33B to HD TK								
MSD-01.14B-02P	0.322	0.322	0.071	0.071	0.071	230,417,056	No	112,406

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: PD: PRESEPRTR DRAINS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.643

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
=====>Grouped by Line: PD-01.1 PRESEP 1B DR to HDR							
PD-01.2-100	0.365	0.303	0.089	0.089	209,374	No	171,511
PD-01.2-09V	0.365	0.259	0.095	0.095	660,435	No	171,511
PD-02.1-01T (BR/SE)	0.000	0.267	0.083	0.083	803,574	No	171,511
PD-01.2-04E	0.365	0.287	0.089	0.089	1,076,343	No	171,511
PD-01.2-06E	0.365	0.287	0.089	0.089	1,076,343	No	171,511
PD-01.2-02B	0.365	0.291	0.089	0.089	1,162,166	No	171,511
PD-01.2-08E	0.365	0.295	0.089	0.089	1,258,391	No	171,511
PD-01.2-01R (D/S)	0.000	0.297	0.089	0.089	1,311,015	No	171,511
PD-02.1-01T (D/S)	0.000	0.327	0.132	0.132	1,707,569	No	171,511
PD-01.2-03P	0.365	0.312	0.089	0.089	1,797,255	No	171,511
PD-01.2-05P	0.365	0.312	0.089	0.089	1,797,255	No	171,511
PD-01.2-07P	0.365	0.312	0.089	0.089	1,797,255	No	171,511
PD-01.2-01R	0.000	0.331	0.116	0.116	2,080,753	No	171,511
PD-01.1-01N	0.375	0.375	0.094	0.094	100,000,000	No	171,511
Sorted By: Remaining Life							
=====>Grouped by Line: PD-01.3 PRESEP 1A DR to HDR							
PD-01.4-100	0.380	0.131	0.089	0.089	41,439	No	171,511
PD-01.4-09V	0.365	0.259	0.095	0.095	660,435	No	171,511
PD-01.4-06E	0.365	0.287	0.089	0.089	1,076,343	No	171,511
PD-01.4-04E	0.365	0.295	0.089	0.089	1,258,391	No	171,511
PD-01.4-08E	0.365	0.295	0.089	0.089	1,258,391	No	171,511
PD-01.4-02B	0.365	0.340	0.089	0.089	1,442,236	Yes	171,511
PD-01.4-07P	0.365	0.312	0.089	0.089	1,797,255	No	171,511
PD-01.4-03P	0.365	0.329	0.089	0.089	1,934,665	Yes	171,511
PD-01.4-01R (D/S)	0.000	0.403	0.089	0.089	1,977,934	Yes	171,511
PD-01.4-05P	0.365	0.318	0.089	0.089	2,100,365	No	171,511
PD-01.4-01R	0.000	0.357	0.116	0.116	2,327,628	Yes	171,511
PD-01.3-01N	0.375	0.375	0.094	0.094	100,000,000	No	171,511
Sorted By: Remaining Life							
=====>Grouped by Line: PD-01.5 PRESEP 2B DR to HDR							

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: PD-01.5 PRESEP 2B DR to HDR						
PD-01.6-14O	0.365	0.257	0.089	164,208	No	171,511
PD-01.6-13V	0.365	0.259	0.095	660,435	No	171,511
PD-01.6-04E	0.365	0.287	0.089	1,076,343	No	171,511
PD-01.6-06E	0.365	0.287	0.089	1,076,343	No	171,511
PD-01.6-08E	0.365	0.287	0.089	1,076,343	No	171,511
PD-01.6-10E	0.365	0.287	0.089	1,076,343	No	171,511
PD-01.6-02B	0.365	0.291	0.089	1,162,166	No	171,511
PD-01.6-01R (D/S)	0.000	0.297	0.089	1,311,015	No	171,511
PD-01.6-09P	0.365	0.297	0.089	1,311,015	No	171,511
PD-01.6-11P	0.365	0.297	0.089	1,311,015	No	171,511
PD-01.6-12E	0.365	0.326	0.089	1,445,934	Yes	171,511
PD-01.6-03P	0.365	0.312	0.089	1,797,255	No	171,511
PD-01.6-05P	0.365	0.312	0.089	1,797,255	No	171,511
PD-01.6-07P	0.365	0.312	0.089	1,797,255	No	171,511
PD-01.6-01R	0.000	0.331	0.116	2,080,753	No	171,511
PD-01.5-01N	0.375	0.375	0.094	100,000,000	No	171,511
Sorted By: Remaining Life						
====>Grouped by Line: PD-01.7 PRESEP 2A DR to HDR						
PD-01.8-14O	0.365	0.130	0.089	40,460	No	171,511
PD-01.8-13V	0.365	0.259	0.095	660,435	No	171,511
PD-01.8-04E	0.365	0.287	0.089	1,076,343	No	171,511
PD-01.8-06E	0.365	0.287	0.089	1,076,343	No	171,511
PD-01.8-08E	0.365	0.287	0.089	1,076,343	No	171,511
PD-01.8-10E	0.365	0.287	0.089	1,076,343	No	171,511
PD-01.8-02B	0.365	0.291	0.089	1,162,166	No	171,511
PD-01.8-12E	0.365	0.295	0.089	1,258,391	No	171,511
PD-01.8-01R (D/S)	0.000	0.297	0.089	1,311,015	No	171,511
PD-01.8-03P	0.365	0.312	0.089	1,797,255	No	171,511
PD-01.8-05P	0.365	0.312	0.089	1,797,255	No	171,511
PD-01.8-07P	0.365	0.312	0.089	1,797,255	No	171,511
PD-01.8-09P	0.365	0.312	0.089	1,797,255	No	171,511
PD-01.8-11P	0.365	0.312	0.089	1,797,255	No	171,511
PD-01.8-01R	0.000	0.331	0.116	2,080,753	No	171,511
PD-01.7-01N	0.375	0.375	0.094	100,000,000	No	171,511
Sorted By: Remaining Life						
====>Grouped by Line: PD-02.2 PRESEP HDR to HD TK						
PD-02.2-01T (BR/SE)	0.000	0.300	0.083	1,115,129	No	171,511
PD-02.4-22T	0.375	0.322	0.132	1,533,200	No	171,511
PD-02.4-22T (D/S)	0.000	0.322	0.132	1,533,200	No	171,511

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: PD-02.2 PRESEP HDR to HD TK						
PD-02.2-01T (D/S)	0.000	0.453	0.132	0.132	No	171,511
PD-02.2-01T	0.375	0.439	0.132	0.132	No	171,511
====> Grouped by Line: PD-02.3 PRESEP HDR to HD TK						
PD-02.3-01T (D/S)	0.000	0.437	0.132	0.132	No	171,511
PD-02.3-01T	0.375	0.446	0.132	0.132	No	171,511
PD-02.3-01T (BR/SE)	0.000	0.499	0.083	0.083	No	171,511
====> Grouped by Line: PD-02.4 PRESEP HDR to HD TK						
PD-02.4-20O	0.421	0.139	0.132	0.132	No	171,511
PD-02.4-30V	0.000	0.221	0.076	0.076	No	83,116
PD-02.4-12E	0.375	0.257	0.132	0.132	No	171,511
PD-02.4-18E	0.375	0.257	0.132	0.132	No	171,511
PD-02.4-29R (D/S)	0.000	0.286	0.071	0.071	No	83,116
PD-02.4-08E	0.375	0.270	0.132	0.132	No	171,511
PD-02.4-10E	0.375	0.270	0.132	0.132	No	171,511
PD-02.4-14E	0.375	0.270	0.132	0.132	No	171,511
PD-02.4-25T (BR/SE)	0.000	0.343	0.132	0.132	No	83,116
PD-02.4-07P	0.375	0.273	0.132	0.132	No	171,511
PD-02.4-01T (D/S)	0.000	0.345	0.132	0.132	No	171,511
PD-02.4-16E	0.375	0.346	0.132	0.132	Yes	171,511
PD-02.4-02E	0.375	0.351	0.132	0.132	No	83,116
PD-02.4-04E	0.375	0.351	0.132	0.132	No	83,116
PD-02.4-22E	0.000	0.351	0.132	0.132	No	83,116
PD-02.4-28E	0.000	0.351	0.132	0.132	No	83,116
PD-02.4-06E	0.375	0.351	0.132	0.132	No	83,116
PD-02.4-13P	0.375	0.295	0.132	0.132	No	171,511
PD-02.4-19P	0.375	0.295	0.132	0.132	No	171,511
PD-02.4-03P	0.375	0.355	0.132	0.132	No	83,116
PD-02.4-09P	0.375	0.305	0.132	0.132	No	171,511
PD-02.4-11P	0.375	0.305	0.132	0.132	No	171,511
PD-02.4-15P	0.375	0.305	0.132	0.132	No	171,511
PD-02.4-23R	0.000	0.357	0.132	0.132	No	83,116
PD-02.4-17P	0.375	0.336	0.132	0.132	Yes	171,511
PD-02.4-01T	0.375	0.403	0.132	0.132	No	171,511
PD-02.4-05P	0.375	0.359	0.132	0.132	No	83,116
PD-02.4-01T (BR/SE)	0.000	0.344	0.083	0.083	No	171,511
PD-02.4-27P	0.000	0.362	0.132	0.132	No	83,116
PD-02.4-29R	0.000	0.483	0.132	0.132	No	83,116

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Time to Tcrit (hrs)	Predicted [1] Inspected	Comp. Actual Service Time (hrs)
===> Grouped by Line: PD-02.4 PRESEP HDR to HD TK							
PD-02.4-21N	0.899	0.777	0.114	0.114	1,939,184	Yes	171,511
PD-02.4-25T	0.000	0.615	0.248	0.248	3,184,711	No	83,116
PD-02.4-23R (D/S)	0.000	0.619	0.248	0.248	5,364,844	No	83,116
PD-02.4-24P	0.000	0.620	0.248	0.248	6,454,911	No	83,116
PD-02.4-31R	0.000	0.277	0.071	0.071	79,967,056	No	83,116
PD-02.4-31R (D/S)	0.000	0.375	0.132	0.132	100,000,000	No	83,116
PD-02.4-32P	0.000	0.375	0.132	0.132	100,000,000	No	83,116
PD-02.4-25T (D/S)	0.000	0.625	0.248	0.248	100,000,000	No	0
PD-02.4-26P	0.000	0.625	0.248	0.248	100,000,000	No	0

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: RHD: RH 31 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.091

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: RHD-01.1A_1 RH 31A to TK 31A							
RHD01.1A-03N	0.432	0.359	0.233	0.233	465,221	Yes	220,317
RHD01.1A-02P	0.432	0.356	0.233	0.233	673,079	Yes	220,317
RHD01.1A-01N	0.432	0.520	0.233	0.233	846,699	Yes	220,317
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR							
RHD01.1A-35F	0.432	0.265	0.233	0.233	77,271	No	220,317
RHD02.2A-02E	0.473	0.317	0.233	0.233	324,913	Yes	220,317
RHD01.2A-01R (D/S)	0.000	0.238	0.158	0.158	335,376	No	220,317
RHD01.1A-04N	0.432	0.362	0.233	0.233	380,279	No	220,317
RHD01.1A-12E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-16E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-18E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-06E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-08E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-10E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-20E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-29E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-31E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-33E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-43E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-45E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-47E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-25E	0.432	0.336	0.233	0.233	433,140	No	220,317
RHD01.1A-27E	0.432	0.336	0.233	0.233	433,140	No	220,317
RHD02.1A-02R	0.000	0.324	0.158	0.158	447,426	No	33,725
RHD01.1A-14E	0.432	0.341	0.233	0.233	483,942	No	220,317
RHD01.1A-22E	0.432	0.341	0.233	0.233	483,942	No	220,317
RHD01.1A-24E	0.432	0.341	0.233	0.233	483,942	No	220,317
RHD01.1A-39E	0.432	0.341	0.233	0.233	483,942	No	220,317
RHD01.1A-41E	0.432	0.341	0.233	0.233	483,942	No	220,317

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR							
RHD01.1A-21P_1	0.432	0.344	0.233	0.233	511,724	No	220,317
RHD01.1A-37T	0.432	0.350	0.233	0.233	572,844	No	220,317
RHD01.1A-37T (D/S)	0.000	0.350	0.233	0.233	572,844	No	220,317
RHD02.2A-03P	0.432	0.332	0.233	0.233	585,562	Yes	220,317
RHD02.2A-04E	0.432	0.373	0.233	0.233	627,515	Yes	220,317
RHD01.1A-34P_1	0.475	0.385	0.233	0.233	678,940	No	220,317
RHD01.1A-13P_1	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-17P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-07P_1	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-09P_1	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-11P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-19P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-26P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-28P_1	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-30P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-32P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-44P_1	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-46P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-48P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.2A-01R	0.000	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-05P	0.432	0.374	0.233	0.233	769,557	Yes	220,317
RHD02.2A-01P	0.432	0.389	0.233	0.233	917,809	Yes	151,585
RHD01.1A-15P	0.432	0.372	0.233	0.233	928,452	No	220,317
RHD01.1A-23P	0.432	0.372	0.233	0.233	928,452	No	220,317
RHD01.1A-40P	0.432	0.372	0.233	0.233	928,452	No	220,317
RHD01.1A-42P_1	0.432	0.372	0.233	0.233	928,452	No	220,317
RHD02.2A-05P	0.432	0.372	0.233	0.233	928,452	No	220,317
RHD02.1A-02R (D/S)	0.000	0.425	0.233	0.233	944,198	No	33,725
RHD01.1A-38P	0.432	0.377	0.233	0.233	1,061,806	No	220,317
RHD01.1A-13P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1A-07P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1A-09P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1A-21P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1A-28P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1A-42P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1A-44P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1A-36P	0.462	0.428	0.233	0.233	2,357,898	Yes	220,317
RHD01.1A-34P_2	0.475	0.444	0.233	0.233	2,748,432	No	220,317
RHD02.1A-01V	0.337	0.501	0.132	0.132	301,100,000	No	220,317

Sorted By: Remaining Life

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: RHD-01.1B_1 RH 31B to TK 31B							
RHD01.1B-01N	0.432	0.295	0.233	0.233	181,674	No	220,317
RHD01.1B-03N	0.432	0.322	0.233	0.233	328,363	No	220,317
RHD01.1B-02P	0.432	0.358	0.233	0.233	681,502	No	220,317
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR							
RHD01.1B-14F	0.432	0.265	0.233	0.233	77,271	No	220,317
RHD01.1B-04N	0.432	0.295	0.233	0.233	181,674	No	220,317
RHD02.1B-02R	0.000	0.299	0.158	0.158	378,911	No	99,292
RHD01.1B-06E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-08E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-12E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-18E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-22E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-24E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-26E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-28E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-32E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-35E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-37E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-43E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-45E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-49E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-30E	0.473	0.345	0.233	0.233	435,043	Yes	220,317
RHD01.1B-16E	0.432	0.354	0.233	0.233	480,606	Yes	220,317
RHD01.1B-10E	0.432	0.341	0.233	0.233	483,942	No	220,317
RHD01.1B-20E	0.432	0.341	0.233	0.233	483,942	No	220,317
RHD01.1B-47E	0.432	0.341	0.233	0.233	483,942	No	220,317
RHD02.2B-04E	0.432	0.341	0.233	0.233	483,942	No	220,317
RHD02.2B-02E	0.432	0.357	0.233	0.233	495,323	Yes	220,317
RHD01.1B-36P	0.432	0.344	0.233	0.233	511,724	No	220,317
RHD01.1B-41E	0.432	0.363	0.233	0.233	519,214	Yes	220,317
RHD01.1B-39E	0.432	0.364	0.233	0.233	523,196	Yes	220,317
RHD01.1B-34T	0.432	0.350	0.233	0.233	572,844	No	220,317
RHD01.1B-34T (D/S)	0.000	0.350	0.233	0.233	572,844	No	220,317
RHD01.1B-51E	0.432	0.394	0.233	0.233	641,942	Yes	220,317
RHD01.1B-05P	0.432	0.358	0.233	0.233	681,502	No	220,317
RHD01.2B-01R (D/S)	0.401	0.333	0.158	0.158	702,105	Yes	220,317
RHD01.1B-31P	0.469	0.390	0.233	0.233	706,132	Yes	220,317
RHD02.2B-03P	0.432	0.354	0.233	0.233	711,552	Yes	220,317

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
Sorted By: Remaining Life							
====> Grouped by Line: RHD-01.1B_2 TK 31B to B HDR							
RHD01.1B-07P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-09P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-13P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-19P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-23P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-25P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-27P_1	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-33P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-38P_1	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-44P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-46P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-50P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD02.1B-02R (D/S)	0.000	0.411	0.233	0.233	875,445	No	99,292
RHD01.1B-11P	0.432	0.372	0.233	0.233	928,452	No	220,317
RHD01.1B-21P_1	0.432	0.372	0.233	0.233	928,452	No	220,317
RHD01.1B-48P	0.432	0.372	0.233	0.233	928,452	No	220,317
RHD02.2B-05P	0.432	0.372	0.233	0.233	928,452	No	220,317
RHD01.1B-52P	0.476	0.402	0.233	0.233	967,985	Yes	220,317
RHD02.2B-01P	0.432	0.398	0.233	0.233	970,847	No	151,585
RHD01.1B-29P	0.473	0.402	0.233	0.233	972,809	No	220,317
RHD01.1B-40P	0.432	0.405	0.233	0.233	1,012,098	Yes	220,317
RHD01.1B-17P	0.432	0.415	0.233	0.233	1,074,628	Yes	220,317
RHD01.1B-42P_1	0.432	0.420	0.233	0.233	1,100,495	Yes	220,317
RHD01.2B-01R	0.000	0.450	0.233	0.233	1,282,312	Yes	220,317
RHD01.1B-15P	0.432	0.417	0.233	0.233	2,233,337	Yes	220,317
RHD01.1B-21P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1B-27P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1B-38P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1B-42P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD02.1B-01V	0.337	0.596	0.132	0.132	378,736,192	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: RHD: RH 32A TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.356

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: RHD-01.3A_1 RH 32A to TK 32A							
RHD01.3A-01N	0.432	0.277	0.233	0.233	No	115,697	220,317
RHD01.3A-03N	0.432	0.308	0.233	0.233	No	245,891	220,317
RHD01.3A-02P	0.432	0.368	0.233	0.233	Yes	656,045	220,317
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR							
RHD01.5A-03F	0.432	0.244	0.233	0.233	No	23,033	220,317
RHD01.3A-12E	0.432	0.317	0.233	0.233	No	298,672	220,317
RHD01.3A-14E	0.432	0.317	0.233	0.233	No	298,672	220,317
RHD01.3A-10E	0.432	0.317	0.233	0.233	No	298,672	220,317
RHD01.3A-08E	0.432	0.317	0.233	0.233	No	298,672	220,317
RHD01.7A-02E	0.432	0.317	0.233	0.233	No	298,672	220,317
RHD01.8A-02P	0.376	0.274	0.158	0.158	Yes	301,303	220,317
RHD01.8A-01R (D/S)	0.000	0.324	0.158	0.158	Yes	346,189	220,317
RHD02.4A-04E	0.432	0.330	0.233	0.233	No	383,975	220,317
RHD01.3A-04N	0.432	0.385	0.233	0.233	No	398,648	220,317
RHD01.7A-03P	0.432	0.333	0.233	0.233	No	408,633	220,317
RHD01.7A-04E	0.458	0.365	0.233	0.233	Yes	458,701	220,317
RHD02.4A-02E	0.473	0.371	0.233	0.233	No	474,085	220,317
RHD02.3A-02R	0.000	0.365	0.158	0.158	Yes	493,109	151,585
RHD01.3A-06E	0.432	0.379	0.233	0.233	Yes	516,596	220,317
RHD01.3A-15R	0.000	0.345	0.233	0.233	No	524,878	220,317
RHD01.8A-01R	0.000	0.379	0.233	0.233	Yes	546,641	220,317
RHD01.3A-13P	0.432	0.355	0.233	0.233	No	636,473	220,317
RHD01.3A-07P	0.432	0.355	0.233	0.233	No	636,473	220,317
RHD01.3A-11P	0.432	0.355	0.233	0.233	No	636,473	220,317
RHD01.3A-09P	0.432	0.355	0.233	0.233	No	636,473	220,317
RHD02.4A-03P	0.432	0.355	0.233	0.233	No	636,473	220,317
RHD02.3A-02R (D/S)	0.000	0.396	0.233	0.233	Yes	710,962	151,585
RHD02.4A-01P	0.432	0.379	0.233	0.233	Yes	764,967	151,585
RHD01.6A-04E	0.500	0.432	0.303	0.303	No	766,618	220,317

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
===>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR							
RHD01.6A-06E	0.500	0.432	0.303	0.303	766,618	No	220,317
RHD01.6A-08E	0.500	0.432	0.303	0.303	766,618	No	220,317
RHD01.6A-10E	0.500	0.432	0.303	0.303	766,618	No	220,317
RHD01.6A-12E	0.500	0.432	0.303	0.303	766,618	No	220,317
RHD01.6A-14E	0.500	0.432	0.303	0.303	766,618	No	220,317
RHD02.4A-05P	0.432	0.364	0.233	0.233	778,502	No	220,317
RHD01.5A-02P	0.432	0.364	0.233	0.233	854,533	Yes	220,317
RHD01.3A-05P	0.432	0.421	0.233	0.233	912,979	Yes	220,317
RHD01.6A-07P	0.500	0.441	0.303	0.303	949,696	No	220,317
RHD01.3A-15R (D/S)	0.000	0.445	0.303	0.303	1,040,014	No	220,317
RHD01.6A-02T	0.500	0.445	0.303	0.303	1,040,014	No	220,317
RHD01.6A-02T (D/S)	0.000	0.445	0.303	0.303	1,040,014	No	220,317
RHD01.7A-01R (D/S)	0.000	0.376	0.233	0.233	1,041,521	No	220,317
RHD02.4A-06L (D/S)	0.000	0.534	0.378	0.378	1,045,490	No	220,317
RHD01.5A-05R	0.000	0.462	0.233	0.233	1,070,972	Yes	220,317
RHD02.4A-06L	0.594	0.553	0.378	0.378	1,177,423	Yes	220,317
RHD01.5A-05R (D/S)	0.000	0.472	0.303	0.303	1,239,811	Yes	220,317
RHD01.4A-01P_1	0.500	0.454	0.303	0.303	1,329,033	No	220,317
RHD01.6A-05P	0.500	0.454	0.303	0.303	1,329,033	No	220,317
RHD01.6A-09P	0.500	0.454	0.303	0.303	1,329,033	No	220,317
RHD01.6A-11P	0.500	0.454	0.303	0.303	1,329,033	No	220,317
RHD01.6A-13P	0.500	0.454	0.303	0.303	1,329,033	No	220,317
RHD01.6A-15P_1	0.500	0.454	0.303	0.303	1,329,033	No	220,317
RHD01.7A-01R	0.000	0.454	0.303	0.303	1,329,033	No	220,317
RHD01.5A-01R	0.000	0.457	0.303	0.303	1,355,566	No	220,317
RHD01.6A-01P	0.500	0.459	0.303	0.303	1,373,186	Yes	220,317
RHD01.5A-01R (D/S)	0.000	0.454	0.233	0.233	1,605,777	No	220,317
RHD01.6A-03P_1	0.500	0.463	0.303	0.303	1,762,561	No	220,317
RHD01.5A-04P	0.432	0.407	0.233	0.233	1,870,006	Yes	220,317
RHD02.7A-01P	0.594	0.558	0.378	0.378	2,012,537	No	220,317
RHD01.4A-01P_2	0.500	0.480	0.303	0.303	3,536,084	No	220,317
RHD01.6A-03P_2	0.500	0.480	0.303	0.303	3,536,084	No	220,317
RHD01.6A-15P_2	0.500	0.480	0.303	0.303	3,536,084	No	220,317
RHD02.3A-01V	0.337	0.318	0.132	0.132	134,482,784	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Run Name: RHD: RH 32B TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.055

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			
====>Grouped by Line: RHD-01.3B_1 RH 32B to TK 32B						
RHD01.3B-03N	0.432	0.375	0.233	358,929	Yes	220,317
RHD01.3B-02P	0.432	0.360	0.233	474,995	Yes	220,317
RHD01.3B-01N	0.432	0.733	0.233	1,007,941	Yes	220,317
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR						
RHD01.5B-03F	0.432	0.188	0.233	-71,644	No	220,317
RHD01.3B-16E	0.432	0.327	0.233	257,735	Yes	220,317
RHD01.3B-04N	0.432	0.366	0.233	269,522	Yes	220,317
RHD01.3B-06E	0.432	0.336	0.233	279,992	Yes	220,317
RHD01.3B-08E	0.432	0.366	0.233	362,305	Yes	220,317
RHD01.3B-10E	0.432	0.367	0.233	365,086	Yes	220,317
RHD01.3B-14E	0.432	0.372	0.233	378,717	Yes	220,317
RHD01.3B-12E	0.432	0.389	0.233	425,061	Yes	220,317
RHD01.3B-18E	0.432	0.389	0.233	426,755	Yes	220,317
RHD01.9B-01R (D/S)	0.000	0.317	0.158	455,780	Yes	220,317
RHD02.3B-02R	0.000	0.434	0.158	507,537	No	66,848
RHD01.3B-19P	0.432	0.361	0.233	515,365	Yes	220,317
RHD01.3B-09P	0.432	0.365	0.233	534,989	Yes	220,317
RHD01.3B-15P	0.432	0.371	0.233	558,271	Yes	220,317
RHD01.3B-17P	0.432	0.373	0.233	563,782	Yes	220,317
RHD01.3B-13P	0.432	0.376	0.233	578,445	Yes	220,317
RHD01.3B-05P	0.432	0.388	0.233	581,393	Yes	220,317
RHD01.7B-02P	0.432	0.352	0.233	599,220	No	220,317
RHD01.3B-11P	0.432	0.383	0.233	606,687	Yes	220,317
RHD01.3B-07P	0.432	0.394	0.233	648,740	Yes	220,317
RHD01.3B-20R	0.000	0.419	0.233	668,914	Yes	220,317
RHD01.5B-01R (D/S)	0.000	0.360	0.233	710,809	No	220,317
RHD01.7B-01R (D/S)	0.000	0.360	0.233	710,809	No	220,317
RHD01.5B-02P	0.458	0.376	0.233	711,358	No	220,317
RHD01.7B-03R	0.000	0.521	0.233	1,038,461	Yes	220,317

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR					
RHD02.4B-01P	0.594	0.479	0.378	No	151,585
RHD01.7B-03R (D/S)	0.000	0.502	0.378	Yes	220,317
RHD01.6B-06E	0.594	0.536	0.378	No	220,317
RHD01.6B-08E	0.594	0.536	0.378	No	220,317
RHD01.6B-10E	0.594	0.536	0.378	No	220,317
RHD01.6B-11E	0.594	0.536	0.378	No	220,317
RHD01.6B-13E	0.594	0.536	0.378	No	220,317
RHD01.6B-15E	0.594	0.536	0.378	No	220,317
RHD01.6B-19E	0.594	0.536	0.378	No	220,317
RHD01.8B-04E	0.594	0.536	0.378	No	220,317
RHD01.6B-04E	0.594	0.542	0.378	No	220,317
RHD01.8B-02E	0.594	0.542	0.378	No	220,317
RHD02.4B-04E	0.594	0.542	0.378	No	220,317
RHD02.4B-06E	0.594	0.542	0.378	No	220,317
RHD01.6B-02E	0.594	0.567	0.378	Yes	220,317
RHD01.6B-12P	0.594	0.544	0.378	No	220,317
RHD01.5B-04P	0.475	0.404	0.233	Yes	220,317
RHD01.6B-17T	0.594	0.547	0.378	No	220,317
RHD01.6B-17T (D/S)	0.000	0.547	0.378	No	220,317
RHD01.6B-21T	0.594	0.547	0.378	No	220,317
RHD01.6B-21T (D/S)	0.000	0.547	0.378	No	220,317
RHD01.6B-03P_1	0.594	0.530	0.378	Yes	220,317
RHD02.4B-02E	0.000	0.624	0.378	Yes	220,317
RHD01.8B-01P_1	0.594	0.546	0.378	Yes	220,317
RHD01.4B-01P_1	0.594	0.546	0.378	Yes	220,317
RHD01.5B-01R	0.000	0.555	0.378	No	220,317
RHD01.6B-07P	0.594	0.555	0.378	No	220,317
RHD01.6B-09P_1	0.594	0.555	0.378	No	220,317
RHD01.6B-14P	0.594	0.555	0.378	No	220,317
RHD01.6B-16P	0.594	0.555	0.378	No	220,317
RHD01.6B-20P_1	0.594	0.555	0.378	No	220,317
RHD01.7B-01R	0.000	0.555	0.378	No	220,317
RHD01.8B-05P	0.594	0.555	0.378	No	220,317
RHD02.4B-03P	0.594	0.558	0.378	Yes	220,317
RHD01.6B-01P	0.634	0.564	0.378	Yes	220,317
RHD01.9B-01R	0.000	0.570	0.378	Yes	220,317
RHD01.8B-06E	0.594	0.678	0.378	Yes	220,317
RHD01.6B-05P	0.594	0.560	0.378	No	220,317
RHD01.8B-03P	0.594	0.560	0.378	No	220,317

Sorted By: Remaining Life

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====> Grouped by Line: RHD-01.3B_2 TK 32B to B HDR						
RHD02.4B-05P	0.594	0.560	0.378	2,137,989	No	220,317
RHD01.5B-05R	0.000	0.836	0.233	2,171,754	Yes	220,317
RHD02.4B-07P	0.609	0.574	0.378	2,298,627	No	220,317
RHD01.6B-18P	0.594	0.563	0.378	2,392,296	No	220,317
RHD01.6B-22P_1	0.594	0.563	0.378	2,392,296	No	220,317
RHD01.5B-05R (D/S)	0.000	0.720	0.378	2,951,687	Yes	220,317
RHD01.3B-20R (D/S)	0.000	0.721	0.378	2,961,764	Yes	220,317
RHD02.3B-02R (D/S)	0.000	0.797	0.378	3,617,238	No	66,848
RHD01.6B-03P_2	0.594	0.577	0.378	4,681,058	No	220,317
RHD01.4B-01P_2	0.594	0.577	0.378	4,681,058	No	220,317
RHD01.6B-09P_2	0.594	0.577	0.378	4,681,058	No	220,317
RHD01.6B-20P_2	0.594	0.577	0.378	4,681,058	No	220,317
RHD01.6B-22P_2	0.594	0.577	0.378	4,681,058	No	220,317
RHD01.8B-01P_2	0.594	0.577	0.378	4,681,058	No	220,317
RHD02.3B-01V	0.337	0.621	0.132	273,256,288	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Service Life Report

Pass 2 Analysis Include Measured Wear

Run Name: RHD: RH 33 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.596

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop				
====>Grouped by Line: RHD-01.10A_1 RH 33A to TK 33A							
RHD01.10A-01N	0.432	0.196	0.233	0.233	-61,644	No	220,317
RHD01.10A-03N	0.432	0.243	0.233	0.233	21,430	No	220,317
RHD01.10A-02P	0.432	0.304	0.233	0.233	226,787	No	220,317
====>Grouped by Line: RHD-01.10A_2 TK 33A to A HDR							
RHD01.10A-18F	0.432	0.144	0.233	0.233	-118,891	No	220,317
RHD01.10A-10E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10A-14E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10A-16E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.12A-03E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.12A-04E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.12A-06E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10A-08E	0.432	0.276	0.233	0.233	111,902	No	220,317
RHD01.10A-12E	0.432	0.276	0.233	0.233	111,902	No	220,317
RHD02.6A-04E	0.432	0.276	0.233	0.233	111,902	No	220,317
RHD01.12A-05P	0.432	0.281	0.233	0.233	128,058	No	220,317
RHD02.6A-02E	0.432	0.301	0.233	0.233	157,027	Yes	220,317
RHD01.13A-01R (D/S)	0.000	0.314	0.158	0.158	213,612	No	220,317
RHD01.10A-04N	0.432	0.375	0.233	0.233	243,155	No	220,317
RHD01.12A-08E	0.432	0.346	0.233	0.233	262,601	Yes	220,317
RHD01.10A-11P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10A-15P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10A-17P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.12A-07P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.12A-01T	0.000	0.418	0.303	0.303	301,608	No	220,317
RHD02.5A-02R	0.000	0.366	0.158	0.158	324,863	No	151,585
RHD01.12A-01T (D/S)	0.000	0.430	0.303	0.303	333,093	No	220,317
RHD01.10A-06E	0.432	0.366	0.233	0.233	346,288	Yes	220,317
RHD01.11A-03E	0.500	0.396	0.303	0.303	362,606	No	220,317
RHD02.5A-02R (D/S)	0.000	0.361	0.233	0.233	365,534	Yes	151,585

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: RHD-01.10A_2 TK 33A to A HDR								
RHD01.10A-09P	0.432	0.328	0.233	0.233	0.233	370,393	No	220,317
RHD01.10A-07P	0.432	0.328	0.233	0.233	0.233	370,393	No	220,317
RHD01.10A-13P	0.432	0.328	0.233	0.233	0.233	370,393	No	220,317
RHD02.6A-03P	0.432	0.348	0.233	0.233	0.233	394,281	Yes	220,317
RHD01.13A-01R	0.000	0.412	0.233	0.233	0.233	438,098	No	220,317
RHD02.6A-01P	0.432	0.374	0.233	0.233	0.233	483,983	Yes	151,585
RHD01.10A-05P	0.432	0.389	0.233	0.233	0.233	496,942	Yes	220,317
RHD01.11A-01E	0.500	0.441	0.303	0.303	0.303	535,656	Yes	220,317
RHD01.12A-02P	0.432	0.384	0.233	0.233	0.233	647,930	No	220,317
RHD01.10A-20R (D/S)	0.000	0.441	0.303	0.303	0.303	664,731	No	220,317
RHD01.10A-20R	0.000	0.466	0.233	0.233	0.233	714,170	No	220,317
RHD01.11A-02P	0.500	0.462	0.303	0.303	0.303	716,791	Yes	220,317
RHD02.6A-05P	0.000	0.419	0.233	0.233	0.233	723,796	No	50,194
RHD01.11A-04P	0.500	0.430	0.303	0.303	0.303	731,095	No	220,317
RHD01.10A-19P	0.432	0.398	0.233	0.233	0.233	1,159,584	Yes	220,317
RHD02.5A-01V	0.337	0.490	0.132	0.132	0.132	169,811,632	No	220,317
====>Grouped by Line: RHD-01.10B_1 RH 33B to TK 33B								
RHD01.10B-01N	0.432	0.335	0.233	0.233	0.233	174,671	Yes	220,317
RHD01.10B-03N	0.432	0.359	0.233	0.233	0.233	270,682	No	220,317
RHD01.10B-02P	0.432	0.358	0.233	0.233	0.233	396,157	Yes	220,317
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR								
RHD01.10B-26F	0.432	0.144	0.233	0.233	0.233	-118,891	No	220,317
RHD01.10B-04N	0.432	0.196	0.233	0.233	0.233	-61,644	No	220,317
RHD01.12B-01R (D/S)	0.000	0.167	0.158	0.158	0.158	22,160	No	220,317
RHD01.10B-08E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-10E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-12E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-14E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-15E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-17E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-19E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-21E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-22E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-24E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-30E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-42E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-44E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
Sorted By: Remaining Life							
====> Grouped by Line: RHD-01.10B_2 TK 33B to B HDR							
RHD01.10B-46E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-48E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-50E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-54E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-56E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-58E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-60E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-62E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-63E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-06E	0.432	0.276	0.233	0.233	111,902	No	220,317
RHD01.10B-32E	0.432	0.276	0.233	0.233	111,902	No	220,317
RHD01.10B-34E	0.432	0.276	0.233	0.233	111,902	No	220,317
RHD01.10B-36E	0.432	0.276	0.233	0.233	111,902	No	220,317
RHD01.10B-38E	0.432	0.276	0.233	0.233	111,902	No	220,317
RHD01.10B-40E	0.432	0.276	0.233	0.233	111,902	No	220,317
RHD01.10B-13P_1	0.432	0.281	0.233	0.233	128,058	No	220,317
RHD01.10B-16P	0.432	0.281	0.233	0.233	128,058	No	220,317
RHD01.10B-23P	0.432	0.281	0.233	0.233	128,058	No	220,317
RHD01.10B-64R	0.000	0.300	0.233	0.233	204,220	No	220,317
RHD01.10B-05P	0.432	0.304	0.233	0.233	226,787	No	220,317
RHD01.10B-09P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-11P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-18P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-20P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-25P_1	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-31P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-43P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-45P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-47P_1	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-49P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-51P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-55P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-57P_1	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-59P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-61P_1	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-52T (D/S)	0.000	0.417	0.233	0.233	315,175	Yes	220,317
RHD01.11B-02E	0.500	0.396	0.303	0.303	362,606	No	220,317
RHD01.11B-04E	0.500	0.396	0.303	0.303	362,606	No	220,317
RHD01.10B-07P	0.432	0.328	0.233	0.233	370,393	No	220,317

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR							
RHD01.10B-33P	0.432	0.328	0.233	0.233	370,393	No	220,317
RHD01.10B-35P	0.432	0.328	0.233	0.233	370,393	No	220,317
RHD01.10B-37P_1	0.432	0.328	0.233	0.233	370,393	No	220,317
RHD01.10B-39P	0.432	0.328	0.233	0.233	370,393	No	220,317
RHD01.10B-41P	0.432	0.328	0.233	0.233	370,393	No	220,317
RHD01.10B-52T	0.432	0.453	0.233	0.233	376,860	No	220,317
RHD01.10B-53P	0.432	0.372	0.233	0.233	396,432	Yes	220,317
RHD01.10B-28E	0.432	0.443	0.233	0.233	486,612	Yes	220,317
RHD01.10B-29P	0.432	0.389	0.233	0.233	534,182	Yes	220,317
RHD01.10B-64R (D/S)	0.000	0.416	0.303	0.303	541,733	No	220,317
RHD02.6B-02P	0.528	0.437	0.303	0.303	595,018	No	220,317
RHD01.11B-01P_1	0.500	0.430	0.303	0.303	731,095	No	220,317
RHD01.11B-03P	0.500	0.430	0.303	0.303	731,095	No	220,317
RHD01.11B-05P	0.500	0.430	0.303	0.303	731,095	No	220,317
RHD01.12B-01R	0.000	0.430	0.303	0.303	731,095	No	220,317
RHD02.6B-01E	0.559	0.541	0.303	0.303	899,851	No	66,848
RHD01.10B-13P_2	0.432	0.380	0.233	0.233	1,145,865	No	220,317
RHD01.10B-25P_2	0.432	0.380	0.233	0.233	1,145,865	No	220,317
RHD01.10B-37P_2	0.432	0.380	0.233	0.233	1,145,865	No	220,317
RHD01.10B-47P_2	0.432	0.380	0.233	0.233	1,145,865	No	220,317
RHD01.10B-57P_2	0.432	0.380	0.233	0.233	1,145,865	No	220,317
RHD01.10B-61P_2	0.432	0.380	0.233	0.233	1,145,865	No	220,317
RHD01.10B-27P	0.432	0.437	0.233	0.233	1,434,256	Yes	220,317
RHD01.11B-01P_2	0.500	0.469	0.303	0.303	2,177,135	No	220,317
RHD02.5B-01V	0.337	0.552	0.132	0.132	199,288,848	No	220,317

Sorted By: Remaining Life

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:03:48PM
 AnalysisDate/Time:

Run Name: RHD: RHD HDR TO HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.184

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) :1.000

Component Name	Thickness (in)			Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	I_hoop				
====>Grouped by Line: RHD-02.10A TK A HDR to FWH 36							
RHD02.10A-09E	0.500	0.352	0.303	0.303	131,928	No	220,317
RHD02.10A-07E	0.500	0.352	0.303	0.303	131,928	No	220,317
RHD02.10A-03E	0.500	0.352	0.303	0.303	131,928	No	220,317
RHD02.10A-05E	0.500	0.352	0.303	0.303	131,928	No	220,317
RHD02.10A-01R (D/S)	0.000	0.356	0.303	0.303	148,710	No	220,317
RHD02.10A-11T (BR/SE)	0.000	0.341	0.211	0.211	290,862	Yes	220,317
RHD02.10A-02P	0.500	0.388	0.303	0.303	303,771	No	220,317
RHD02.10A-10P	0.500	0.401	0.303	0.303	400,432	No	220,317
RHD02.10A-06P	0.500	0.401	0.303	0.303	400,432	No	220,317
RHD02.10A-08P	0.500	0.401	0.303	0.303	400,432	No	220,317
RHD02.10A-04P	0.500	0.401	0.303	0.303	400,432	No	220,317
RHD02.10A-01R	0.000	0.491	0.378	0.378	441,988	No	220,317
RHD02.10A-11T	0.500	0.576	0.303	0.303	447,098	Yes	220,317
RHD02.10A-11T (D/S)	0.000	0.544	0.303	0.303	713,961	Yes	220,317
====>Grouped by Line: RHD-02.10B B HDR to FWH 36A							
RHD02.10B-12V	0.432	0.223	0.200	0.200	43,128	No	220,317
RHD02.10B-09E	0.432	0.277	0.233	0.233	115,711	No	220,317
RHD02.10B-11E	0.432	0.277	0.233	0.233	115,711	No	220,317
RHD02.10B-07E	0.432	0.277	0.233	0.233	115,711	No	220,317
RHD02.10B-03E	0.432	0.277	0.233	0.233	115,711	No	220,317
RHD02.10B-05E	0.432	0.277	0.233	0.233	115,711	No	220,317
RHD02.10B-06P	0.432	0.298	0.233	0.233	197,084	No	220,317
RHD02.10B-01R (D/S)	0.000	0.298	0.233	0.233	197,084	No	220,317
RHD02.10B-17R	0.000	0.306	0.233	0.233	252,446	Yes	220,317
RHD02.10B-10P	0.432	0.327	0.233	0.233	365,690	No	220,317
RHD02.10B-08P	0.432	0.327	0.233	0.233	365,690	No	220,317
RHD02.10B-04P	0.432	0.327	0.233	0.233	365,690	No	220,317
RHD02.10B-02P_1	0.432	0.327	0.233	0.233	365,690	No	220,317
RHD02.10B-16T (BR/SE)	0.000	0.476	0.211	0.211	415,044	Yes	220,317

Sorted By: Remaining Life

Sorted By: Remaining Life

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
===>Grouped by Line: RHD-02.10B B HDR to FWH 36A								
RHD02.10B-14T (BR/SE)	0.000	0.485	0.211	0.211	0.211	429,112	Yes	220,317
RHD02.10B-13P	0.432	0.340	0.233	0.233	0.233	470,795	No	220,317
RHD02.10B-15P	0.432	0.348	0.233	0.233	0.233	558,382	No	220,317
RHD02.11B-01N	0.500	0.401	0.261	0.261	0.261	569,173	No	220,317
RHD02.10B-14T	0.432	0.537	0.233	0.233	0.233	587,767	Yes	220,317
RHD02.10B-16T	0.432	0.543	0.233	0.233	0.233	599,379	Yes	220,317
RHD02.10B-01R	0.000	0.537	0.378	0.378	0.378	1,128,422	No	220,317
RHD02.10B-02P_2	0.432	0.386	0.233	0.233	0.233	1,346,669	No	220,317
RHD02.10B-17R (D/S)	0.000	0.629	0.303	0.303	0.303	1,771,469	Yes	220,317
===>Grouped by Line: RHD-02.11A A HDR to FWH 36A								
RHD02.11A-15V	0.432	0.223	0.200	0.200	0.200	43,128	No	220,317
RHD02.11A-05E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.11A-03E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.11A-07E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.11A-08E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.11A-10E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.11A-12E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.11A-14E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.11A-06P	0.432	0.298	0.233	0.233	0.233	197,084	No	220,317
RHD02.11A-01R (D/S)	0.000	0.298	0.233	0.233	0.233	197,084	No	220,317
RHD02.11A-09P_1	0.432	0.298	0.233	0.233	0.233	197,084	No	220,317
RHD02.11A-20R	0.000	0.315	0.233	0.233	0.233	283,107	No	220,317
RHD02.11A-19T (BR/SE)	0.000	0.401	0.211	0.211	0.211	297,812	Yes	220,317
RHD02.11A-17T (BR/SE)	0.000	0.436	0.211	0.211	0.211	352,520	No	220,317
RHD02.11A-04P	0.432	0.327	0.233	0.233	0.233	365,690	No	220,317
RHD02.11A-02P_1	0.432	0.327	0.233	0.233	0.233	365,690	No	220,317
RHD02.11A-11P	0.432	0.327	0.233	0.233	0.233	365,690	No	220,317
RHD02.11A-13P	0.432	0.327	0.233	0.233	0.233	365,690	No	220,317
RHD02.11A-17T	0.432	0.459	0.233	0.233	0.233	436,813	Yes	220,317
RHD02.11A-19T	0.432	0.468	0.233	0.233	0.233	454,231	Yes	220,317
RHD02.11A-01R	0.000	0.413	0.303	0.303	0.303	511,547	No	220,317
RHD02.12A-01N	0.500	0.401	0.261	0.261	0.261	569,173	No	220,317
RHD02.11A-20R (D/S)	0.000	0.425	0.303	0.303	0.303	664,318	No	220,317
RHD02.11A-16P	0.489	0.393	0.233	0.233	0.233	680,393	No	220,317
RHD02.11A-18P	0.473	0.387	0.233	0.233	0.233	726,180	No	220,317
RHD02.11A-02P_2	0.432	0.386	0.233	0.233	0.233	1,346,669	No	220,317
RHD02.11A-09P_2	0.432	0.386	0.233	0.233	0.233	1,346,669	No	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: RHD-02.12B B HDR to FWH 36B								
RHD02.12B-09V	0.432	0.223	0.200	0.200	0.200	43,128	No	220,317
RHD02.12B-04E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.12B-06E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.12B-08E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.12B-02E	0.432	0.290	0.233	0.233	0.233	150,049	Yes	220,317
RHD02.12B-03P	0.432	0.298	0.233	0.233	0.233	197,084	No	220,317
RHD02.12B-13T (BR/SE)	0.000	0.341	0.211	0.211	0.211	204,026	Yes	220,317
RHD02.12B-14R	0.000	0.315	0.233	0.233	0.233	283,107	No	220,317
RHD02.12B-05P	0.432	0.327	0.233	0.233	0.233	365,690	No	220,317
RHD02.12B-07P	0.432	0.327	0.233	0.233	0.233	365,690	No	220,317
RHD02.12B-11T (BR/SE)	0.000	0.464	0.211	0.211	0.211	395,298	Yes	220,317
RHD02.12B-10P	0.432	0.340	0.233	0.233	0.233	470,795	No	220,317
RHD02.12B-13T	0.432	0.504	0.233	0.233	0.233	523,902	Yes	220,317
RHD02.12B-01P	0.432	0.348	0.233	0.233	0.233	558,382	No	220,317
RHD02.12B-12P	0.432	0.348	0.233	0.233	0.233	558,382	No	220,317
RHD02.12B-14R (D/S)	0.000	0.425	0.303	0.303	0.303	664,318	No	220,317
RHD02.12B-11T	0.432	0.589	0.233	0.233	0.233	689,126	Yes	220,317
RHD02.13B-01N	0.500	1.085	0.261	0.261	0.261	3,359,273	No	220,317
====>Grouped by Line: RHD-02.13A A HDR to FWH 36B								
RHD02.13A-12V	0.432	0.223	0.200	0.200	0.200	43,128	No	220,317
RHD02.13A-11E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.13A-07E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.13A-09E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.13A-16T (BR/SE)	0.000	0.290	0.211	0.211	0.211	123,318	Yes	220,317
RHD02.13A-05E	0.432	0.303	0.233	0.233	0.233	182,936	Yes	220,317
RHD02.13A-03P	0.432	0.298	0.233	0.233	0.233	197,084	No	220,317
RHD02.13A-17R	0.000	0.315	0.233	0.233	0.233	283,107	No	220,317
RHD02.13A-02E	0.432	0.355	0.233	0.233	0.233	320,042	Yes	220,317
RHD02.13A-14T (BR/SE)	0.000	0.419	0.211	0.211	0.211	325,947	Yes	220,317
RHD02.13A-08P	0.432	0.327	0.233	0.233	0.233	365,690	No	220,317
RHD02.13A-10P	0.432	0.327	0.233	0.233	0.233	365,690	No	220,317
RHD02.13A-16T	0.432	0.425	0.233	0.233	0.233	371,735	Yes	220,317
RHD02.13A-14T	0.432	0.463	0.233	0.233	0.233	444,554	Yes	220,317
RHD02.13A-06P_1	0.432	0.387	0.233	0.233	0.233	466,422	Yes	220,317
RHD02.13A-13P	0.432	0.340	0.233	0.233	0.233	470,795	No	220,317
RHD02.13A-04E	0.432	0.416	0.233	0.233	0.233	478,463	Yes	220,317
RHD02.13A-01P	0.432	0.338	0.233	0.233	0.233	510,209	Yes	220,317
RHD02.13A-15P	0.432	0.348	0.233	0.233	0.233	558,382	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: RHD-02.13A A HDR to FWH 36B						
RHD02.13A-17R (D/S)	0.000	0.425	0.303	0.303	No	220,317
RHD02.13A-06P_2	0.432	0.386	0.233	0.233	No	220,317
RHD02.14A-01N	0.500	1.064	0.261	0.261	Yes	220,317
Sorted By: Remaining Life						
====>Grouped by Line: RHD-02.14B B HDR to FWH 36C						
RHD02.14B-08V	0.432	0.223	0.200	0.200	No	220,317
RHD02.14B-04E	0.432	0.277	0.233	0.233	No	220,317
RHD02.14B-05E	0.432	0.277	0.233	0.233	No	220,317
RHD02.14B-07E	0.432	0.277	0.233	0.233	No	220,317
RHD02.14B-03P	0.432	0.298	0.233	0.233	No	220,317
RHD02.14B-06P	0.432	0.298	0.233	0.233	No	220,317
RHD02.14B-12T (BR/SE)	0.000	0.370	0.211	0.211	Yes	220,317
RHD02.14B-13R	0.000	0.315	0.233	0.233	No	220,317
RHD02.14B-10T (BR/SE)	0.000	0.410	0.211	0.211	No	33,725
RHD02.14B-10T	0.000	0.415	0.233	0.233	No	33,725
RHD02.14B-02E	0.000	0.412	0.233	0.233	No	50,194
RHD02.14B-09P	0.432	0.340	0.233	0.233	No	220,317
RHD02.14B-12T	0.432	0.495	0.233	0.233	Yes	220,317
RHD02.14B-01P	0.432	0.348	0.233	0.233	No	220,317
RHD02.14B-11P	0.432	0.348	0.233	0.233	No	220,317
RHD02.14B-13R (D/S)	0.000	0.425	0.303	0.303	No	220,317
RHD02.14B-14P	0.000	0.421	0.233	0.233	No	50,194
RHD02.15B-01N	0.432	1.086	0.261	0.261	Yes	220,317
Sorted By: Remaining Life						
====>Grouped by Line: RHD-02.15A A HDR to FWH 36C						
RHD02.15A-07V	0.432	0.223	0.200	0.200	No	220,317
RHD02.15A-04E	0.432	0.277	0.233	0.233	No	220,317
RHD02.15A-06E	0.432	0.277	0.233	0.233	No	220,317
RHD02.15A-12R	0.000	0.315	0.233	0.233	No	220,317
RHD02.15A-11T (BR/SE)	0.000	0.399	0.211	0.211	No	50,194
RHD02.15A-11T	0.000	0.405	0.233	0.233	No	50,194
RHD02.15A-09T (BR/SE)	0.000	0.434	0.211	0.211	Yes	220,317
RHD02.15A-05P	0.432	0.327	0.233	0.233	No	220,317
RHD02.15A-03P	0.432	0.336	0.233	0.233	Yes	220,317
RHD02.15A-08P	0.432	0.340	0.233	0.233	No	220,317
RHD02.15A-02E	0.000	0.425	0.233	0.233	No	50,194
RHD02.15A-01P	0.432	0.348	0.233	0.233	No	220,317
RHD02.15A-10P	0.432	0.348	0.233	0.233	No	220,317
RHD02.15A-09T	0.432	0.522	0.233	0.233	Yes	220,317

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
Sorted By: Remaining Life							
====>Grouped by Line: RHD-02.15A A HDR to FWH 36C							
RHD02.15A-12R (D/S)	0.000	0.425	0.303	0.303	664,318	No	220,317
RHD02.15A-13P	0.000	0.421	0.233	0.233	911,785	No	50,194
RHD02.16A-01N	0.500	1.062	0.261	0.261	3,265,554	Yes	220,317
Sorted By: Remaining Life							
====>Grouped by Line: RHD-02.7B TK B HDR to FWH 36							
RHD02.7B-02E	0.500	0.334	0.303	0.303	73,874	No	220,317
RHD02.7B-04E	0.500	0.352	0.303	0.303	131,928	No	220,317
RHD02.7B-06E	0.500	0.352	0.303	0.303	131,928	No	220,317
RHD02.7B-03P	0.500	0.388	0.303	0.303	303,771	No	220,317
RHD02.2B-06L (D/S)	0.000	0.466	0.303	0.303	356,779	No	220,317
RHD02.7B-05P	0.500	0.401	0.303	0.303	400,432	No	220,317
RHD02.7B-01P	0.500	0.410	0.303	0.303	480,984	No	220,317
RHD02.7B-07P	0.543	0.442	0.303	0.303	555,913	No	220,317
RHD02.2B-06L (BR/SE)	0.000	0.864	0.211	0.211	1,502,025	No	220,317
Sorted By: Remaining Life							
====>Grouped by Line: RHD-02.8A TK A HDR to FWH 36							
RHD02.6A-06L (BR/SE)	0.000	0.208	0.211	0.211	-7,767	Yes	220,317
RHD02.6A-06L (D/S)	0.000	0.473	0.378	0.378	318,027	No	220,317
RHD02.8A-02E	0.594	0.497	0.378	0.378	493,326	No	220,317
RHD02.8A-03P	0.594	0.529	0.378	0.378	942,528	No	220,317
RHD02.6A-06L	0.594	0.550	0.378	0.378	1,045,428	Yes	220,317
RHD02.8A-01P	0.000	0.535	0.378	0.378	1,077,289	No	220,317
Sorted By: Remaining Life							
====>Grouped by Line: RHD-02.8B TK B HDR to FWH 36							
RHD02.8B-06T (D/S)	0.000	0.432	0.378	0.378	133,964	No	220,317
RHD02.8B-02E	0.594	0.439	0.378	0.378	159,821	No	220,317
RHD02.8B-04E	0.594	0.439	0.378	0.378	159,821	No	220,317
RHD02.7B-08L (D/S)	0.000	0.480	0.378	0.378	241,954	Yes	220,317
RHD02.8B-05P	0.594	0.460	0.378	0.378	248,087	No	220,317
RHD02.8B-06T	0.594	0.577	0.378	0.378	349,446	Yes	220,317
RHD02.8B-03P	0.594	0.489	0.378	0.378	430,974	No	220,317
RHD02.8B-01P	0.609	0.516	0.378	0.378	665,863	Yes	220,317
RHD02.8B-06T (BR/SE)	0.000	0.568	0.211	0.211	797,091	Yes	220,317
RHD02.7B-08L	0.605	0.531	0.378	0.378	925,999	Yes	220,317
RHD02.7B-08L (BR/SE)	0.000	1.106	0.281	0.281	1,863,585	No	220,317
Sorted By: Remaining Life							
====>Grouped by Line: RHD-02.9A TK A HDR to FWH 36							
RHD02.2A-06L (BR/SE)	0.000	0.256	0.211	0.211	103,162	No	220,317
RHD02.2A-06L (D/S)	0.000	0.422	0.378	0.378	104,709	No	220,317

Component Name	Init.	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====> Grouped by Line: RHD-02.9A TK A HDR to FWH 36							
RHD02.9A-11T (D/S)	0.000	0.432	0.378	0.378	133,964	No	220,317
RHD02.9A-07E	0.594	0.447	0.378	0.378	192,101	No	220,317
RHD02.9A-09E	0.594	0.447	0.378	0.378	192,101	No	220,317
RHD02.9A-02E	0.594	0.456	0.378	0.378	228,294	No	220,317
RHD02.9A-04E	0.594	0.456	0.378	0.378	228,294	No	220,317
RHD02.9A-06E	0.594	0.456	0.378	0.378	228,294	No	220,317
RHD02.2A-06L	0.594	0.473	0.378	0.378	318,027	No	220,317
RHD02.9A-11T	0.594	0.621	0.378	0.378	426,808	Yes	220,317
RHD02.9A-08P	0.594	0.489	0.378	0.378	430,974	No	220,317
RHD02.9A-10P	0.594	0.489	0.378	0.378	430,974	No	220,317
RHD02.9A-03P	0.594	0.502	0.378	0.378	544,981	No	220,317
RHD02.9A-05P	0.594	0.502	0.378	0.378	544,981	No	220,317
RHD02.9A-11T (BR/SE)	0.000	0.480	0.211	0.211	600,587	Yes	220,317
RHD02.9A-01P	0.594	0.510	0.378	0.378	639,987	No	220,317

====> Grouped by Line: RHD-02.9B TK B HDR to FWH 36

RHD02.9B-02T (BR/SE)	0.000	0.251	0.211	0.211	88,641	No	220,317
RHD02.9B-02T	0.594	0.432	0.378	0.378	133,964	No	220,317
RHD02.9B-02T (D/S)	0.000	0.504	0.378	0.378	570,785	No	220,317
RHD02.9B-01P	0.594	0.535	0.378	0.378	1,077,289	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: CD: HDR TO BFP
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.119

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			
====>Grouped by Line: CD-06.1 FWH 35 OUT HDR						
CD-06.1-01T	0.659	0.658	0.561	259,169	No	220,317
CD-06.1-01T (D/S)	0.659	0.658	0.561	217,807	No	220,317
CD-06.1-02P	0.663	0.643	0.524	502,377	No	220,317
CD-06.1-03T	0.702	0.594	0.561	54,613	No	220,317
CD-06.1-03T (BR/SE)	0.721	0.590	0.449	403,042	No	220,317
CD-06.1-03T (D/S)	0.702	0.619	0.561	141,186	No	220,317
CD-06.1-01T (BR/SE)	0.000	0.430	0.299	309,560	Yes	220,317
Sorted By:Flow Order						
====>Grouped by Line: CD-06.2A HDR to BFP 31						
CD-06.2A-01P	0.721	0.651	0.523	645,569	Yes	220,317
CD-06.2A-02E	0.729	0.658	0.523	365,933	Yes	220,317
CD-06.2A-03P	0.688	0.703	0.523	726,120	Yes	220,317
CD-06.2A-04E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-05P	0.688	0.601	0.523	316,028	No	220,317
CD-06.2A-06E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-07V	0.688	0.514	0.559	-89,764	No	220,317
CD-06.2A-08P	0.688	0.642	0.523	547,785	Yes	220,317
CD-06.2A-09E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-10P	0.688	0.601	0.523	316,028	No	220,317
CD-06.2A-11E	0.688	0.663	0.523	381,323	Yes	220,317
CD-06.2A-12P	0.688	0.577	0.523	170,130	No	220,317
CD-06.2A-13E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-14P	0.688	0.601	0.523	316,028	No	220,317
CD-06.2A-15E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-16P	0.688	0.601	0.523	316,028	No	220,317
CD-06.2A-17E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-18P	0.688	0.601	0.523	316,028	No	220,317
CD-06.2A-19E	0.688	0.559	0.523	99,716	No	220,317
CD-06.2A-20E	0.688	0.559	0.523	99,716	No	220,317

Component Name
 Init. Pred.[I] Thoop Tcrit
 Thickness (in) -----
 Component Predicted [1] Inspected
 Time to Tcrit (hrs)
 Comp. Actual Service Time (hrs)

=====>Grouped by Line: CD-06.2A HDR to BFP 31

Component Name	Init.	Pred.[I]	Thoop	Tcrit	Component Predicted [1] Inspected	Comp. Actual Service Time (hrs)
CD-06.2A-21P	0.688	0.577	0.523	0.523	No	220,317
CD-06.2A-22P	0.688	0.643	0.523	0.523	No	220,317
CD-06.2A-23P	0.688	0.643	0.523	0.523	No	220,317
CD-06.2A-24O	0.688	0.412	0.523	0.523	No	220,317
CD-06.2A-25P	0.688	0.640	0.523	0.523	Yes	220,317
CD-06.2A-26E	0.688	0.559	0.523	0.523	No	220,317
CD-06.2A-27P	0.688	0.601	0.523	0.523	No	220,317
CD-06.2A-28E	0.688	0.559	0.523	0.523	No	220,317
CD-06.2A-29P	0.688	0.577	0.523	0.523	No	220,317
CD-06.2A-30E	0.688	0.573	0.523	0.523	No	220,317
CD-06.2A-31E	0.688	0.566	0.523	0.523	No	220,317
CD-06.2A-32P	0.688	0.601	0.523	0.523	No	220,317
CD-06.2A-33E	0.688	0.559	0.523	0.523	No	220,317
CD-06.2A-34P	0.688	0.601	0.523	0.523	No	220,317
CD-06.3A-01R	0.000	0.622	0.523	0.523	Yes	220,317
CD-06.3A-01R (D/S)	0.000	0.522	0.392	0.392	Yes	220,317
CD-06.3A-02N	0.562	1.002	0.392	0.392	Yes	220,317

Sorted By:Flow Order

=====>Grouped by Line: CD-06.2B HDR to BFP 32

Component Name	Init.	Pred.[I]	Thoop	Tcrit	Component Predicted [1] Inspected	Comp. Actual Service Time (hrs)
CD-06.2B-01R	0.000	0.816	0.615	0.615	Yes	220,317
CD-06.2B-01R (D/S)	0.000	0.664	0.492	0.492	Yes	220,317
CD-06.2B-02P	0.702	0.612	0.523	0.523	Yes	220,317
CD-06.2B-35P	0.688	0.643	0.523	0.523	No	220,317
CD-06.2B-03T	0.688	0.584	0.523	0.523	No	220,317
CD-06.2B-03T (D/S)	0.000	0.584	0.523	0.523	No	220,317
CD-06.2B-04T	0.688	0.947	0.523	0.523	Yes	220,317
CD-06.2B-04T (BR/SE)	0.000	0.874	0.523	0.523	Yes	220,317
CD-06.2B-05V	0.688	0.514	0.559	0.559	No	220,317
CD-06.2B-06E	0.688	0.630	0.523	0.523	Yes	220,317
CD-06.2B-07P	0.688	0.614	0.523	0.523	Yes	220,317
CD-06.2B-36P	0.688	0.643	0.523	0.523	No	220,317
CD-06.2B-08O	0.688	0.412	0.523	0.523	No	220,317
CD-06.2B-09P	0.688	0.613	0.523	0.523	Yes	220,317
CD-06.2B-10E	0.688	0.559	0.523	0.523	No	220,317
CD-06.2B-11P	0.688	0.601	0.523	0.523	No	220,317
CD-06.2B-12E	0.688	0.559	0.523	0.523	No	220,317
CD-06.2B-13P	0.688	0.577	0.523	0.523	No	220,317
CD-06.2B-14E	0.688	0.559	0.523	0.523	No	220,317
CD-06.2B-15P	0.688	0.601	0.523	0.523	No	220,317

Sorted By:Flow Order

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
===>Grouped by Line: CD-06.2B HDR to BFP 32								
CD-06.3B-01R	0.000	0.601	0.523	0.523	0.523	316,028	No	220,317
CD-06.3B-01R (D/S)	0.000	0.471	0.392	0.392	0.392	307,874	No	220,317
CD-06.3B-02N	0.562	0.910	0.392	0.392	0.392	904,377	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: CD: HDR TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.090

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: CD-02.8A HDR to FWH 33A							
CD-02.7-01P	0.675	0.647	0.523	0.523	1,473,855	No	220,317
CD-02.7-02T	0.688	0.650	0.523	0.523	549,564	Yes	220,317
CD-02.7-02T (BR/SE)	0.000	0.364	0.305	0.305	186,885	Yes	220,317
CD-02.8A-01P	0.438	0.376	0.305	0.305	392,801	No	220,317
CD-02.8A-02E	0.438	0.490	0.305	0.305	552,233	Yes	220,317
CD-02.8A-03P	0.438	0.351	0.305	0.305	158,152	Yes	220,317
CD-02.8A-04V	0.438	0.707	0.326	0.326	839,007	No	220,317
CD-02.8A-05E	0.438	0.444	0.305	0.305	413,311	Yes	220,317
CD-02.8A-06P	0.438	0.372	0.305	0.305	231,684	Yes	220,317
CD-02.8A-07E	0.438	0.449	0.305	0.305	428,202	Yes	220,317
CD-02.8A-08N	0.438	0.481	0.305	0.305	484,041	Yes	220,317
====>Grouped by Line: CD-02.8B HDR to FWH 33B							
CD-02.8B-01P	0.445	0.367	0.305	0.305	339,495	Yes	220,317
CD-02.8B-02E	0.000	0.417	0.305	0.305	334,112	Yes	220,317
CD-02.8B-03P	0.438	0.376	0.305	0.305	244,432	Yes	220,317
CD-02.8B-04V	0.438	0.284	0.326	0.326	-93,537	No	220,317
CD-02.8B-05E	0.438	0.474	0.305	0.305	503,862	Yes	220,317
CD-02.8B-06P	0.438	0.394	0.305	0.305	306,413	Yes	220,317
CD-02.8B-07E	0.438	0.474	0.305	0.305	503,862	Yes	220,317
CD-02.8B-08N	0.438	0.466	0.305	0.305	442,721	Yes	220,317
====>Grouped by Line: CD-02.8C HDR to FWH 33C							
CD-02.8C-01P	0.629	0.565	0.305	0.305	1,379,970	No	220,317
CD-02.8C-02E	0.000	0.379	0.305	0.305	220,946	Yes	220,317
CD-02.8C-03P	0.594	0.359	0.305	0.305	179,830	Yes	220,317
CD-02.8C-04V	0.438	0.957	0.326	0.326	1,389,949	No	220,317
CD-02.8C-05E	0.438	0.446	0.305	0.305	419,161	Yes	220,317
CD-02.8C-06P	0.438	0.368	0.305	0.305	217,910	Yes	220,317
CD-02.8C-07E	0.438	0.449	0.305	0.305	428,202	Yes	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
Sorted By: Flow Order								
===>Grouped by Line: CD-02.8C HDR to FWH 33C	0.438	0.439	0.305	0.305	0.305	369,368	Yes	220,317
CD-02.8C-08N								

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: CD: HTR 31 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====>Grouped by Line: CD-01.1A FWH 31A to FWH 32A						
CD-01.1A-01N	0.438	0.336	0.305 0.305	No	108,208	220,317
CD-01.1A-02P	0.438	0.383	0.305 0.305	No	498,622	220,317
CD-01.1A-03E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1A-04P	0.438	0.387	0.305 0.305	No	566,521	220,317
CD-01.1A-05E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1A-06E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1A-07E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1A-08P	0.438	0.373	0.305 0.305	No	366,009	220,317
CD-01.1A-09E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1A-10P	0.438	0.387	0.305 0.305	No	566,521	220,317
CD-01.1A-11E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1A-12P	0.438	0.373	0.305 0.305	No	366,009	220,317
CD-01.1A-13N	0.438	0.357	0.305 0.305	No	222,786	220,317
====>Grouped by Line: CD-01.1B FWH 31B to FWH 32B						
CD-01.1B-01N	0.438	0.336	0.305 0.305	No	108,208	220,317
CD-01.1B-02P	0.438	0.383	0.305 0.305	No	498,622	220,317
CD-01.1B-03E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1B-04P	0.438	0.387	0.305 0.305	No	566,521	220,317
CD-01.1B-05E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1B-06E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1B-07E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1B-08P	0.438	0.373	0.305 0.305	No	366,009	220,317
CD-01.1B-09E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1B-10P	0.438	0.387	0.305 0.305	No	566,521	220,317
CD-01.1B-11E	0.438	0.363	0.305 0.305	No	269,237	220,317
CD-01.1B-12P	0.438	0.373	0.305 0.305	No	366,009	220,317
CD-01.1B-13N	0.438	0.357	0.305 0.305	No	222,786	220,317
====>Grouped by Line: CD-01.1C FWH 31C to FWH 32C						

Sorted By:Flow Order

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====>Grouped by Line: CD-01.1C FWH 31C to FWH 32C					
CD-01.1C-01N	0.438	0.336	0.305	No	220,317
CD-01.1C-02P	0.438	0.383	0.305	No	220,317
CD-01.1C-03E	0.438	0.363	0.305	No	220,317
CD-01.1C-04P	0.438	0.387	0.305	No	220,317
CD-01.1C-05E	0.438	0.363	0.305	No	220,317
CD-01.1C-06E	0.438	0.363	0.305	No	220,317
CD-01.1C-07E	0.438	0.363	0.305	No	220,317
CD-01.1C-08P	0.438	0.373	0.305	No	220,317
CD-01.1C-09E	0.438	0.363	0.305	No	220,317
CD-01.1C-10P	0.438	0.387	0.305	No	220,317
CD-01.1C-11E	0.438	0.363	0.305	No	220,317
CD-01.1C-12P	0.438	0.373	0.305	No	220,317
CD-01.1C-13N	0.438	0.357	0.305	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: CD: HTR 32 TO 33 HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.808

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			
====>Grouped by Line: CD-02.2 FWH 32 OUT HDR						
CD-02.1B-11T	0.624	0.555	0.436	0.436	Yes	220,317
CD-02.1B-11T (BR/SE)	0.000	0.352	0.305	0.305	Yes	220,317
CD-02.1B-11T (D/S)	0.624	0.550	0.436	0.436	Yes	220,317
CD-02.2-01P	0.594	0.549	0.436	0.436	Yes	220,317
CD-02.2-03P	0.594	0.564	0.436	0.436	No	220,317
CD-02.2-02R	0.000	0.683	0.436	0.436	Yes	220,317
CD-02.2-02R (D/S)	0.000	0.676	0.523	0.523	Yes	220,317

====>Grouped by Line: CD-02.3 FWH 32 OUT HDR

CD-02.1C-12T (BR/SE)	0.000	0.372	0.305	0.305	Yes	220,317
CD-02.1C-12T	0.692	0.634	0.523	0.523	Yes	220,317
CD-02.1C-12T (D/S)	0.692	0.634	0.523	0.523	Yes	220,317
CD-02.3-01P	0.736	0.669	0.523	0.523	Yes	220,317
CD-02.3-02T	0.688	0.624	0.523	0.523	No	220,317
CD-02.3-02T (D/S)	0.000	0.624	0.523	0.523	No	220,317
CD-02.3-03P	0.688	0.645	0.523	0.523	No	220,317
CD-02.3-04E	0.688	0.609	0.523	0.523	No	220,317
CD-02.3-05E	0.688	0.613	0.523	0.523	No	220,317
CD-02.3-06P	0.688	0.635	0.523	0.523	No	220,317
CD-02.3-07E	0.688	0.609	0.523	0.523	No	220,317
CD-02.3-08P	0.688	0.635	0.523	0.523	No	220,317
CD-02.3-09E	0.688	0.618	0.523	0.523	No	220,317
CD-02.3-10P	0.688	0.641	0.523	0.523	No	220,317
CD-02.3-16P	0.688	0.658	0.523	0.523	No	220,317
CD-02.3-11E	0.688	0.609	0.523	0.523	No	220,317
CD-02.3-12P	0.688	0.635	0.523	0.523	No	220,317
CD-02.3-13E	0.688	0.609	0.523	0.523	No	220,317
CD-02.3-14P	0.688	0.620	0.523	0.523	No	220,317
CD-02.3-15T	0.688	0.682	0.523	0.523	No	220,317

Sorted By:Flow Order

Sorted By:Flow Order

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: CD-02.3 FWH 32 OUT HDR							
CD-02.3-15T (D/S)	0.000	0.647	0.523	0.523	368,576	Yes	220,317
CD-02.3-15T (BR/SE)	0.000	0.495	0.392	0.392	3,594,426	No	220,317
====>Grouped by Line: CD-02.4 FWH 32 OUT HDR							
CD-02.3-17P	0.688	0.646	0.523	0.523	1,006,670	No	220,317
CD-02.4-01R	0.000	0.615	0.523	0.523	429,372	No	220,317
CD-02.4-01R (D/S)	0.000	0.510	0.436	0.436	299,355	No	220,317
CD-02.4-02V	0.594	0.462	0.466	0.466	-9,870	No	220,317
CD-02.4-03P	0.594	0.536	0.436	0.436	590,135	No	220,317
CD-02.4-04E	0.864	0.716	0.436	0.436	874,537	Yes	220,317
CD-02.4-04E (D/S)	0.864	0.683	0.523	0.523	638,843	Yes	220,317
CD-02.5-01P	0.754	0.709	0.523	0.523	1,207,542	No	220,317
CD-02.5-02E	0.994	0.664	0.523	0.523	601,608	No	220,317
====>Grouped by Line: CD-02.5 FWH 32 OUT HDR							
CD-02.5-03T (BR/SE)	0.000	0.552	0.392	0.392	5,661,022	No	220,317
CD-02.5-03T	0.688	0.616	0.523	0.523	371,947	Yes	220,317
CD-02.5-03T (D/S)	0.000	0.623	0.523	0.523	391,721	Yes	220,317
CD-02.5-04T	0.730	0.646	0.523	0.523	356,769	Yes	220,317
CD-02.5-04T (BR/SE)	0.000	0.356	0.305	0.305	217,215	No	220,317
CD-02.5-04T (D/S)	0.730	0.637	0.523	0.523	412,531	Yes	220,317
====>Grouped by Line: CD-02.6 FWH 32 OUT HDR							
CD-02.6-01T (D/S)	0.693	0.647	0.523	0.523	829,667	Yes	220,317
CD-02.6-02P	0.693	0.640	0.523	0.523	1,169,307	Yes	220,317
CD-02.6-03T	0.694	0.657	0.523	0.523	488,685	Yes	220,317
CD-02.6-03T (D/S)	0.694	0.646	0.523	0.523	716,417	Yes	220,317
CD-02.6-03T (BR/SE)	0.000	0.369	0.305	0.305	271,651	Yes	220,317
CD-02.6-01T	0.693	0.631	0.523	0.523	723,037	Yes	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: CD: HTR 32 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.990

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop			

====>Grouped by Line: CD-02.1A FWH 32A to HDR

CD-02.1A-01N	0.438	0.428	0.305	0.305	No	298,155	220,317
CD-02.1A-02P	0.438	0.362	0.305	0.305	No	257,706	220,317
CD-02.1A-03E	0.438	0.334	0.305	0.305	No	96,067	220,317
CD-02.1A-04P	0.438	0.368	0.305	0.305	No	305,552	220,317
CD-02.1A-05V	0.438	0.298	0.326	0.326	No	-66,764	220,317
CD-02.1A-06E	0.438	0.481	0.305	0.305	Yes	356,775	220,317
CD-02.1A-08P	0.438	0.340	0.305	0.305	No	121,006	220,317
CD-02.1A-09E	0.438	0.334	0.305	0.305	No	96,067	220,317
CD-02.1A-10P	0.438	0.368	0.305	0.305	No	305,552	220,317
CD-02.1A-11E	0.438	0.334	0.305	0.305	No	96,067	220,317
CD-02.1A-12P	0.438	0.348	0.305	0.305	No	164,259	220,317
CD-02.1A-14P	0.438	0.399	0.305	0.305	No	811,812	220,317
CD-02.1A-13R	0.000	0.599	0.305	0.305	Yes	1,275,961	220,317
CD-02.1A-13R (D/S)	0.000	0.550	0.436	0.436	Yes	725,345	220,317

Sorted By:Flow Order

====>Grouped by Line: CD-02.1B FWH 32B to HDR

CD-02.1B-01N	0.438	0.432	0.305	0.305	No	307,863	220,317
CD-02.1B-02P	0.438	0.362	0.305	0.305	No	257,706	220,317
CD-02.1B-03E	0.438	0.408	0.305	0.305	Yes	336,917	220,317
CD-02.1B-04P	0.438	0.368	0.305	0.305	No	305,552	220,317
CD-02.1B-05E	0.438	0.334	0.305	0.305	No	96,067	220,317
CD-02.1B-06E	0.438	0.334	0.305	0.305	No	96,067	220,317
CD-02.1B-07V	0.438	0.298	0.326	0.326	No	-66,764	220,317
CD-02.1B-08P	0.438	0.376	0.305	0.305	No	393,631	220,317
CD-02.1B-09E	0.438	0.474	0.305	0.305	Yes	556,011	220,317
CD-02.1B-10P	0.661	0.588	0.305	0.305	No	1,314,383	220,317

Sorted By:Flow Order

====>Grouped by Line: CD-02.1C FWH 32C to HDR

CD-02.1C-01N	0.438	0.389	0.305	0.305	No	203,506	220,317
CD-02.1C-02P	0.438	0.349	0.305	0.305	Yes	198,536	220,317

Sorted By:Flow Order

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
===>Grouped by Line: CD-02.1C FWH 32C to HDR						
CD-02.1C-03E	0.438	0.461	0.305	510,735	Yes	220,317
CD-02.1C-04P	0.438	0.368	0.305	305,552	No	220,317
CD-02.1C-05E	0.438	0.334	0.305	96,067	No	220,317
CD-02.1C-06E	0.438	0.334	0.305	96,067	No	220,317
CD-02.1C-07P	0.438	0.348	0.305	164,259	No	220,317
CD-02.1C-08V	0.438	0.298	0.326	-66,764	No	220,317
CD-02.1C-09P	0.438	0.376	0.305	393,631	No	220,317
CD-02.1C-10E	0.575	0.491	0.305	594,057	Yes	220,317
CD-02.1C-11P	0.438	0.368	0.305	305,552	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: CD: HTR 33 TO HTR 34
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.601

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: CD-03.1A FWH 33A to FWH 34A							
CD-03.1A-01N	0.438	0.400	0.305	0.305	258,191	Yes	220,317
CD-03.1A-02E	0.438	0.466	0.305	0.305	592,115	Yes	220,317
CD-03.1A-03E	0.438	0.481	0.305	0.305	647,291	Yes	220,317
CD-03.1A-04P	0.438	0.374	0.305	0.305	293,860	Yes	220,317
CD-03.1A-05E	0.438	0.353	0.305	0.305	199,593	No	220,317
CD-03.1A-15P	0.438	0.382	0.305	0.305	474,011	No	220,317
CD-03.1A-06E	0.438	0.343	0.305	0.305	140,259	No	220,317
CD-03.1A-07P	0.438	0.356	0.305	0.305	216,744	No	220,317
CD-03.1A-14P	0.438	0.402	0.305	0.305	934,608	No	220,317
CD-03.1A-08E	0.438	0.353	0.305	0.305	199,593	No	220,317
CD-03.1A-09P	0.438	0.382	0.305	0.305	474,011	No	220,317
CD-03.1A-10E	0.438	0.343	0.305	0.305	140,259	No	220,317
CD-03.1A-11P	0.438	0.356	0.305	0.305	216,744	No	220,317
CD-03.1A-12E	0.438	0.353	0.305	0.305	199,593	No	220,317
CD-03.1A-13N	0.438	0.335	0.305	0.305	103,547	No	220,317
Sorted By:Flow Order							

====>Grouped by Line: CD-03.1B FWH 33B to FWH 34B							
CD-03.1B-01N	0.438	0.310	0.305	0.305	12,989	No	220,317
CD-03.1B-02E	0.438	0.459	0.305	0.305	568,464	Yes	220,317
CD-03.1B-03E	0.438	0.467	0.305	0.305	595,557	Yes	220,317
CD-03.1B-04P	0.438	0.388	0.305	0.305	353,628	Yes	220,317
CD-03.1B-05E	0.547	0.433	0.305	0.305	459,513	Yes	220,317
CD-03.1B-06E	0.555	0.478	0.305	0.305	621,032	Yes	220,317
CD-03.1B-07P	0.477	0.365	0.305	0.305	253,760	Yes	220,317
CD-03.1B-12P	0.438	0.402	0.305	0.305	934,608	No	220,317
CD-03.1B-08E	0.438	0.343	0.305	0.305	140,259	No	220,317
CD-03.1B-09P	0.438	0.374	0.305	0.305	375,220	No	220,317
CD-03.1B-10E	0.438	0.353	0.305	0.305	199,593	No	220,317
CD-03.1B-11N	0.438	0.335	0.305	0.305	103,547	No	220,317
Sorted By:Flow Order							

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====>Grouped by Line: CD-03.1C FWH 33C to FWH 34C					
CD-03.1C-01N	0.438	0.424	0.305	0.305	220,317
CD-03.1C-02E	0.438	0.436	0.305	0.305	220,317
CD-03.1C-03E	0.438	0.343	0.305	0.305	220,317
CD-03.1C-04P	0.438	0.356	0.305	0.305	220,317
CD-03.1C-05E	0.438	0.343	0.305	0.305	220,317
CD-03.1C-06E	0.438	0.343	0.305	0.305	220,317
CD-03.1C-07P	0.438	0.356	0.305	0.305	220,317
CD-03.1C-12P	0.438	0.402	0.305	0.305	220,317
CD-03.1C-08E	0.438	0.343	0.305	0.305	220,317
CD-03.1C-09P	0.438	0.374	0.305	0.305	220,317
CD-03.1C-10E	0.438	0.353	0.305	0.305	220,317
CD-03.1C-11N	0.438	0.335	0.305	0.305	220,317

Sorted By:Flow Order

324,285	Yes	220,317
482,086	Yes	220,317
140,259	No	220,317
216,744	No	220,317
140,259	No	220,317
140,259	No	220,317
216,744	No	220,317
934,608	No	220,317
140,259	No	220,317
375,220	No	220,317
199,593	No	220,317
103,547	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: CD: HTR 34 TO HTR 35
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.452

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: CD-04.1A FWH 34A to FWH 35A							
CD-04.1A-01N	0.438	0.343	0.305	0.305	No	107,083	220,317
CD-04.1A-02E	0.438	0.471	0.305	0.305	Yes	624,955	220,317
CD-04.1A-03E	0.438	0.475	0.305	0.305	Yes	639,968	220,317
CD-04.1A-04P	0.438	0.362	0.305	0.305	Yes	248,206	220,317
CD-04.1A-05E	0.438	0.345	0.305	0.305	No	149,707	220,317
CD-04.1A-06P	0.438	0.375	0.305	0.305	No	389,449	220,317
CD-04.1A-07E	0.438	0.345	0.305	0.305	No	149,707	220,317
CD-04.1A-08P	0.438	0.375	0.305	0.305	No	389,449	220,317
CD-04.1A-09E	0.438	0.345	0.305	0.305	No	149,707	220,317
CD-04.1A-10P	0.438	0.357	0.305	0.305	No	227,748	220,317
CD-04.1A-15P	0.438	0.403	0.305	0.305	No	949,605	220,317
CD-04.1A-11E	0.438	0.345	0.305	0.305	No	149,707	220,317
CD-04.1A-12P	0.438	0.375	0.305	0.305	No	389,449	220,317
CD-04.1A-13E	0.438	0.355	0.305	0.305	No	210,248	220,317
CD-04.1A-14N	0.438	0.337	0.305	0.305	No	112,247	220,317
Sorted By:Flow Order							

====>Grouped by Line: CD-04.1B FWH 34B to FWH 35B

CD-04.1B-01N	0.438	0.389	0.305	0.305	Yes	234,337	220,317
CD-04.1B-02E	0.438	0.478	0.305	0.305	Yes	650,648	220,317
CD-04.1B-03E	0.438	0.456	0.305	0.305	Yes	568,076	220,317
CD-04.1B-04P	0.438	0.398	0.305	0.305	Yes	405,438	220,317
CD-04.1B-05E	0.438	0.345	0.305	0.305	No	149,707	220,317
CD-04.1B-06E	0.438	0.350	0.305	0.305	No	178,248	220,317
CD-04.1B-07P	0.438	0.375	0.305	0.305	No	389,449	220,317
CD-04.1B-08E	0.438	0.345	0.305	0.305	No	149,707	220,317
CD-04.1B-09P	0.438	0.357	0.305	0.305	No	227,748	220,317
CD-04.1B-10E	0.438	0.345	0.305	0.305	No	149,707	220,317
CD-04.1B-11P	0.438	0.357	0.305	0.305	No	227,748	220,317
CD-04.1B-17P	0.438	0.403	0.305	0.305	No	949,605	220,317
Sorted By:Flow Order							

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: CD-04.1B FWH 34B to FWH 35B							
CD-04.1B-12E	0.438	0.355	0.305	0.305	210,248	No	220,317
CD-04.1B-13E	0.438	0.345	0.305	0.305	149,707	No	220,317
CD-04.1B-14P	0.438	0.357	0.305	0.305	227,748	No	220,317
CD-04.1B-15E	0.438	0.355	0.305	0.305	210,248	No	220,317
CD-04.1B-16N	0.438	0.337	0.305	0.305	112,247	No	220,317
====>Grouped by Line: CD-04.1C FWH 34C to FWH 35C							
CD-04.1C-01N	0.438	0.454	0.305	0.305	415,256	No	220,317
CD-04.1C-02E	0.594	0.457	0.305	0.305	554,445	Yes	220,317
CD-04.1C-03E	0.570	0.459	0.305	0.305	564,459	Yes	220,317
CD-04.1C-04P	0.438	0.357	0.305	0.305	227,748	No	220,317
CD-04.1C-05E	0.438	0.467	0.305	0.305	609,298	Yes	220,317
CD-04.1C-06P	0.438	0.428	0.305	0.305	682,095	Yes	220,317
CD-04.1C-07E	0.438	0.435	0.305	0.305	489,193	Yes	220,317
CD-04.1C-08E	0.438	0.345	0.305	0.305	149,707	No	220,317
CD-04.1C-09P	0.438	0.357	0.305	0.305	227,748	No	220,317
CD-04.1C-14P	0.438	0.403	0.305	0.305	949,605	No	220,317
CD-04.1C-10E	0.438	0.345	0.305	0.305	149,707	No	220,317
CD-04.1C-11P	0.438	0.375	0.305	0.305	389,449	No	220,317
CD-04.1C-12E	0.438	0.355	0.305	0.305	210,248	No	220,317
CD-04.1C-13N	0.438	0.337	0.305	0.305	112,247	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB
 Run Name: CD: HTR 35 TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.422

Service Life Report

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Pass 2 Analysis Include Measured Wear

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrp			
====>Grouped by Line: CD-05.3 FWH 35 OUT HDR						
CD-05.1B-09T	0.724	0.641	0.523	0.523	Yes	220,317
CD-05.1B-09T (BR/SE)	0.000	0.417	0.305	0.305	Yes	220,317
CD-05.1B-09T (D/S)	0.724	0.662	0.523	0.523	Yes	220,317
CD-05.3-01P	0.724	0.666	0.523	0.523	Yes	220,317
====>Grouped by Line: CD-05.4 FWH 35 OUT HDR						
CD-05.1C-10T (BR/SE)	0.000	0.404	0.305	0.305	Yes	220,317
CD-05.1C-10T	0.000	0.675	0.523	0.523	Yes	220,317
CD-05.1C-10T (D/S)	0.000	0.657	0.523	0.523	Yes	220,317
CD-05.4-04P	0.688	0.654	0.523	0.523	No	220,317
CD-05.4-01E	0.688	0.670	0.523	0.523	Yes	220,317
CD-05.4-02P	0.722	0.668	0.523	0.523	No	220,317
CD-05.4-03T (BR/SE)	0.696	0.669	0.523	0.523	Yes	220,317
CD-05.4-03T (D/S)	0.696	0.666	0.653	0.653	Yes	220,317
CD-05.4-05P	0.625	0.668	0.561	0.561	No	220,317

Sorted By:Flow Order

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: CD: HTR 35 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.655

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			

====>Grouped by Line: CD-05.1A FWH 35A to HDR

CD-05.1A-01N	0.438	0.347	0.305	0.305	Yes	220,317
CD-05.1A-02E	0.438	0.366	0.305	0.305	Yes	220,317
CD-05.1A-03E	0.438	0.374	0.305	0.305	Yes	220,317
CD-05.1A-04P	0.438	0.348	0.305	0.305	No	220,317
CD-05.1A-05V	0.438	0.297	0.326	0.326	No	220,317
CD-05.1A-06P	0.438	0.372	0.305	0.305	Yes	220,317
CD-05.1A-07E	0.438	0.470	0.305	0.305	Yes	220,317
CD-05.1A-08P	0.438	0.368	0.305	0.305	No	220,317
CD-05.1A-09E	0.438	0.334	0.305	0.305	No	220,317
CD-05.1A-10P	0.438	0.348	0.305	0.305	No	220,317
CD-05.1A-11R	0.000	0.359	0.305	0.305	No	220,317
CD-05.1A-11R (D/S)	0.000	0.648	0.523	0.523	No	220,317
CD-05.2-01P	0.688	0.655	0.523	0.523	No	220,317

Sorted By:Flow Order

====>Grouped by Line: CD-05.1B FWH 35B to HDR

CD-05.1B-01N	0.438	0.297	0.305	0.305	No	220,317
CD-05.1B-02E	0.438	0.433	0.305	0.305	Yes	220,317
CD-05.1B-03E	0.438	0.491	0.305	0.305	Yes	220,317
CD-05.1B-04P	0.438	0.359	0.305	0.305	Yes	220,317
CD-05.1B-05V	0.438	0.297	0.326	0.326	No	220,317
CD-05.1B-06P	0.438	0.383	0.305	0.305	Yes	220,317
CD-05.1B-07E	0.575	0.466	0.305	0.305	Yes	220,317

Sorted By:Flow Order

====>Grouped by Line: CD-05.1C FWH 35C to HDR

CD-05.1C-01N	0.438	0.390	0.305	0.305	No	220,317
CD-05.1C-02E	0.438	0.334	0.305	0.305	No	220,317
CD-05.1C-03E	0.438	0.334	0.305	0.305	No	220,317
CD-05.1C-04P	0.438	0.348	0.305	0.305	No	220,317
CD-05.1C-05V	0.438	0.297	0.326	0.326	No	220,317
CD-05.1C-06P	0.438	0.376	0.305	0.305	No	220,317

Sorted By:Flow Order

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
===>Grouped by Line: CD-05.1C FWH 35C to HDR								
CD-05.1C-07E	0.438	0.334	0.305	0.305	0.305	99,785	No	220,317
CD-05.1C-08E	0.438	0.437	0.305	0.305	0.305	456,730	Yes	220,317
CD-05.1C-09P	0.498	0.407	0.305	0.305	0.305	401,698	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: CD: S/G BLWDN HX IN
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.754

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: CD-02.9 FWH HDR to SGBD HX3							
CD-02.9-01P	0.562	0.550	0.392	0.392	4,359,634	No	220,317
CD-02.9-02E	0.562	0.540	0.392	0.392	2,202,347	No	220,317
CD-02.9-03P	0.562	0.543	0.392	0.392	2,598,907	No	220,317
CD-02.9-04V	0.562	0.532	0.420	0.420	1,238,780	No	220,317
CD-02.9-05P	0.562	0.549	0.392	0.392	3,932,791	No	220,317
CD-02.9-06E	0.562	0.540	0.392	0.392	2,202,347	No	220,317
CD-02.9-07P	0.562	0.547	0.392	0.392	3,420,580	No	220,317
CD-02.9-08E	0.562	0.540	0.392	0.392	2,202,347	No	220,317
CD-02.9-09P	0.562	0.543	0.392	0.392	2,598,907	No	220,317
CD-02.9-10P	0.562	0.555	0.392	0.392	8,201,220	No	220,317
CD-02.9-11E	0.562	0.540	0.392	0.392	2,202,347	No	220,317
CD-02.9-12P	0.562	0.547	0.392	0.392	3,420,580	No	220,317
CD-02.9-13E	0.562	0.540	0.392	0.392	2,202,347	No	220,317
CD-02.9-14P	0.562	0.547	0.392	0.392	3,420,580	No	220,317
CD-02.9-15P	0.562	0.555	0.392	0.392	8,201,220	No	220,317
CD-02.9-16E	0.562	0.540	0.392	0.392	2,202,347	No	220,317
CD-02.9-17T	0.562	0.529	0.392	0.392	1,371,733	No	220,317
CD-02.9-17T (BR/SE)	0.000	0.222	0.174	0.174	162,184	No	220,317
CD-02.10-01P	0.322	0.273	0.188	0.188	584,832	No	220,317
CD-02.10-03P	0.322	0.270	0.188	0.188	531,679	No	220,317
CD-02.10-04E	0.322	0.266	0.188	0.188	291,440	Yes	220,317
CD-02.10-05P	0.322	0.261	0.188	0.188	400,738	No	220,317
CD-02.10-06E	0.322	0.232	0.188	0.188	161,913	No	220,317
CD-02.10-07P	0.322	0.261	0.188	0.188	400,738	No	220,317
CD-02.10-08E	0.322	0.286	0.188	0.188	363,352	Yes	220,317
CD-02.10-09P	0.322	0.290	0.188	0.188	563,454	Yes	220,317
CD-02.10-10E	0.322	0.268	0.188	0.188	296,589	Yes	220,317
CD-02.10-11N	0.812	0.687	0.188	0.188	1,342,643	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

2

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: CD: S/G BLWDN HX OUT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.247

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Init.	Pred.[1]	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	-----	-----							
====>Grouped by Line: CD-02.11 SGBD HX3 to FWH HDR									
CD-02.11-01N	0.812	0.523	0.188	0.188	0.812	0.523	389,466	No	220,317
CD-02.11-02P	0.322	0.200	0.188	0.188	0.322	0.200	32,593	No	220,317
CD-02.11-03E	0.322	0.279	0.188	0.188	0.322	0.279	182,903	Yes	220,317
CD-02.11-04P	0.322	0.284	0.188	0.188	0.322	0.284	283,920	Yes	220,317
CD-02.11-05E	0.322	0.269	0.188	0.188	0.322	0.269	182,827	Yes	220,317
CD-02.11-06P	0.322	0.286	0.188	0.188	0.322	0.286	331,341	Yes	220,317
CD-02.11-07E	0.322	0.285	0.188	0.188	0.322	0.285	194,657	Yes	220,317
CD-02.11-08P	0.322	0.277	0.188	0.188	0.322	0.277	265,386	Yes	220,317
CD-02.11-09P	0.322	0.272	0.188	0.188	0.322	0.272	568,204	No	220,317
CD-02.11-10E	0.322	0.277	0.188	0.188	0.322	0.277	177,724	Yes	220,317
CD-02.11-11P	0.322	0.284	0.188	0.188	0.322	0.284	286,032	Yes	220,317
CD-02.11-12E	0.322	0.270	0.188	0.188	0.322	0.270	163,702	No	220,317
CD-02.11-13T (BR/SE)	0.000	0.239	0.174	0.174	0.000	0.239	102,509	No	220,317
CD-02.11-13T (D/S)	0.000	0.538	0.392	0.392	0.000	0.538	869,642	Yes	220,317
CD-02.12-01P	0.562	0.528	0.392	0.392	0.562	0.528	1,354,861	No	220,317
CD-02.12-02E	0.562	0.520	0.392	0.392	0.562	0.520	1,035,037	No	220,317
CD-02.12-03P	0.562	0.534	0.392	0.392	0.562	0.534	1,692,961	No	220,317
CD-02.12-04V	0.562	0.506	0.420	0.420	0.562	0.506	514,649	No	220,317
CD-02.12-05P	0.562	0.537	0.392	0.392	0.562	0.537	1,969,838	Yes	220,317
CD-02.12-06E	0.562	0.680	0.392	0.392	0.562	0.680	2,319,464	Yes	220,317
CD-02.12-07P	0.562	0.534	0.392	0.392	0.562	0.534	1,692,961	No	220,317
CD-02.12-08E	0.562	0.520	0.392	0.392	0.562	0.520	1,035,037	No	220,317
CD-02.12-09P	0.562	0.534	0.392	0.392	0.562	0.534	1,692,961	No	220,317
CD-02.12-10E	0.562	0.520	0.392	0.392	0.562	0.520	1,035,037	No	220,317
CD-02.12-11P	0.562	0.534	0.392	0.392	0.562	0.534	1,692,961	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: ES: BFPT DRN TO COND
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: EX-07.1 BFPT 31 Drain to Cond							
EX-07.1-01N	0.000	0.618	0.080	0.080	16,192,661	No	220,317
EX-07.1-02E	0.000	0.621	0.080	0.080	26,233,440	No	220,317
EX-07.1-03EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.1-04P	0.000	0.623	0.080	0.080	66,364,080	No	220,317
EX-07.1-05E	0.000	0.621	0.080	0.080	28,830,762	No	220,317
EX-07.1-06P	0.000	0.620	0.080	0.080	25,489,944	No	220,317
EX-07.1-07E	0.000	0.621	0.080	0.080	30,591,206	No	220,317
EX-07.1-08EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.1-09P	0.000	0.623	0.080	0.080	66,364,080	No	220,317
EX-07.1-10EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.1-11R (D/S)	0.000	0.622	0.080	0.080	38,993,804	No	220,317
EX-07.1-11R (D/S)	0.000	0.623	0.090	0.090	69,036,992	No	220,317
EX-07.1-12N	0.000	0.622	0.090	0.090	46,054,212	No	220,317
====>Grouped by Line: EX-07.2 BFPT 32 Drain to Cond							
EX-07.2-01N	0.000	0.618	0.080	0.080	16,192,661	No	220,317
EX-07.2-02E	0.000	0.621	0.080	0.080	26,233,440	No	220,317
EX-07.2-03EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.2-04P	0.000	0.623	0.080	0.080	66,364,080	No	220,317
EX-07.2-05E	0.000	0.621	0.080	0.080	28,830,762	No	220,317
EX-07.2-06P	0.000	0.620	0.080	0.080	25,489,944	No	220,317
EX-07.2-07E	0.000	0.621	0.080	0.080	30,591,206	No	220,317
EX-07.2-08EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.2-09P	0.000	0.623	0.080	0.080	66,364,080	No	220,317
EX-07.2-10EJ	0.000	0.618	0.080	0.080	17,233,458	No	220,317
EX-07.2-11R	0.000	0.622	0.080	0.080	38,993,804	No	220,317
EX-07.2-11R (D/S)	0.000	0.623	0.090	0.090	69,036,992	No	220,317
EX-07.2-12N	0.000	0.622	0.090	0.090	46,054,212	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

2

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: ES: HDR TO 35 HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.988

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: EX-02.16 HDR 35 to FWH 35A							
EX-02.19-01P	0.375	0.375	0.232	0.232	41,397,136	No	141,668
EX-02.16-01R	0.000	0.603	0.232	0.232	50,130,776	No	141,668
EX-02.16-01R (D/S)	0.000	0.513	0.149	0.149	38,975,992	No	141,668
EX-02.16-02P	0.284	0.283	0.149	0.149	15,998,001	No	99,292
EX-02.16-03E	0.455	0.454	0.149	0.149	29,086,284	No	99,292
EX-02.16-04P	0.346	0.345	0.149	0.149	28,067,710	No	99,292
EX-02.16-05V	0.312	-0.269	0.160	0.160	-153,839	No	220,317
EX-02.16-06E	0.000	0.374	0.149	0.149	21,644,146	No	99,292
EX-02.16-07P	0.380	0.403	0.149	0.149	23,390,240	No	99,292
EX-02.16-08E	0.924	0.641	0.149	0.149	162,962	Yes	181,524
EX-02.16-09N	0.293	-0.237	0.149	0.149	-151,408	No	220,317
Sorted By:Flow Order							
====>Grouped by Line: EX-02.17 HDR 35 to FWH 35B							
EX-02.17-01P	0.375	0.374	0.149	0.149	55,970,908	No	141,668
EX-02.17-02V	0.312	-0.269	0.160	0.160	-153,839	No	220,317
EX-02.17-03E	0.375	0.466	0.149	0.149	30,478,688	No	99,292
EX-02.17-04P	0.378	0.393	0.149	0.149	22,489,822	No	99,292
EX-02.17-05E	0.968	0.110	0.149	0.149	-12,940	Yes	181,524
EX-02.17-06N	0.293	0.442	0.149	0.149	103,229	Yes	220,317
Sorted By:Flow Order							
====>Grouped by Line: EX-02.18 HDR 35 to FWH 35C							
EX-02.18-01P	0.375	0.374	0.149	0.149	55,970,908	No	141,668
EX-02.18-02V	0.312	-0.269	0.160	0.160	-153,839	No	220,317
EX-02.18-03E	0.375	0.558	0.149	0.149	39,313,304	No	141,668
EX-02.18-04P	0.375	0.383	0.149	0.149	24,036,804	No	141,668
EX-02.18-05E	0.312	0.675	0.149	0.149	186,681	Yes	181,524
EX-02.18-06N	0.293	0.433	0.149	0.149	100,098	No	220,317
Sorted By:Flow Order							

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

2

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: ES: HDR TO 36 HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.686

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcr			

=====>Grouped by Line: EX-01.5A HP EX HDR to FW 36A

EX-01.7-01P	0.438	0.438	0.275	0.275	No	100,000,000	128,112
EX-01.5A-01R	0.000	0.438	0.275	0.275	No	100,000,000	128,112
EX-01.5A-01R (D/S)	0.293	0.293	0.195	0.195	No	100,000,000	128,112
EX-01.5A-02P	0.374	0.374	0.195	0.195	No	100,000,000	128,112
EX-01.5A-03E	0.000	0.375	0.195	0.195	No	100,000,000	128,112
EX-01.5A-04P	0.411	0.411	0.195	0.195	No	100,000,000	128,112
EX-01.5A-05E	0.419	0.419	0.195	0.195	No	100,000,000	128,112
EX-01.5A-06P	0.000	0.375	0.195	0.195	No	100,000,000	128,112
EX-01.5A-16L	0.000	0.375	0.195	0.195	No	100,000,000	128,112
EX-01.5A-16L (D/S)	0.000	0.375	0.195	0.195	No	100,000,000	128,112
EX-01.5A-07L	0.000	0.375	0.195	0.195	No	100,000,000	128,112
EX-01.5A-07L (D/S)	0.000	0.375	0.195	0.195	No	100,000,000	128,112
EX-01.5A-08P	0.000	0.375	0.195	0.195	No	100,000,000	128,112
EX-01.5A-09E	0.000	0.375	0.195	0.195	No	100,000,000	128,112
EX-01.5A-10P	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.5A-11V	0.330	0.100	0.202	0.202	No	-140,420	220,317
EX-01.5A-12P	0.387	0.387	0.195	0.195	No	100,000,000	128,112
EX-01.5A-13E	0.426	0.426	0.195	0.195	No	100,000,000	128,112
EX-01.5A-17P	0.335	0.335	0.195	0.195	No	100,000,000	128,112
EX-01.5A-14E	0.470	0.470	0.195	0.195	No	100,000,000	128,112
EX-01.5A-15N	0.309	1.170	0.195	0.195	No	100,000,000	128,112

Sorted By:Flow Order

=====>Grouped by Line: EX-01.5B HP EX HDR to FW 36B

EX-01.5B-01P	0.363	0.363	0.195	0.195	No	100,000,000	128,112
EX-01.5B-02E	0.477	0.477	0.195	0.195	No	100,000,000	128,112
EX-01.5B-03P	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.5B-14L	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.5B-14L (D/S)	0.000	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.5B-04L	0.330	0.330	0.195	0.195	No	100,000,000	128,112

Sorted By:Flow Order

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: EX-01.5B HP EX HDR to FWH 36B							
EX-01.5B-04L (D/S)	0.000	0.330	0.195	0.195	No	No	128,112
EX-01.5B-05P	0.330	0.330	0.195	0.195	No	No	128,112
EX-01.5B-06E	0.330	0.330	0.195	0.195	No	No	128,112
EX-01.5B-07E	0.330	0.330	0.195	0.195	No	No	128,112
EX-01.5B-08P	0.330	0.330	0.195	0.195	No	No	128,112
EX-01.5B-09V	0.330	0.100	0.202	0.202	No	No	220,317
EX-01.5B-10P	0.374	0.374	0.195	0.195	No	No	128,112
EX-01.5B-11E	0.452	0.452	0.195	0.195	No	No	128,112
EX-01.5B-15P	0.386	0.386	0.195	0.195	No	No	128,112
EX-01.5B-12E	0.543	0.543	0.195	0.195	No	No	128,112
EX-01.5B-13N	0.309	0.377	0.195	0.195	No	No	128,112
====>Grouped by Line: EX-01.5C HP EX HDR to FWH 36C							
EX-01.5C-01P	0.450	0.450	0.195	0.195	No	No	128,112
EX-01.5C-02E	0.423	0.423	0.195	0.195	No	No	128,112
EX-01.5C-03P	0.377	0.377	0.195	0.195	No	No	128,112
EX-01.5C-14L	0.373	0.373	0.195	0.195	No	No	128,112
EX-01.5C-14L (D/S)	0.373	0.373	0.195	0.195	No	No	128,112
EX-01.5C-04L	0.364	0.364	0.195	0.195	No	No	128,112
EX-01.5C-04L (D/S)	0.000	0.330	0.195	0.195	No	No	128,112
EX-01.5C-05P	0.373	0.373	0.195	0.195	No	No	128,112
EX-01.5C-06E	0.431	0.431	0.195	0.195	No	No	128,112
EX-01.5C-07E	0.416	0.416	0.195	0.195	No	No	128,112
EX-01.5C-08P	0.356	0.356	0.195	0.195	No	No	128,112
EX-01.5C-09V	0.330	0.100	0.202	0.202	No	No	220,317
EX-01.5C-10P	0.358	0.358	0.195	0.195	No	No	128,112
EX-01.5C-11E	0.448	0.448	0.195	0.195	No	No	128,112
EX-01.5C-15P	0.337	0.337	0.195	0.195	No	No	128,112
EX-01.5C-12E	0.485	0.485	0.195	0.195	No	No	128,112
EX-01.5C-13N	0.309	1.166	0.195	0.195	No	No	128,112

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: ES: HTR 36 HEADER
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.751

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: EX-01.1 HP EXT to FWH 36 HDR							
EX-01.1-01N	0.330	0.335	0.189	0.189	No	161,434	220,317
EX-01.1-02E	0.446	0.446	0.195	0.195	No	100,000,000	128,112
EX-01.1-03P	0.352	0.352	0.195	0.195	No	100,000,000	128,112
EX-01.1-04E	0.450	0.450	0.195	0.195	No	100,000,000	128,112
EX-01.1-05P	0.368	0.368	0.195	0.195	No	100,000,000	128,112
EX-01.1-06E	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.1-07P	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.1-08R	0.000	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.1-08R (D/S)	0.000	0.438	0.275	0.275	No	100,000,000	128,112
EX-01.6-01P	0.378	0.378	0.275	0.275	No	100,000,000	128,112
Sorted By:Flow Order							
====>Grouped by Line: EX-01.2 HP EXT to FWH 36 HDR							
EX-01.2-01N	0.330	-0.099	0.189	0.189	No	-179,595	220,317
EX-01.2-02E	0.000	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.2-03P	0.385	0.385	0.195	0.195	No	100,000,000	128,112
EX-01.2-04E	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.2-05P	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.2-06E	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.2-07P	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.2-08E	0.330	0.330	0.195	0.195	No	100,000,000	128,112
EX-01.2-09P	0.357	0.357	0.195	0.195	No	100,000,000	128,112
Sorted By:Flow Order							
====>Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER							
EX-01.2-10L	0.482	0.543	0.275	0.275	No	100,000,000	128,112
EX-01.2-10L (BR/SE)	0.391	0.422	0.195	0.195	No	100,000,000	128,112
EX-01.2-10L (D/S)	0.482	0.543	0.275	0.275	No	100,000,000	128,112
EX-01.3-01P	0.456	0.456	0.275	0.275	No	100,000,000	128,112
EX-01.3-02E	0.438	0.438	0.275	0.275	No	100,000,000	128,112
EX-01.3-03P	0.438	0.438	0.275	0.275	No	100,000,000	128,112
EX-01.3-04T	0.468	0.468	0.275	0.275	No	100,000,000	128,112
Sorted By:Flow Order							

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER								
EX-01.3-04T (D/S)	0.468	0.468	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-05P	0.464	0.464	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-06V	0.438	0.137	0.286	0.286	0.286	-150,643	No	220,317
EX-01.3-07V	0.438	0.110	0.286	0.286	0.286	-158,958	No	220,317
EX-01.3-08V	0.438	0.110	0.286	0.286	0.286	-158,958	No	220,317
EX-01.3-09E	0.438	0.438	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-10P	0.438	0.438	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-11T	0.438	0.438	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-11T (D/S)	0.438	0.438	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-12P	0.438	0.438	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-13E	0.438	0.438	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-14P	0.438	0.438	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-15E	0.438	0.438	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-16P	0.460	0.460	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-17T	0.501	0.501	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-17T (D/S)	0.501	0.501	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-19E	0.000	0.438	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-20P	0.438	0.438	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-21E	0.438	0.438	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-22P	0.528	0.528	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-23T	0.539	0.539	0.275	0.275	0.275	240,061,088	No	128,112
EX-01.3-23T (D/S)	0.539	0.539	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.3-23T (BR/SE)	0.566	0.566	0.195	0.195	0.195	100,000,000	No	128,112
====>Grouped by Line: EX-01.4 HP EXT FWH 36 HEADER								
EX-01.4-01P	0.528	0.528	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.4-02T	0.439	0.551	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.4-02T (D/S)	0.439	0.551	0.275	0.275	0.275	100,000,000	No	128,112
EX-01.4-02T (BR/SE)	0.363	0.421	0.195	0.195	0.195	100,000,000	No	128,112

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: ES: LP TO 31 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.811

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)			Component Predicted Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			

====>Grouped by Line: EX-06.1A LP EXT 19 to FWH 31A

EX-06.1A-01N	0.400	0.242	0.043	0.043	No	220,317
EX-06.1A-02E	0.313	0.219	0.043	0.043	No	220,317
EX-06.1A-03E	0.313	0.219	0.043	0.043	No	220,317
EX-06.1A-04N	0.375	0.271	0.043	0.043	No	220,317

====>Grouped by Line: EX-06.1B LP EXT 19 to FWH 31B

EX-06.1B-01N	0.400	0.242	0.043	0.043	No	220,317
EX-06.1B-02E	0.313	0.219	0.043	0.043	No	220,317
EX-06.1B-03E	0.313	0.219	0.043	0.043	No	220,317
EX-06.1B-04N	0.375	0.271	0.043	0.043	No	220,317

====>Grouped by Line: EX-06.1C LP EXT 19 to FWH 31C

EX-06.1C-01N	0.400	0.242	0.043	0.043	No	220,317
EX-06.1C-02E	0.313	0.219	0.043	0.043	No	220,317
EX-06.1C-03E	0.313	0.219	0.043	0.043	No	220,317
EX-06.1C-04N	0.375	0.271	0.043	0.043	No	220,317

====>Grouped by Line: EX-06.2A LP EXT 17 to FWH 31A

EX-06.2A-01N	0.400	0.242	0.043	0.043	No	220,317
EX-06.2A-02E	0.313	0.219	0.043	0.043	No	220,317
EX-06.2A-03E	0.313	0.219	0.043	0.043	No	220,317
EX-06.2A-04N	0.375	0.315	0.043	0.043	Yes	220,317

====>Grouped by Line: EX-06.2B LP EXT 17 to FWH 31B

EX-06.2B-01N	0.400	0.242	0.043	0.043	No	220,317
EX-06.2B-02E	0.313	0.219	0.043	0.043	No	220,317
EX-06.2B-03E	0.313	0.219	0.043	0.043	No	220,317
EX-06.2B-04N	0.375	0.271	0.043	0.043	No	220,317

====>Grouped by Line: EX-06.2C LP EXT 17 to FWH 31C

EX-06.2C-01N	0.400	0.242	0.043	0.043	No	220,317
EX-06.2C-02E	0.313	0.219	0.043	0.043	No	220,317
EX-06.2C-03E	0.313	0.219	0.043	0.043	No	220,317
EX-06.2C-04N	0.375	0.271	0.043	0.043	No	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: EX-06.2C LP EXT 17 to FWH 31C								
EX-06.2C-01N	0.400	0.242	0.043	0.043	0.043	320,539	No	220,317
EX-06.2C-02E	0.313	0.219	0.043	0.043	0.043	481,199	No	220,317
EX-06.2C-03E	0.313	0.219	0.043	0.043	0.043	481,199	No	220,317
EX-06.2C-04N	0.375	0.271	0.043	0.043	0.043	555,528	No	220,317
====>Grouped by Line: EX-06.3A LP EXT 20 to FWH 31A								
EX-06.3A-01N	0.400	0.242	0.043	0.043	0.043	320,539	No	220,317
EX-06.3A-02E	0.313	0.219	0.043	0.043	0.043	481,199	No	220,317
EX-06.3A-03P	0.313	0.216	0.058	0.058	0.058	413,021	No	220,317
EX-06.3A-04E	0.313	0.233	0.043	0.043	0.043	604,515	No	220,317
EX-06.3A-05N	0.375	0.309	0.043	0.043	0.043	648,300	Yes	220,317
====>Grouped by Line: EX-06.3B LP EXT 20 to FWH 31B								
EX-06.3B-01N	0.400	0.242	0.043	0.043	0.043	320,539	No	220,317
EX-06.3B-02E	0.313	0.219	0.043	0.043	0.043	481,199	No	220,317
EX-06.3B-03P	0.313	0.216	0.058	0.058	0.058	413,021	No	220,317
EX-06.3B-04E	0.313	0.219	0.043	0.043	0.043	481,199	No	220,317
EX-06.3B-05N	0.375	0.271	0.043	0.043	0.043	555,528	No	220,317
====>Grouped by Line: EX-06.3C LP EXT 20 to FWH 31C								
EX-06.3C-01N	0.400	0.242	0.043	0.043	0.043	320,539	No	220,317
EX-06.3C-02E	0.313	0.219	0.043	0.043	0.043	481,199	No	220,317
EX-06.3C-03P	0.313	0.216	0.058	0.058	0.058	413,021	No	220,317
EX-06.3C-04E	0.313	0.219	0.043	0.043	0.043	481,199	No	220,317
EX-06.3C-05N	0.375	0.271	0.043	0.043	0.043	555,528	No	220,317
====>Grouped by Line: EX-06.4A LP EXT 18 to FWH 31A								
EX-06.4A-01N	0.400	0.242	0.043	0.043	0.043	320,539	No	220,317
EX-06.4A-02E	0.313	0.228	0.043	0.043	0.043	555,367	No	220,317
EX-06.4A-03P	0.313	0.284	0.058	0.058	0.058	2,329,368	No	220,317
EX-06.4A-04E	0.313	0.219	0.043	0.043	0.043	481,199	No	220,317
EX-06.4A-05N	0.375	0.271	0.043	0.043	0.043	555,528	No	220,317
====>Grouped by Line: EX-06.4B LP EXT 18 to FWH 31B								
EX-06.4B-01N	0.400	0.242	0.043	0.043	0.043	320,539	No	220,317
EX-06.4B-02E	0.313	0.228	0.043	0.043	0.043	555,367	No	220,317
EX-06.4B-03P	0.313	0.284	0.058	0.058	0.058	2,329,368	No	220,317
EX-06.4B-04E	0.313	0.219	0.043	0.043	0.043	481,199	No	220,317
EX-06.4B-05N	0.375	0.271	0.043	0.043	0.043	555,528	No	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: EX-06.4C LP EXT 18 to FWH 31C								
EX-06.4C-01N	0.400	0.242	0.043	0.043	0.043	320,539	No	220,317
EX-06.4C-02E	0.313	0.228	0.043	0.043	0.043	555,367	No	220,317
EX-06.4C-03P	0.313	0.284	0.058	0.058	0.058	2,329,368	No	220,317
EX-06.4C-04E	0.313	0.219	0.043	0.043	0.043	481,199	No	220,317
EX-06.4C-05N	0.375	0.271	0.043	0.043	0.043	555,528	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: ES: LP TO 32 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.318

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			
====>Grouped by Line: EX-05.1A LP EXT 16 to FWH 32A						
EX-05.1A-01N	0.400	0.206	0.037	No	362,250	220,317
EX-05.1A-02P	0.250	0.215	0.037	No	1,602,787	220,317
EX-05.1A-03E	0.250	0.139	0.037	No	377,855	220,317
EX-05.1A-04N	0.375	0.245	0.037	No	665,066	220,317
====>Grouped by Line: EX-05.1B LP EXT 16 to FWH 32B						
EX-05.1B-01N	0.400	0.334	0.037	No	638,748	220,317
EX-05.1B-02P	0.250	0.284	0.037	No	2,221,553	220,317
EX-05.1B-03E	0.250	0.251	0.037	Yes	792,267	220,317
EX-05.1B-04N	0.375	0.324	0.037	Yes	917,709	220,317
====>Grouped by Line: EX-05.1C LP EXT 16 to FWH 32C						
EX-05.1C-01N	0.400	0.206	0.037	No	362,250	220,317
EX-05.1C-02P	0.250	0.215	0.037	No	1,602,787	220,317
EX-05.1C-03E	0.250	0.139	0.037	No	377,855	220,317
EX-05.1C-04N	0.375	0.273	0.037	Yes	755,584	220,317
====>Grouped by Line: EX-05.2A LP EXT 15 to FWH 32A						
EX-05.2A-01N	0.400	0.206	0.037	No	362,250	220,317
EX-05.2A-02E	0.250	0.128	0.037	No	305,468	220,317
EX-05.2A-03E	0.250	0.139	0.037	No	377,855	220,317
EX-05.2A-04P	0.250	0.150	0.037	No	468,980	220,317
EX-05.2A-05E	0.250	0.145	0.037	No	425,705	220,317
EX-05.2A-06N	0.375	0.245	0.037	No	665,066	220,317
====>Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B						
EX-05.2B-01N	0.400	0.278	0.037	Yes	518,663	220,317
EX-05.2B-02E	0.250	0.256	0.037	Yes	736,941	220,317
EX-05.2B-03E	0.250	0.241	0.037	Yes	755,266	220,317
EX-05.2B-04P	0.250	0.244	0.037	Yes	854,268	220,317

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
===>Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B							
EX-05.2B-05E	0.250	0.247	0.037	0.037	824,757	Yes	220,317
EX-05.2B-06N	0.375	0.256	0.037	0.037	699,381	Yes	220,317
===>Grouped by Line: EX-05.2C LP EXT 15 to FWH 32C							
EX-05.2C-01N	0.400	0.206	0.037	0.037	362,250	No	220,317
EX-05.2C-02E	0.250	0.128	0.037	0.037	305,468	No	220,317
EX-05.2C-03E	0.250	0.139	0.037	0.037	377,855	No	220,317
EX-05.2C-04P	0.250	0.150	0.037	0.037	468,980	No	220,317
EX-05.2C-05E	0.250	0.145	0.037	0.037	425,705	No	220,317
EX-05.2C-06N	0.375	0.245	0.037	0.037	665,066	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: ES: LP TO 33 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.383

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Inspected	Comp. Predicted Time to Tcrit (hrs)	Actual Service Time (hrs)
	Init.	Pred.[1]			

====>Grouped by Line: EX-04.1 LPEX14 to FWH33A HDR

EX-04.1-01N	0.400	0.207	0.033	0.033	164,815	No	220,317
EX-04.1-08X	0.000	0.174	0.033	0.033	439,015	No	220,317
EX-04.1-02E	0.250	0.141	0.033	0.033	179,496	No	220,317
EX-04.1-03E	0.250	0.141	0.033	0.033	179,496	No	220,317
EX-04.1-04P	0.250	0.152	0.033	0.033	221,061	No	220,317
EX-04.1-05E	0.250	0.121	0.033	0.033	123,247	No	220,317
EX-04.1-07P	0.250	0.195	0.033	0.033	689,254	No	220,317
EX-04.1-06T (BR/SE)	0.250	0.120	0.045	0.045	104,402	No	220,317
EX-04.1-06T (D/S)	0.000	0.193	0.063	0.063	227,213	No	220,317
EX-04.3-01P	0.313	0.270	0.063	0.063	995,908	No	220,317

====>Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR

EX-04.9-09T (D/S)	0.000	0.068	0.063	0.063	4,487	No	220,317
EX-04.11-01P	0.313	0.268	0.063	0.063	877,462	No	220,317
EX-04.11-02T	0.313	0.201	0.063	0.063	236,879	No	220,317
EX-04.11-02T (D/S)	0.000	0.214	0.063	0.063	294,134	No	220,317
EX-04.11-03P	0.313	0.202	0.063	0.063	241,951	No	220,317
EX-04.11-04V	0.313	0.179	0.050	0.050	181,087	No	220,317
EX-04.11-05P	0.313	0.259	0.063	0.063	689,747	No	220,317
EX-04.11-06V	0.313	0.134	0.050	0.050	89,496	No	220,317
EX-04.11-07P	0.313	0.247	0.063	0.063	536,484	No	220,317
EX-04.11-08E	0.313	0.370	0.047	0.047	417,914	Yes	220,317
EX-04.11-09E	0.313	0.188	0.047	0.047	216,539	No	220,317
EX-04.11-10P	0.313	0.249	0.063	0.063	690,304	No	220,317
EX-04.11-11E	0.313	0.188	0.047	0.047	216,539	No	220,317
EX-04.11-12P	0.313	0.201	0.063	0.063	236,100	No	220,317
EX-04.11-13E	0.313	0.165	0.047	0.047	153,113	No	220,317
EX-04.11-14P	0.313	0.259	0.063	0.063	875,592	No	220,317
EX-04.11-15E	0.313	0.165	0.047	0.047	153,113	No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop		Time to Tcrit (hrs)	Inspected	
====>Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR							
EX-04.11-16P	0.313	0.219	0.063	0.063	No	321,373	220,317
EX-04.11-17T	0.313	0.201	0.063	0.063	No	236,879	220,317
EX-04.11-17T (D/S)	0.000	0.214	0.063	0.063	No	294,134	220,317
EX-04.11-18P	0.313	0.202	0.063	0.063	No	241,951	220,317
EX-04.11-20P	0.313	0.328	0.063	0.063	No	1,545,924	220,317
EX-04.11-19T	0.313	0.214	0.063	0.063	No	100,750	220,317
EX-04.11-19T (D/S)	0.000	0.254	0.063	0.063	No	218,105	220,317
EX-04.11-19T (BR/SE)	0.259	0.163	0.045	0.045	Yes	234,646	220,317
EX-04.9-09T	0.313	0.156	0.063	0.063	No	125,486	220,317
EX-04.9-09T (BR/SE)	0.250	0.108	0.045	0.045	No	81,313	220,317
====>Grouped by Line: EX-04.13 LP EXT 32 to FWH 33B							
EX-04.12-01P	0.313	0.274	0.063	0.063	No	1,150,917	220,317
EX-04.13-01R	0.000	0.356	0.047	0.047	No	875,612	220,317
EX-04.13-01R (D/S)	0.000	0.165	0.033	0.033	No	219,845	220,317
EX-04.13-02P	0.255	0.173	0.033	0.033	Yes	258,856	220,317
EX-04.13-07T	0.250	0.195	0.033	0.033	No	299,857	220,317
EX-04.13-07T (D/S)	0.000	0.164	0.033	0.033	No	275,853	220,317
EX-04.13-03E	0.250	0.121	0.033	0.033	No	123,247	220,317
EX-04.13-04P	0.250	0.169	0.033	0.033	No	307,373	220,317
EX-04.13-05E	0.250	0.121	0.033	0.033	No	123,247	220,317
EX-04.13-06N	0.250	0.120	0.033	0.033	No	120,336	220,317
====>Grouped by Line: EX-04.14 LP EXT 32 to FWH 33B							
EX-04.14-01P	0.276	0.204	0.033	0.033	Yes	602,830	220,317
EX-04.14-02E	0.250	0.358	0.033	0.033	Yes	456,925	220,317
EX-04.14-03N	0.250	0.120	0.033	0.033	No	120,336	220,317
====>Grouped by Line: EX-04.15 LPEX14 to FWH33C HDR							
EX-04.15-01N	0.400	0.207	0.033	0.033	No	164,815	220,317
EX-04.15-08X	0.000	0.174	0.033	0.033	No	439,015	220,317
EX-04.15-02E	0.250	0.141	0.033	0.033	No	179,496	220,317
EX-04.15-03E	0.250	0.141	0.033	0.033	No	179,496	220,317
EX-04.15-04P	0.250	0.152	0.033	0.033	No	221,061	220,317
EX-04.15-05E	0.250	0.130	0.033	0.033	No	146,364	220,317
EX-04.15-07P	0.250	0.169	0.033	0.033	No	301,533	220,317
EX-04.15-06T (BR/SE)	0.250	0.120	0.045	0.045	No	104,402	220,317
EX-04.15-06T (D/S)	0.000	0.193	0.063	0.063	No	227,213	220,317
EX-04.17-01P	0.313	0.270	0.063	0.063	No	995,908	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop		Time to Tcrit (hrs)	Inspected	
===>Grouped by Line: EX-04.16 LPEX13 to FWH33C HDR							
EX-04.16-01N	0.400	0.207	0.033	0.033	No	164,815	220,317
EX-04.16-10X	0.000	0.174	0.033	0.033	No	439,015	220,317
EX-04.16-02E	0.250	0.141	0.033	0.033	No	179,496	220,317
EX-04.16-03E	0.250	0.141	0.033	0.033	No	179,496	220,317
EX-04.16-04P	0.250	0.152	0.033	0.033	No	221,061	220,317
EX-04.16-05E	0.250	0.141	0.033	0.033	No	179,496	220,317
EX-04.16-06P	0.250	0.152	0.033	0.033	No	221,061	220,317
EX-04.16-07E	0.250	0.130	0.033	0.033	No	146,364	220,317
EX-04.16-08P	0.250	0.195	0.033	0.033	No	689,254	220,317
Sorted By:Flow Order							
===>Grouped by Line: EX-04.18 LPEX FWH 33C IN HDR							
EX-04.16-09T	0.313	0.156	0.063	0.063	No	125,486	220,317
EX-04.16-09T (BR/SE)	0.250	0.108	0.045	0.045	No	81,313	220,317
EX-04.16-09T (D/S)	0.000	0.068	0.063	0.063	No	4,487	220,317
EX-04.18-01P	0.313	0.268	0.063	0.063	No	877,462	220,317
EX-04.18-02T	0.313	0.201	0.063	0.063	No	236,879	220,317
EX-04.18-02T (D/S)	0.000	0.214	0.063	0.063	No	294,134	220,317
EX-04.18-03P	0.313	0.202	0.063	0.063	No	241,951	220,317
EX-04.18-04V	0.313	0.179	0.050	0.050	No	181,087	220,317
EX-04.18-05P	0.313	0.259	0.063	0.063	No	689,747	220,317
EX-04.18-06V	0.313	0.134	0.050	0.050	No	89,496	220,317
EX-04.19-01R	0.000	0.198	0.047	0.047	No	251,487	220,317
EX-04.19-01R (D/S)	0.000	0.150	0.040	0.040	No	208,536	220,317
EX-04.19-02V	0.313	0.222	0.043	0.043	No	380,272	220,317
EX-04.19-03R	0.000	0.176	0.040	0.040	No	348,472	220,317
EX-04.19-03R (D/S)	0.000	0.214	0.047	0.047	No	325,196	220,317
EX-04.20-01P	0.313	0.238	0.063	0.063	No	449,214	220,317
EX-04.20-02E	0.313	0.165	0.047	0.047	No	153,113	220,317
EX-04.20-03P	0.313	0.259	0.063	0.063	No	875,592	220,317
EX-04.20-04E	0.313	0.165	0.047	0.047	No	153,113	220,317
EX-04.20-05P	0.313	0.219	0.063	0.063	No	321,373	220,317
EX-04.20-06E	0.313	0.165	0.047	0.047	No	153,113	220,317
EX-04.20-07P	0.313	0.170	0.063	0.063	No	142,721	220,317
EX-04.20-08E	0.313	0.165	0.047	0.047	No	153,113	220,317
EX-04.20-09P	0.313	0.219	0.063	0.063	No	321,373	220,317
EX-04.20-10E	0.313	0.165	0.047	0.047	No	153,113	220,317
EX-04.20-11P	0.313	0.259	0.063	0.063	No	875,592	220,317
EX-04.20-12E	0.313	0.165	0.047	0.047	No	153,113	220,317
EX-04.20-13P	0.313	0.219	0.063	0.063	No	321,373	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: EX-04.18 LPEX FWH 33C IN HDR							
EX-04.20-14T	0.313	0.201	0.063	0.063	No	236,879	220,317
EX-04.20-14T (D/S)	0.000	0.214	0.063	0.063	No	294,134	220,317
EX-04.20-15P	0.313	0.202	0.063	0.063	No	241,951	220,317
EX-04.20-16T	0.384	0.200	0.063	0.063	No	92,185	220,317
EX-04.20-16T (D/S)	0.384	0.256	0.063	0.063	No	214,683	220,317
EX-04.20-16T (BR/SE)	0.000	0.163	0.045	0.045	No	234,920	220,317
====>Grouped by Line: EX-04.2 LPEX13 to FWH33A HDR							
EX-04.2-01N	0.400	0.207	0.033	0.033	No	164,815	220,317
EX-04.2-10X	0.000	0.174	0.033	0.033	No	439,015	220,317
EX-04.2-02E	0.250	0.141	0.033	0.033	No	179,496	220,317
EX-04.2-03E	0.250	0.141	0.033	0.033	No	179,496	220,317
EX-04.2-04P	0.250	0.152	0.033	0.033	No	221,061	220,317
EX-04.2-05E	0.250	0.141	0.033	0.033	No	179,496	220,317
EX-04.2-06P	0.250	0.152	0.033	0.033	No	221,061	220,317
EX-04.2-07E	0.250	0.130	0.033	0.033	No	146,364	220,317
EX-04.2-08P	0.250	0.195	0.033	0.033	No	689,254	220,317
====>Grouped by Line: EX-04.21 LP EXT 31 to FWH 33C							
EX-04.20-17P	0.313	0.274	0.063	0.063	No	1,150,917	220,317
EX-04.21-01R	0.000	0.330	0.047	0.047	Yes	802,771	220,317
EX-04.21-01R (D/S)	0.000	0.178	0.033	0.033	No	242,164	220,317
EX-04.21-02P	0.267	0.138	0.033	0.033	Yes	194,398	220,317
EX-04.21-07T	0.250	0.160	0.033	0.033	Yes	235,935	220,317
EX-04.21-07T (D/S)	0.000	0.182	0.033	0.033	Yes	313,085	220,317
EX-04.21-03E	0.250	0.240	0.033	0.033	Yes	291,350	220,317
EX-04.21-04P	0.250	0.169	0.033	0.033	Yes	307,373	220,317
EX-04.21-05E	0.250	0.345	0.033	0.033	Yes	438,634	220,317
EX-04.21-06N	0.250	0.120	0.033	0.033	No	120,336	220,317
====>Grouped by Line: EX-04.22 LP EXT 31 to FWH 33C							
EX-04.22-01P	0.271	0.219	0.033	0.033	Yes	657,235	220,317
EX-04.22-02E	0.250	0.121	0.033	0.033	No	123,247	220,317
EX-04.22-03N	0.250	0.219	0.033	0.033	No	258,515	220,317
====>Grouped by Line: EX-04.4 LPEX FWH 33A IN HDR							
EX-04.2-09T	0.313	0.329	0.063	0.063	No	356,378	220,317
EX-04.2-09T (BR/SE)	0.250	0.271	0.045	0.045	Yes	290,350	220,317
EX-04.2-09T (D/S)	0.000	0.068	0.063	0.063	No	4,487	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: EX-04.4 LPEX FWH 33A IN HDR							
EX-04.4-01P	0.313	0.268	0.063	0.063	877,462	No	220,317
EX-04.4-02T	0.313	0.201	0.063	0.063	236,879	No	220,317
EX-04.4-02T (D/S)	0.000	0.214	0.063	0.063	294,134	No	220,317
EX-04.4-03P	0.313	0.203	0.063	0.063	242,826	No	220,317
EX-04.4-04V	0.313	0.179	0.050	0.050	181,087	No	220,317
EX-04.4-05P	0.313	0.260	0.063	0.063	691,503	No	220,317
EX-04.4-06V	0.313	0.134	0.050	0.050	89,496	No	220,317
EX-04.4-07P	0.313	0.247	0.063	0.063	537,950	No	220,317
EX-04.4-08E	0.313	0.394	0.047	0.047	448,953	Yes	220,317
EX-04.4-09P	0.313	0.260	0.063	0.063	877,766	No	220,317
EX-04.4-10E	0.313	0.165	0.047	0.047	153,113	No	220,317
EX-04.4-11P	0.313	0.220	0.063	0.063	322,408	No	220,317
EX-04.4-12E	0.313	0.165	0.047	0.047	153,113	No	220,317
EX-04.4-13P	0.313	0.170	0.063	0.063	143,397	No	220,317
EX-04.4-14E	0.313	0.165	0.047	0.047	153,113	No	220,317
EX-04.4-15P	0.313	0.220	0.063	0.063	322,408	No	220,317
EX-04.4-16E	0.313	0.165	0.047	0.047	153,113	No	220,317
EX-04.4-17P	0.313	0.260	0.063	0.063	877,766	No	220,317
EX-04.4-18E	0.313	0.165	0.047	0.047	153,113	No	220,317
EX-04.4-19P	0.313	0.220	0.063	0.063	322,408	No	220,317
EX-04.4-20T	0.313	0.201	0.063	0.063	236,879	No	220,317
EX-04.4-20T (D/S)	0.000	0.214	0.063	0.063	294,134	No	220,317
EX-04.4-21P	0.313	0.203	0.063	0.063	242,826	No	220,317
EX-04.4-23P	0.313	0.280	0.063	0.063	1,267,791	No	220,317
EX-04.4-22T	0.352	0.215	0.063	0.063	101,544	No	220,317
EX-04.4-22T (D/S)	0.352	0.247	0.063	0.063	207,310	No	220,317
EX-04.4-22T (BR/SE)	0.259	0.177	0.045	0.045	263,429	No	220,317
====>Grouped by Line: EX-04.6 LP EXT to FWH 33A							
EX-04.5-01P	0.313	0.275	0.063	0.063	1,153,390	No	220,317
EX-04.6-01R	0.000	0.314	0.047	0.047	757,463	Yes	220,317
EX-04.6-01R (D/S)	0.000	0.212	0.033	0.033	299,114	No	220,317
EX-04.6-02P	0.264	0.177	0.033	0.033	266,826	Yes	220,317
EX-04.6-07T	0.262	0.182	0.033	0.033	276,868	Yes	220,317
EX-04.6-07T (D/S)	0.262	0.197	0.033	0.033	344,818	No	220,317
EX-04.6-03E	0.461	0.240	0.033	0.033	300,427	Yes	220,317
EX-04.6-04P	0.279	0.201	0.033	0.033	380,242	Yes	220,317
EX-04.6-05E	0.250	0.293	0.033	0.033	364,773	Yes	220,317
EX-04.6-06N	0.250	0.413	0.033	0.033	528,532	Yes	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: EX-04.7 LP EXT to FWH 33A								
EX-04.7-01P	0.264	0.224	0.033	0.033	0.033	672,918	Yes	220,317
EX-04.7-02E	0.250	0.121	0.033	0.033	0.033	123,247	No	220,317
EX-04.7-03N	0.250	0.120	0.033	0.033	0.033	120,336	No	220,317
====>Grouped by Line: EX-04.8 LPEX14 to FWH33B HDR								
EX-04.8-01N	0.400	0.207	0.033	0.033	0.033	164,815	No	220,317
EX-04.8-08X	0.000	0.174	0.033	0.033	0.033	439,015	No	220,317
EX-04.8-02E	0.250	0.141	0.033	0.033	0.033	179,496	No	220,317
EX-04.8-03E	0.250	0.141	0.033	0.033	0.033	179,496	No	220,317
EX-04.8-04P	0.250	0.152	0.033	0.033	0.033	221,061	No	220,317
EX-04.8-05E	0.250	0.121	0.033	0.033	0.033	123,247	No	220,317
EX-04.8-07P	0.250	0.195	0.033	0.033	0.033	689,254	No	220,317
EX-04.8-06T (BR/SE)	0.250	0.120	0.045	0.045	0.045	104,402	No	220,317
EX-04.8-06T (D/S)	0.000	0.193	0.063	0.063	0.063	227,213	No	220,317
EX-04.10-01P	0.313	0.270	0.063	0.063	0.063	995,908	No	220,317
====>Grouped by Line: EX-04.9 LPEX13 to FWH33B HDR								
EX-04.9-01N	0.400	0.207	0.033	0.033	0.033	164,815	No	220,317
EX-04.9-10X	0.000	0.174	0.033	0.033	0.033	439,015	No	220,317
EX-04.9-02E	0.250	0.141	0.033	0.033	0.033	179,496	No	220,317
EX-04.9-03E	0.250	0.141	0.033	0.033	0.033	179,496	No	220,317
EX-04.9-04P	0.250	0.152	0.033	0.033	0.033	221,061	No	220,317
EX-04.9-05E	0.250	0.141	0.033	0.033	0.033	179,496	No	220,317
EX-04.9-06P	0.250	0.152	0.033	0.033	0.033	221,061	No	220,317
EX-04.9-07E	0.250	0.130	0.033	0.033	0.033	146,364	No	220,317
EX-04.9-08P	0.250	0.195	0.033	0.033	0.033	689,254	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: ES: PRESEP TO 35 HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.229

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: EX-02.1 PSEP 2A 10" to 35 HDR							
EX-02.1-01N	0.365	0.365	0.072	0.072	No	117,014,920	171,511
EX-02.1-02P	0.378	0.378	0.091	0.091	No	159,064,784	66,848
EX-02.1-03E	0.425	0.425	0.091	0.091	No	215,357,760	66,848
EX-02.1-04P	0.365	0.365	0.091	0.091	No	171,191,616	66,848
EX-02.1-05O	0.365	0.365	0.091	0.091	No	164,388,624	66,848
EX-02.1-06T (BR/SE)	0.365	0.365	0.091	0.091	No	164,317,024	66,848
EX-02.1-06T (D/S)	0.500	0.500	0.152	0.152	No	206,013,568	66,848
EX-02.5-01P	0.500	0.500	0.152	0.152	No	100,000,000	66,848
Sorted By:Flow Order							
====>Grouped by Line: EX-02.11 PSEP1B 14" to 35 HDR							
EX-02.11-02P	0.375	0.375	0.118	0.118	No	100,000,000	66,848
EX-02.11-03E	0.375	0.375	0.118	0.118	No	128,396,928	66,848
EX-02.11-04P	0.375	0.375	0.118	0.118	No	123,147,360	66,848
EX-02.11-06O	0.375	0.375	0.118	0.118	No	113,164,072	66,848
EX-02.11-07P	0.000	0.375	0.118	0.118	No	100,000,000	66,848
Sorted By:Flow Order							
====>Grouped by Line: EX-02.12 PSEP 1B&2B to 35 HDR							
EX-02.9-10T (D/S)	0.500	0.500	0.152	0.152	No	104,125,656	66,848
EX-02.12-01P	0.500	0.500	0.152	0.152	No	100,000,000	66,848
EX-02.9-10T (BR/SE)	0.365	0.365	0.091	0.091	No	151,050,384	66,848
EX-02.9-10T	0.500	0.500	0.152	0.152	No	157,129,744	66,848
Sorted By:Flow Order							
====>Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR							
EX-02.11-05T (BR/SE)	0.375	0.375	0.118	0.118	No	108,655,880	66,848
EX-02.11-05T	0.500	0.500	0.152	0.152	No	104,125,656	66,848
EX-02.11-05T (D/S)	0.500	0.500	0.152	0.152	No	104,125,656	66,848
EX-02.13-01P	0.500	0.500	0.152	0.152	No	100,000,000	66,848
EX-02.13-02B	0.500	0.500	0.152	0.152	No	216,606,656	66,848
EX-02.13-03E	0.375	0.375	0.152	0.152	No	112,255,552	66,848
EX-02.13-03P	0.000	0.500	0.152	0.152	No	241,211,600	66,848
Sorted By:Flow Order							

Component Name	Init.	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop			Time to Tcrit (hrs)	Inspected	
===>Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR								
EX-02.13-04E	0.375	0.375	0.152	0.152	0.152	123,845,304	No	66,848
EX-02.13-05P	0.375	0.375	0.152	0.152	0.152	148,286,992	No	66,848
EX-02.13-06R	0.000	0.311	0.149	0.149	0.149	32,753,584	No	171,511
EX-02.13-06R (D/S)	0.000	0.374	0.232	0.232	0.232	39,084,248	No	171,511
===>Grouped by Line: EX-02.14 FWH 35 HEADER								
EX-02.7-02T	0.375	0.374	0.232	0.232	0.232	17,483,966	No	141,668
EX-02.7-02T (D/S)	0.375	0.374	0.232	0.232	0.232	13,998,550	No	141,668
EX-02.14-01P	0.375	0.388	0.311	0.311	0.311	147,665	No	220,317
EX-02.14-02E	0.375	0.301	0.232	0.232	0.232	43,161	No	171,511
EX-02.14-03P	0.375	0.144	0.311	0.311	0.311	-161,843	No	220,317
EX-02.14-04T	0.375	0.299	0.311	0.311	0.311	-9,079	No	220,317
EX-02.14-04T (D/S)	0.375	0.345	0.311	0.311	0.311	29,277	No	220,317
EX-02.14-05P	0.375	0.102	0.311	0.311	0.311	-171,501	No	220,317
EX-02.14-06E	0.000	0.321	0.232	0.232	0.232	55,272	No	33,725
EX-02.14-07P	0.375	0.326	0.311	0.311	0.311	13,779	No	220,317
EX-02.14-08E	0.000	0.321	0.232	0.232	0.232	55,272	No	33,725
EX-02.14-09P	0.375	0.144	0.311	0.311	0.311	-161,843	No	220,317
EX-02.14-10V	0.375	-0.112	0.248	0.248	0.248	-165,350	No	220,317
EX-02.14-11V	0.375	-0.069	0.248	0.248	0.248	-160,108	No	220,317
EX-02.14-12P	0.375	0.321	0.311	0.311	0.311	12,638	Yes	220,317
EX-02.14-13V	0.375	-0.069	0.248	0.248	0.248	-160,108	No	220,317
EX-02.14-31P	0.375	0.377	0.311	0.311	0.311	86,092	No	220,317
EX-02.14-14E	0.375	0.431	0.232	0.232	0.232	136,542	Yes	220,317
EX-02.14-32T	0.375	0.298	0.311	0.311	0.311	-9,681	No	220,317
EX-02.14-32T (D/S)	0.000	0.303	0.311	0.311	0.311	-7,072	No	220,317
EX-02.14-16E	0.375	0.185	0.232	0.232	0.232	-27,060	Yes	220,317
EX-02.14-17P	0.375	0.400	0.311	0.311	0.311	137,577	No	220,317
EX-02.14-18E	0.375	0.260	0.232	0.232	0.232	16,274	Yes	220,317
EX-02.14-19P	0.375	0.298	0.311	0.311	0.311	-11,792	No	220,317
EX-02.14-20E	0.375	0.340	0.232	0.232	0.232	62,286	Yes	220,317
EX-02.14-21P	0.375	0.341	0.311	0.311	0.311	18,229	No	220,317
EX-02.14-33P	0.375	0.375	0.232	0.232	0.232	63,956,600	No	141,668
EX-02.14-22T	0.375	0.374	0.232	0.232	0.232	30,758,210	No	141,668
EX-02.14-22T (D/S)	0.000	0.374	0.232	0.232	0.232	34,966,720	No	141,668
EX-02.14-23P	0.375	0.374	0.232	0.232	0.232	31,183,902	No	141,668
EX-02.14-24E	0.375	0.281	0.232	0.232	0.232	28,205	Yes	220,317
EX-02.14-25E	0.000	0.345	0.232	0.232	0.232	65,205	No	17,520
EX-02.14-26P	0.375	0.350	0.311	0.311	0.311	23,314	No	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: EX-02.14 FWH 35 HEADER								
EX-02.14-27E	0.000	0.239	0.232	0.232	0.232	3,944	Yes	220,317
EX-02.14-28P	0.375	0.374	0.232	0.232	0.232	36,936,388	No	141,668
EX-02.14-29T	0.375	0.373	0.232	0.232	0.232	11,905,519	No	141,668
EX-02.14-29T (D/S)	0.000	0.374	0.232	0.232	0.232	14,072,971	No	141,668
EX-02.14-29T (BR/SE)	0.312	0.311	0.149	0.149	0.149	38,232,188	No	141,668
EX-02.7-02T (BR/SE)	0.375	0.374	0.149	0.149	0.149	28,449,874	No	141,668
====>Grouped by Line: EX-02.15 FWH 35 HEADER								
EX-02.15-01P	0.625	0.625	0.232	0.232	0.232	184,839,920	No	141,668
EX-02.15-02T	0.656	0.655	0.232	0.232	0.232	41,272,092	No	141,668
EX-02.15-02T (D/S)	0.656	0.655	0.232	0.232	0.232	42,551,804	No	141,668
EX-02.15-02T (BR/SE)	0.312	0.311	0.149	0.149	0.149	38,232,188	No	141,668
====>Grouped by Line: EX-02.2 PSEP 1A 10" to 35 HDR								
EX-02.2-02P	0.365	0.365	0.091	0.091	0.091	152,190,832	No	66,848
EX-02.2-03E	0.365	0.365	0.091	0.091	0.091	178,485,040	No	66,848
EX-02.2-04P	0.365	0.365	0.091	0.091	0.091	100,000,000	No	66,848
EX-02.2-05E	0.365	0.365	0.091	0.091	0.091	178,485,040	No	66,848
EX-02.2-06P	0.365	0.365	0.091	0.091	0.091	262,948,000	No	66,848
EX-02.2-08O	0.365	0.365	0.091	0.091	0.091	218,982,880	No	66,848
====>Grouped by Line: EX-02.4 PSEP2A 14" to 35 HDR								
EX-02.4-02P	0.375	0.375	0.118	0.118	0.118	100,000,000	No	66,848
EX-02.4-03E	0.375	0.375	0.118	0.118	0.118	128,396,928	No	66,848
EX-02.4-04P	0.375	0.375	0.118	0.118	0.118	123,147,360	No	66,848
EX-02.4-06O	0.375	0.375	0.118	0.118	0.118	113,164,072	No	66,848
EX-02.4-07P	0.000	0.375	0.118	0.118	0.118	100,000,000	No	66,848
====>Grouped by Line: EX-02.6 PSEP 1A&2A to 35 HDR								
EX-02.2-07T	0.500	0.500	0.152	0.152	0.152	157,129,744	No	66,848
EX-02.2-07T (BR/SE)	0.365	0.365	0.091	0.091	0.091	151,050,384	No	66,848
EX-02.2-07T (D/S)	0.500	0.500	0.152	0.152	0.152	104,125,656	No	66,848
EX-02.6-01P	0.500	0.500	0.152	0.152	0.152	100,000,000	No	66,848
====>Grouped by Line: EX-02.7 PSEP 1A&2A to 35 HDR								
EX-02.4-05T (BR/SE)	0.375	0.375	0.118	0.118	0.118	108,655,880	No	66,848
EX-02.4-05T	0.500	0.500	0.152	0.152	0.152	104,125,656	No	66,848
EX-02.4-05T (D/S)	0.500	0.500	0.152	0.152	0.152	104,125,656	No	66,848
EX-02.7-01P	0.500	0.500	0.152	0.152	0.152	100,000,000	No	66,848

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====>Grouped by Line: EX-02.8 PSEP 2B 10" to 35 HDR					
EX-02.8-01N	0.365	0.365	0.072	No	171,511
EX-02.8-02E	0.365	0.365	0.091	No	66,848
EX-02.8-03P	0.365	0.365	0.091	No	66,848
EX-02.8-04E	0.365	0.365	0.091	No	66,848
EX-02.8-05P	0.365	0.365	0.091	No	66,848
EX-02.8-07O	0.365	0.365	0.091	No	66,848
EX-02.8-06E	0.365	0.365	0.091	No	66,848
EX-02.8-09P	0.000	0.365	0.091	No	66,848
EX-02.8-08T (BR/SE)	0.365	0.365	0.091	No	66,848
EX-02.8-08T (D/S)	0.500	0.500	0.152	No	66,848
====>Grouped by Line: EX-02.9 PSEP 1B 10" to 35 HDR					
EX-02.9-01N	0.365	0.365	0.072	No	171,511
EX-02.9-02P	0.365	0.365	0.091	No	66,848
EX-02.9-03E	0.365	0.365	0.091	No	66,848
EX-02.9-04P	0.365	0.365	0.091	No	66,848
EX-02.9-05E	0.365	0.365	0.091	No	66,848
EX-02.9-06P	0.365	0.365	0.091	No	66,848
EX-02.9-11O	0.365	0.365	0.091	No	66,848
EX-02.9-07E	0.365	0.365	0.091	No	66,848
EX-02.9-08P	0.365	0.365	0.091	No	66,848
EX-02.9-09E	0.365	0.365	0.091	No	66,848
EX-02.9-10P	0.000	0.365	0.091	No	66,848

Sorted By:Flow Order

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: FW: 36 HTR TO SG HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.451

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			

====>Grouped by Line: FW-02.1A FWH 36A to SG HDR

FW-02.1A-01N	0.938	0.671	0.717	0.717	0.717	-62,043	No	220,317
FW-02.1A-02E	0.938	0.979	0.717	0.717	0.717	488,551	Yes	220,317
FW-02.1A-03P	0.938	0.892	0.717	0.717	0.717	377,023	Yes	220,317
FW-02.1A-04E	0.938	0.940	0.717	0.717	0.717	415,939	Yes	220,317
FW-02.1A-05V	0.938	0.560	0.889	0.889	0.889	-206,308	No	220,317
FW-02.1A-06P	0.938	0.820	0.717	0.717	0.717	323,615	No	220,317
FW-02.1A-07E	0.938	0.740	0.717	0.717	0.717	43,034	No	220,317
FW-02.1A-08P	0.938	0.804	0.717	0.717	0.717	240,563	No	220,317
FW-02.1A-09E	0.938	0.840	0.717	0.717	0.717	228,845	Yes	220,317
FW-02.1A-10P	0.938	0.873	0.717	0.717	0.717	429,278	Yes	220,317
FW-02.1A-11E	0.938	0.875	0.717	0.717	0.717	294,010	Yes	220,317
FW-02.1A-12P	0.938	0.901	0.717	0.717	0.717	506,433	Yes	220,317
FW-02.1A-13R	0.000	0.866	0.717	0.717	0.717	366,984	Yes	220,317
FW-02.1A-13R (D/S)	0.000	1.336	1.195	1.195	1.195	672,436	No	220,317

====>Grouped by Line: FW-02.1B FWH 36B to SG HDR

FW-02.1B-01N	0.938	2.433	0.717	0.717	0.717	2,364,017	No	220,317
FW-02.1B-02E	0.938	0.957	0.717	0.717	0.717	446,370	Yes	220,317
FW-02.1B-03P	0.938	0.886	0.717	0.717	0.717	363,526	Yes	220,317
FW-02.1B-04E	0.938	0.946	0.717	0.717	0.717	425,890	Yes	220,317
FW-02.1B-05V	0.938	0.560	0.889	0.889	0.889	-206,308	No	220,317
FW-02.1B-06P	0.938	0.860	0.717	0.717	0.717	448,097	Yes	220,317
FW-02.1B-07E	0.938	0.740	0.717	0.717	0.717	43,034	No	220,317
FW-02.1B-08P	0.938	0.804	0.717	0.717	0.717	240,563	No	220,317
FW-02.1B-09E	0.938	0.740	0.717	0.717	0.717	43,034	No	220,317
FW-02.1B-10P	0.965	0.855	0.717	0.717	0.717	377,938	Yes	220,317

====>Grouped by Line: FW-02.1C FWH 36C to SG HDR

FW-02.1C-01N	0.938	1.131	0.717	0.717	0.717	570,280	Yes	220,317
FW-02.1C-02E	0.938	0.866	0.717	0.717	0.717	277,314	Yes	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
===>Grouped by Line: FW-02.1C FWH 36C to SG HDR						
FW-02.1C-03P	0.938	0.883	0.717	0.717	Yes	220,317
FW-02.1C-04E	0.938	0.740	0.717	0.717	No	220,317
FW-02.1C-05V	0.938	0.560	0.889	0.889	No	220,317
FW-02.1C-06P	0.938	0.820	0.717	0.717	No	220,317
FW-02.1C-07E	0.938	0.740	0.717	0.717	No	220,317
FW-02.1C-08P	0.938	0.804	0.717	0.717	No	220,317
FW-02.1C-09E	0.938	0.740	0.717	0.717	No	220,317
FW-02.1C-10P	0.998	0.925	0.717	0.717	Yes	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Pass 2 Analysis Include Measured Wear

Run Name: FW: BFP TO 36 HTR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.893

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Component Predicted Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====>Grouped by Line: FW-01.1A BFP 31 to RCIRC T					
FW-01.1A-01N	1.031	1.001	0.620	No	220,317
FW-01.1A-02P	1.075	0.963	0.740	Yes	220,317
FW-01.1A-03R	1.095	1.037	0.740	Yes	220,317
FW-01.1A-03R (D/S)	1.095	0.956	0.924	Yes	220,317
FW-01.2A-01E	1.031	0.970	0.797	Yes	220,317
FW-01.2A-02P	1.043	0.969	0.797	Yes	220,317
FW-01.2A-03T	1.039	1.002	0.797	No	220,317
FW-01.2A-03T (D/S)	1.039	1.000	0.797	Yes	220,317
FW-01.2A-03T (BR/SE)	0.000	0.802	0.264	No	4,406
Sorted By:Flow Order					
			290,505,056		
			578,013		
			738,861		
			101,634		
			452,882		
			520,626		
			659,156		
			652,723		
			229,787		
====>Grouped by Line: FW-01.1B BFP 32 to RCIRC T					
FW-01.1B-01N	1.031	0.990	0.620	No	220,317
FW-01.1B-02P	1.176	0.982	0.740	No	220,317
FW-01.1B-03R	1.095	1.006	0.740	Yes	220,317
FW-01.1B-03R (D/S)	1.095	1.022	0.924	Yes	220,317
FW-01.2B-01E	1.031	0.906	0.797	Yes	220,317
FW-01.2B-02P	1.031	0.904	0.797	No	220,317
FW-01.2B-03E	1.251	1.033	0.797	Yes	220,317
FW-01.2B-04P	1.032	0.981	0.797	Yes	220,317
FW-01.2B-05T	1.036	0.973	0.797	No	220,317
FW-01.2B-05T (D/S)	1.036	0.988	0.797	No	220,317
FW-01.2B-05T (BR/SE)	0.000	0.846	0.264	No	4,406
Sorted By:Flow Order					
			282,013,792		
			614,767		
			662,510		
			312,548		
			285,011		
			322,912		
			671,008		
			810,889		
			567,233		
			615,504		
			248,484		
Sorted By:Flow Order					
			957,164	Yes	220,317
			-198,875	No	220,317
			-202,887	No	220,317
			227,297	No	220,317
			370,082	No	220,317
			370,082	No	220,317
====>Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR					
FW-01.2A-04P	1.039	0.995	0.797	Yes	220,317
FW-01.2A-05V	1.031	0.808	0.988	No	220,317
FW-01.2A-06V	1.031	0.753	0.988	No	220,317
FW-01.2A-07E	1.031	0.884	0.797	No	220,317
FW-01.2A-08T	1.031	0.912	0.797	No	220,317
FW-01.2A-08T (D/S)	0.000	0.912	0.797	No	220,317

Component Name	Init.	Thickness (in)		Inspected	Comp. Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop			
====>Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR						
FW-01.2A-09P	1.031	0.951	0.797	0.797	No	220,317
FW-01.2A-10E	1.031	1.019	0.797	0.797	Yes	220,317
FW-01.2A-11P	1.031	0.931	0.797	0.797	No	220,317
FW-01.2A-12E	1.031	0.884	0.797	0.797	No	220,317
FW-01.2A-13P	1.031	0.931	0.797	0.797	No	220,317
FW-01.2A-14E	1.031	0.884	0.797	0.797	No	220,317
FW-01.2A-15P_1	1.031	0.931	0.797	0.797	No	220,317
FW-01.2A-15P_2	1.031	0.972	0.797	0.797	No	220,317
FW-01.2A-16E	1.031	0.884	0.797	0.797	No	220,317
FW-01.2A-17P	1.031	0.931	0.797	0.797	No	220,317
FW-01.2A-18E	1.031	0.884	0.797	0.797	No	220,317
FW-01.2A-19P	1.031	0.931	0.797	0.797	No	220,317
FW-01.2A-20E	1.031	0.884	0.797	0.797	No	220,317
FW-01.2A-21P	1.031	0.931	0.797	0.797	No	220,317
FW-01.2A-22E	1.031	0.884	0.797	0.797	No	220,317
FW-01.2A-23P	1.053	0.978	0.797	0.797	Yes	220,317

====>Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR

FW-01.2B-06P	1.057	0.977	0.797	0.797	No	220,317
FW-01.2B-07V	1.031	0.808	0.988	0.988	No	220,317
FW-01.2B-08V	1.031	0.753	0.988	0.988	No	220,317
FW-01.2B-09E	1.031	0.884	0.797	0.797	No	220,317
FW-01.2B-10P	1.031	0.904	0.797	0.797	No	220,317
FW-01.2B-11T	1.031	0.912	0.797	0.797	No	220,317
FW-01.2B-11T (D/S)	0.000	0.912	0.797	0.797	No	220,317
FW-01.2B-12P	1.031	0.951	0.797	0.797	No	220,317
FW-01.2B-13E	1.031	0.884	0.797	0.797	No	220,317
FW-01.2B-14P	1.031	0.931	0.797	0.797	No	220,317
FW-01.2B-15E	1.031	0.884	0.797	0.797	No	220,317
FW-01.2B-16P	1.031	0.931	0.797	0.797	No	220,317
FW-01.2B-17E	1.031	0.884	0.797	0.797	No	220,317
FW-01.2B-18P	1.031	0.931	0.797	0.797	No	220,317
FW-01.2B-19E	1.031	0.884	0.797	0.797	No	220,317
FW-01.2B-20P	1.031	0.931	0.797	0.797	No	220,317
FW-01.2B-21E	1.031	0.884	0.797	0.797	No	220,317
FW-01.2B-22P	1.031	0.931	0.797	0.797	No	220,317
FW-01.2B-23E	1.031	0.884	0.797	0.797	No	220,317
FW-01.2B-24P	1.031	0.931	0.797	0.797	No	220,317
FW-01.2B-25E	1.031	0.884	0.797	0.797	No	220,317

Component Name	Init.	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop			
====>Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR						
FW-01.2B-26P	1.031	0.931	0.797	0.797	No	220,317
FW-01.2B-27R	0.000	1.538	0.797	0.797	Yes	220,317
FW-01.2B-27R (D/S)	0.000	1.285	1.195	1.195	Yes	220,317
====>Grouped by Line: FW-01.3 BFP DISCHARGE HDR						
FW-01.3-01T (BR/SE)	1.042	0.949	0.797	0.797	Yes	220,317
FW-01.3-01T	1.375	1.279	1.195	1.195	No	220,317
FW-01.3-01T (D/S)	1.375	1.343	1.195	1.195	Yes	220,317
FW-01.3-02P	1.371	1.360	1.195	1.195	Yes	220,317
FW-01.3-03E	1.514	1.354	1.195	1.195	Yes	220,317
FW-01.3-04E	1.638	1.383	1.195	1.195	Yes	220,317
FW-01.3-05P	1.260	1.355	1.195	1.195	Yes	220,317
FW-01.3-06E	1.260	1.348	1.195	1.195	Yes	220,317
FW-01.3-07P	1.260	1.338	1.195	1.195	Yes	220,317
FW-01.3-08E	1.260	1.371	1.195	1.195	Yes	220,317
FW-01.3-09P	1.260	1.354	1.195	1.195	Yes	220,317
FW-01.3-10E	1.260	1.313	1.195	1.195	Yes	220,317
FW-01.3-11P	1.260	1.340	1.195	1.195	No	220,317
FW-01.3-12E	1.260	1.296	1.195	1.195	Yes	220,317
FW-01.3-13P	1.260	1.360	1.195	1.195	No	220,317
FW-01.3-14E	1.260	1.358	1.195	1.195	Yes	220,317
FW-01.3-15E	1.260	1.328	1.195	1.195	Yes	220,317
FW-01.3-16P	1.260	1.304	1.195	1.195	Yes	220,317
FW-01.3-17T	1.260	1.333	1.195	1.195	Yes	220,317
FW-01.3-17T (D/S)	1.260	1.327	1.195	1.195	Yes	220,317
FW-01.3-18P	1.348	1.339	1.195	1.195	Yes	220,317
FW-01.4-01T	1.351	1.334	1.195	1.195	No	220,317
FW-01.4-01T (D/S)	1.351	1.338	1.195	1.195	No	220,317
FW-01.4-01T (BR/SE)	1.019	0.834	0.717	0.717	Yes	220,317
====>Grouped by Line: FW-01.4 BFP DISCHARGE HDR						
FW-01.4-02P	1.341	1.286	1.195	1.195	No	220,317
FW-01.5-01T	1.385	1.331	1.195	1.195	No	220,317
FW-01.5-01T (D/S)	1.385	1.343	1.195	1.195	Yes	220,317
FW-01.5-01T (BR/SE)	1.015	0.838	0.717	0.717	Yes	220,317
====>Grouped by Line: FW-01.6A BFP HDR to FWH 36A						
FW-01.6A-01R	0.000	1.301	1.195	1.195	No	220,317
FW-01.6A-01R (D/S)	0.000	1.431	0.717	0.717	No	220,317

Component Name	Init.	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop			Time to Tcrit (hrs)	Inspected	
====>Grouped by Line: FW-01.6A BFP HDR to FWH 36A								
FW-01.6A-02P	1.009	0.874	0.717	0.717	0.717	658,034	Yes	220,317
FW-01.6A-03E	0.938	0.804	0.717	0.717	0.717	248,782	No	220,317
FW-01.6A-04P	0.938	0.847	0.717	0.717	0.717	552,826	No	220,317
FW-01.6A-05E	0.938	0.804	0.717	0.717	0.717	248,782	No	220,317
FW-01.6A-06P	0.938	0.847	0.717	0.717	0.717	552,826	No	220,317
FW-01.6A-07V	0.938	0.682	0.889	0.889	0.889	-199,149	No	220,317
FW-01.6A-08E	0.938	0.804	0.717	0.717	0.717	248,782	No	220,317
FW-01.6A-09P	0.938	0.822	0.717	0.717	0.717	347,755	No	220,317
FW-01.6A-10E	0.938	0.811	0.717	0.717	0.717	284,978	No	220,317
FW-01.6A-11P	0.938	0.847	0.717	0.717	0.717	552,826	No	220,317
FW-01.6A-12N	0.938	2.599	0.717	0.717	0.717	4,987,928	Yes	220,317
====>Grouped by Line: FW-01.6B BFP HDR to FWH 36B								
FW-01.6B-02P	0.930	0.876	0.717	0.717	0.717	843,757	Yes	220,317
FW-01.6B-03E	0.938	0.804	0.717	0.717	0.717	248,782	No	220,317
FW-01.6B-04P	0.938	0.847	0.717	0.717	0.717	552,826	No	220,317
FW-01.6B-05V	0.938	0.682	0.889	0.889	0.889	-199,149	No	220,317
FW-01.6B-06E	0.938	1.050	0.717	0.717	0.717	954,870	Yes	220,317
FW-01.6B-07P	0.938	0.827	0.717	0.717	0.717	365,241	Yes	220,317
FW-01.6B-08E	0.938	0.958	0.717	0.717	0.717	729,540	Yes	220,317
FW-01.6B-10N	0.938	2.709	0.717	0.717	0.717	5,279,954	Yes	220,317
====>Grouped by Line: FW-01.6C BFP HDR to FWH 36C								
FW-01.6C-02P	0.938	0.878	0.717	0.717	0.717	851,813	Yes	220,317
FW-01.6C-03E	0.938	0.804	0.717	0.717	0.717	248,782	No	220,317
FW-01.6C-04P	0.938	0.847	0.717	0.717	0.717	552,826	No	220,317
FW-01.6C-05V	0.938	0.682	0.889	0.889	0.889	-199,149	No	220,317
FW-01.6C-06E	0.938	0.804	0.717	0.717	0.717	248,782	No	220,317
FW-01.6C-08E	0.938	0.811	0.717	0.717	0.717	284,978	No	220,317
FW-01.6C-10N	0.938	2.772	0.717	0.717	0.717	5,446,529	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: FW: FW RECIRC
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 0.020

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: FW-04.1A BFP 31 RECIRC							
FW-04.1A-10P	0.864	0.864	0.306	0.306	86,738,936	No	4,406
FW-04.1A-01E	0.954	0.779	0.260	0.260	41,657,756	No	4,406
FW-04.1A-02P	0.864	0.864	0.306	0.306	54,208,532	No	4,406
FW-04.1A-03E	0.864	0.864	0.260	0.260	50,804,780	No	4,406
FW-04.1A-04P_1	0.864	0.864	0.306	0.306	69,389,392	No	4,406
FW-04.1A-04P_2	0.864	0.864	0.306	0.306	43,091,844	No	4,406
FW-04.1A-05E	0.864	0.864	0.260	0.260	50,804,780	No	4,406
FW-04.1A-06P_1	0.864	0.864	0.306	0.306	69,389,392	No	4,406
FW-04.1A-06P_2	0.864	0.864	0.306	0.306	43,091,844	No	4,406
FW-04.1A-07E	0.864	0.864	0.260	0.260	50,804,780	No	4,406
FW-04.1A-08E	0.864	0.864	0.260	0.260	50,804,780	No	4,406
FW-04.1A-09P	0.896	0.896	0.306	0.306	56,378,176	No	4,406
FW-04.2A-01R	0.000	0.864	0.260	0.260	75,195,304	No	4,406
FW-04.2A-01R (D/S)	0.000	0.674	0.176	0.176	49,400,748	No	4,406
FW-04.2A-02P	0.709	0.709	0.208	0.208	43,508,052	No	4,406
FW-04.2A-03B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2A-04E	0.674	0.674	0.176	0.176	25,401,824	No	4,406
FW-04.2A-05P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2A-06E	0.674	0.674	0.176	0.176	26,941,862	No	4,406
FW-04.2A-07P_1	0.674	0.674	0.208	0.208	37,842,628	No	4,406
FW-04.2A-07P_2	0.674	0.674	0.208	0.208	15,858,906	No	4,406
FW-04.2A-08B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2A-09P_1	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2A-09P_2	0.674	0.674	0.208	0.208	15,858,906	No	4,406
FW-04.2A-10B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2A-11P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2A-12B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2A-13P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2A-14B	0.674	0.674	0.208	0.208	22,497,454	No	4,406

Sorted By: Flow Order

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
===>Grouped by Line: FW-04.1A BFP 31 RECIRC							
FW-04.2A-15P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2A-16B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2A-17P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2A-18B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2A-19P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2A-20B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2A-21P	0.700	0.700	0.208	0.208	34,430,652	No	4,406
FW-04.2A-22B	0.782	0.610	0.208	0.208	17,753,050	No	4,406
FW-04.2A-23P	0.724	0.724	0.208	0.208	35,408,516	No	4,406
FW-04.2A-24R	0.000	0.674	0.176	0.176	31,754,480	No	4,406
FW-04.2A-24R (D/S)	0.000	0.864	0.260	0.260	62,661,288	No	4,406
FW-05.1A-01V	0.864	0.864	0.327	0.327	16,342,465	No	4,406
FW-05.1A-02P	0.886	0.811	0.306	0.306	70,561,488	No	4,406
FW-05.1A-03V	0.864	0.864	0.327	0.327	16,342,465	No	4,406
FW-05.1A-04R	0.000	0.864	0.306	0.306	61,953,872	No	4,406
FW-05.1A-04R (D/S)	0.000	0.875	0.399	0.399	75,668,616	No	4,406
FW-05.2A-01N	0.875	0.875	0.399	0.399	56,749,260	No	4,406
===>Grouped by Line: FW-04.1B BFP 32 RECIRC							
FW-04.1B-10P	0.864	0.864	0.306	0.306	86,738,936	No	4,406
FW-04.1B-01E	0.979	0.753	0.260	0.260	39,042,476	No	4,406
FW-04.1B-02P	0.912	0.912	0.306	0.306	57,425,944	No	4,406
FW-04.1B-03E	1.083	0.800	0.260	0.260	40,379,424	No	4,406
FW-04.1B-04P_1	0.864	0.864	0.306	0.306	54,208,532	No	4,406
FW-04.1B-04P_2	0.864	0.864	0.306	0.306	43,091,844	No	4,406
FW-04.1B-05E	0.864	0.864	0.260	0.260	50,804,780	No	4,406
FW-04.1B-06P_1	0.864	0.864	0.306	0.306	69,389,392	No	4,406
FW-04.1B-06P_2	0.864	0.864	0.306	0.306	43,091,844	No	4,406
FW-04.1B-07E	0.864	0.864	0.260	0.260	50,804,780	No	4,406
FW-04.1B-08E	0.864	0.864	0.260	0.260	50,804,780	No	4,406
FW-04.1B-09P	0.864	0.864	0.306	0.306	54,208,532	No	4,406
FW-04.2B-01R	0.000	0.864	0.260	0.260	75,195,304	No	4,406
FW-04.2B-01R (D/S)	0.000	0.674	0.176	0.176	49,400,748	No	4,406
FW-04.2B-02P	0.674	0.674	0.208	0.208	41,627,772	No	4,406
FW-04.2B-03B	0.674	0.674	0.208	0.208	22,497,454	No	4,406
FW-04.2B-04P	0.674	0.674	0.208	0.208	33,300,458	No	4,406
FW-04.2B-05E	0.674	0.674	0.176	0.176	26,941,862	No	4,406
FW-04.2B-06P	0.674	0.674	0.208	0.208	37,842,628	No	4,406
FW-04.2B-07E	0.674	0.674	0.176	0.176	26,941,862	No	4,406

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
===>Grouped by Line: FW-04.1B BFP 32 RECIRC						
FW-04.2B-08P_1	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-08P_2	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-09B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-10P_1	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-10P_2	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-11B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-12P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-13B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-14P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-15B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-16P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-17B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-18P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-19B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-20P	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-21B	0.674	0.674	0.208	0.208	No	4,406
FW-04.2B-22P	0.716	0.716	0.208	0.208	No	4,406
FW-04.2B-23R	0.000	0.778	0.176	0.176	No	4,406
FW-04.2B-23R (D/S)	0.962	0.839	0.260	0.260	No	4,406
FW-05.1B-01V	0.864	0.864	0.327	0.327	No	4,406
FW-05.1B-02P	0.864	0.864	0.306	0.306	No	4,406
FW-05.1B-03V	0.864	0.864	0.327	0.327	No	4,406
FW-05.1B-04R	0.000	0.864	0.306	0.306	No	4,406
FW-05.1B-04R (D/S)	0.000	0.875	0.399	0.399	No	4,406
FW-05.2B-01N	0.875	0.875	0.399	0.399	No	4,406

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Pass 2 Analysis Include Measured Wear

Run Name: FW: SG HEADERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.162

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrp Tcrit			
====>Grouped by Line: FW-02.3 SG INLET HEADER						
FW-02.1B-11T	1.398	1.347	1.195 1.195	Yes	566,684	220,317
FW-02.1B-11T (BR/SE)	0.974	0.875	0.717 0.717	Yes	346,967	220,317
FW-02.1B-11T (D/S)	1.398	1.322	1.195 1.195	No	305,103	220,317
FW-02.3-01P	1.380	1.348	1.195 1.195	No	752,638	220,317
====>Grouped by Line: FW-02.4 SG INLET HEADER						
FW-02.1C-11T (BR/SE)	0.975	0.880	0.717 0.717	No	358,423	220,317
FW-02.1C-11T	1.375	1.335	1.195 1.195	No	336,287	220,317
FW-02.1C-11T (D/S)	1.375	1.275	1.195 1.195	No	153,329	220,317
FW-02.4-02T	1.260	1.320	1.195 1.195	Yes	331,240	220,317
FW-02.4-02T (D/S)	0.000	1.332	1.195 1.195	Yes	363,041	220,317
FW-02.4-03P	1.260	1.167	1.195 1.195	No	-111,911	220,317
FW-02.4-04E	1.260	1.409	1.195 1.195	Yes	459,542	220,317
FW-02.4-05E	1.260	1.350	1.195 1.195	Yes	332,816	220,317
FW-02.4-06P	1.260	1.385	1.195 1.195	Yes	472,026	220,317
FW-02.4-07E	1.260	1.399	1.195 1.195	Yes	438,102	220,317
FW-02.4-08P	1.260	1.321	1.195 1.195	No	402,395	220,317
FW-02.4-09E	1.260	1.331	1.195 1.195	Yes	292,975	220,317
FW-02.4-10P	1.260	1.334	1.195 1.195	Yes	443,431	220,317
FW-02.4-11E	1.260	1.333	1.195 1.195	Yes	296,753	220,317
FW-02.4-12P_1	1.260	1.144	1.195 1.195	No	-143,953	220,317
FW-02.4-12P_2	1.260	1.194	1.195 1.195	No	-4,758	220,317
FW-02.4-13E	1.260	1.089	1.195 1.195	No	-173,468	220,317
FW-02.4-14P	1.260	1.144	1.195 1.195	No	-143,953	220,317
FW-02.4-15E	1.260	1.291	1.195 1.195	Yes	205,866	220,317
FW-02.4-16P	1.260	1.325	1.195 1.195	No	415,111	220,317
FW-02.4-17E	1.260	1.273	1.195 1.195	Yes	167,415	220,317
FW-02.4-18P	1.365	1.340	1.195 1.195	Yes	457,076	220,317
FW-02.4-19T	1.368	1.342	1.195 1.195	No	210,107	220,317

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			Inspected	Time to Tcrit (hrs)	
===>Grouped by Line: FW-02.4 SG INLET HEADER							
FW-02.4-19T (BR/SE)	0.974	0.857	0.717	0.717	Yes	351,060	220,317
FW-02.4-19T (D/S)	1.368	1.340	1.195	1.195	No	243,097	220,317
===>Grouped by Line: FW-02.5 SG INLET HEADER							
FW-02.5-01T (D/S)	1.372	1.330	1.195	1.195	No	416,531	220,317
FW-02.5-02P	1.260	1.181	1.195	1.195	No	-62,848	220,317
FW-02.5-03T	1.260	1.329	1.195	1.195	No	418,682	220,317
FW-02.5-03T (D/S)	0.000	1.142	1.195	1.195	No	-145,915	220,317
FW-02.5-06P	1.365	1.285	1.195	1.195	No	417,769	220,317
FW-02.5-04T	1.368	1.311	1.195	1.195	No	194,801	220,317
FW-02.5-04T (D/S)	1.368	1.327	1.195	1.195	No	278,457	220,317
FW-02.5-04T (BR/SE)	1.002	0.902	0.717	0.717	Yes	462,361	220,317
FW-02.5-01T	1.372	1.323	1.195	1.195	No	394,967	220,317
===>Grouped by Line: FW-02.6 SG INLET HEADER							
FW-02.6-01P	1.361	1.297	1.195	1.195	No	594,944	220,317
FW-02.6-03T	1.361	1.346	1.195	1.195	No	318,722	220,317
FW-02.6-03T (BR/SE)	1.006	0.846	0.717	0.717	Yes	323,030	220,317
FW-02.6-03T (D/S)	1.361	1.334	1.195	1.195	Yes	496,539	220,317
===>Grouped by Line: FW-02.8A SG HDR to SG 31							
FW-02.8A-01P	0.968	0.884	0.717	0.717	Yes	733,820	220,317
FW-02.8A-02E	0.938	0.921	0.717	0.717	Yes	485,718	220,317
FW-02.8A-03T	0.938	0.834	0.717	0.717	Yes	345,191	220,317
FW-02.8A-03T (D/S)	0.000	0.867	0.717	0.717	Yes	442,251	220,317
FW-02.8A-04V	0.938	0.643	0.889	0.889	No	-203,071	220,317
FW-02.8A-25R	0.000	0.925	0.832	0.832	No	233,381	33,725
FW-02.8A-25R (D/S)	0.000	0.824	0.589	0.589	No	403,345	33,725
FW-02.8A-05V	1.312	0.937	0.630	0.630	No	302,061	220,317
FW-02.8A-26R	0.000	0.642	0.589	0.589	Yes	103,383	220,317
FW-02.8A-26R (D/S)	0.000	1.334	0.832	0.832	Yes	1,476,469	220,317
FW-02.8A-06E	0.938	0.877	0.717	0.717	Yes	380,788	220,317
FW-02.8A-07P	0.938	0.872	0.717	0.717	Yes	428,643	220,317
FW-02.8A-08T	0.938	0.813	0.717	0.717	No	281,604	220,317
FW-02.8A-08T (D/S)	0.000	0.813	0.717	0.717	No	281,604	220,317
FW-02.8A-09P	0.938	0.854	0.717	0.717	No	606,647	220,317
FW-02.8A-10E	0.938	0.783	0.717	0.717	No	158,614	220,317
FW-02.8A-11P_1	0.938	0.804	0.717	0.717	No	240,973	220,317
FW-02.8A-11P_2	0.938	0.884	0.717	0.717	No	1,125,436	220,317

Component Name	Init.	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop			Time to Tcrit (hrs)	Inspected	
===>Grouped by Line: FW-02.8A SG HDR to SG 31								
FW-02.8A-12F	0.938	0.699	0.717	0.717	0.717	-27,194	No	220,317
FW-02.8A-13P	0.938	0.901	0.717	0.717	0.717	1,417,945	Yes	220,317
FW-02.8A-14E	0.938	0.800	0.717	0.717	0.717	222,505	No	220,317
FW-02.8A-15P	0.938	0.846	0.717	0.717	0.717	517,999	No	220,317
FW-02.8A-16E	0.938	0.783	0.717	0.717	0.717	158,614	No	220,317
FW-02.8A-17P	0.938	0.834	0.717	0.717	0.717	411,621	No	220,317
FW-02.8A-18V	0.938	0.664	0.717	0.717	0.717	-68,937	No	220,317
FW-02.8A-19V	0.938	0.627	0.717	0.717	0.717	-108,237	No	220,317
FW-02.8A-20P	0.750	0.613	0.544	0.544	0.544	185,058	No	220,317
FW-02.8A-21T	0.750	0.628	0.544	0.544	0.544	253,730	No	220,317
FW-02.8A-21T (D/S)	0.000	0.628	0.544	0.544	0.544	253,730	No	220,317
FW-02.8A-22E	0.750	0.600	0.544	0.544	0.544	136,014	No	220,317
FW-02.8A-23E	0.750	0.600	0.544	0.544	0.544	136,014	No	220,317
FW-02.8A-24P	0.750	0.620	0.544	0.544	0.544	214,841	No	220,317
FW-03.1A-01P	0.750	0.649	0.544	0.544	0.544	378,172	No	220,317
FW-03.1A-02E	0.750	0.600	0.544	0.544	0.544	136,014	No	220,317
FW-03.1A-03P	0.750	0.649	0.544	0.544	0.544	378,172	No	220,317
FW-03.1A-04B	0.750	0.616	0.544	0.544	0.544	197,165	No	220,317
FW-03.1A-05B	0.750	0.608	0.544	0.544	0.544	164,842	No	220,317
FW-03.1A-06P_1	0.750	0.649	0.544	0.544	0.544	378,172	No	220,317
FW-03.1A-06P_2	0.750	0.698	0.544	0.544	0.544	1,081,515	No	220,317
FW-03.1A-07B	0.750	0.616	0.544	0.544	0.544	197,165	No	220,317
FW-03.1A-08B	0.750	0.966	0.544	0.544	0.544	1,035,406	Yes	220,317
FW-03.1A-09N	0.750	0.745	0.478	0.478	0.478	41,441,756	No	220,317

Sorted By:Flow Order

Sorted By:Flow Order

===>Grouped by Line: FW-02.8B SG HDR to SG 32								
FW-02.8B-01P	0.938	0.900	0.717	0.717	0.717	807,609	Yes	220,317
FW-02.8B-02E	0.938	0.783	0.717	0.717	0.717	158,614	No	220,317
FW-02.8B-03P	0.938	0.834	0.717	0.717	0.717	411,621	No	220,317
FW-02.8B-04T	0.938	0.813	0.717	0.717	0.717	281,604	No	220,317
FW-02.8B-04T (D/S)	0.000	0.813	0.717	0.717	0.717	281,604	No	220,317
FW-02.8B-05V	0.938	0.643	0.889	0.889	0.889	-203,071	No	220,317
FW-02.8B-25R	0.000	1.888	0.832	0.832	0.832	2,662,217	No	220,317
FW-02.8B-25R (D/S)	1.312	0.864	0.589	0.589	0.589	421,156	No	220,317
FW-02.8B-06V	1.312	0.937	0.630	0.630	0.630	302,061	No	220,317
FW-02.8B-26R	0.000	0.827	0.589	0.589	0.589	465,784	No	33,725
FW-02.8B-26R (D/S)	0.000	0.927	0.832	0.832	0.832	277,898	No	33,725
FW-02.8B-07E	0.938	0.814	0.717	0.717	0.717	231,049	Yes	220,317
FW-02.8B-08P	0.938	0.837	0.717	0.717	0.717	331,867	Yes	220,317

Component Name	Init.	Thickness (in)		Inspected	Comp. Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop			
====>Grouped by Line: FW-02.8B SG HDR to SG 32						
FW-02.8B-09T	0.938	0.855	0.717	0.717	406,956	220,317
FW-02.8B-09T (D/S)	0.000	0.868	0.717	0.717	445,192	220,317
FW-02.8B-10P	0.938	0.854	0.717	0.717	606,647	220,317
FW-02.8B-11E	0.938	0.783	0.717	0.717	158,614	220,317
FW-02.8B-12P_1	0.998	0.863	0.717	0.717	399,168	220,317
FW-02.8B-12P_2	0.938	0.884	0.717	0.717	1,125,436	220,317
FW-02.8B-13F	0.938	0.775	0.717	0.717	89,122	220,317
FW-02.8B-14P	0.990	0.859	0.717	0.717	1,099,136	220,317
FW-02.8B-15E	0.938	0.800	0.717	0.717	222,505	220,317
FW-02.8B-16P	0.938	0.846	0.717	0.717	517,999	220,317
FW-02.8B-17E	0.938	0.783	0.717	0.717	158,614	220,317
FW-02.8B-18P	0.938	0.834	0.717	0.717	411,621	220,317
FW-02.8B-19V	0.938	0.664	0.717	0.717	-68,937	220,317
FW-02.8B-20V	0.938	0.627	0.717	0.717	-108,237	220,317
FW-02.8B-21P	0.750	0.613	0.544	0.544	185,058	220,317
FW-02.8B-22T	0.000	0.701	0.544	0.544	474,789	220,317
FW-02.8B-22T (D/S)	0.000	0.654	0.544	0.544	332,485	220,317
FW-02.8B-23E	0.924	0.679	0.544	0.544	321,195	220,317
FW-02.8B-24P	0.750	0.620	0.544	0.544	214,841	220,317
FW-03.1B-01P	0.750	0.649	0.544	0.544	378,172	220,317
FW-03.1B-02E	0.750	0.600	0.544	0.544	136,014	220,317
FW-03.1B-03P	0.750	0.649	0.544	0.544	378,172	220,317
FW-03.1B-04B	0.750	0.616	0.544	0.544	197,165	220,317
FW-03.1B-05B	0.750	0.608	0.544	0.544	164,842	220,317
FW-03.1B-06P	0.750	0.649	0.544	0.544	378,172	220,317
FW-03.1B-07B	0.750	0.616	0.544	0.544	197,165	220,317
FW-03.1B-08E	0.750	0.644	0.544	0.544	243,973	220,317
FW-03.1B-09P	0.750	0.857	0.544	0.544	1,135,411	220,317
FW-03.1B-10E	0.750	0.616	0.544	0.544	197,165	220,317
FW-03.1B-11E	0.750	0.608	0.544	0.544	164,842	220,317
FW-03.1B-12N	0.750	0.748	0.478	0.478	41,824,940	220,317
====>Grouped by Line: FW-02.8C SG HDR to SG 34						
FW-02.8C-01P	0.946	0.862	0.717	0.717	640,680	220,317
FW-02.8C-02E	0.938	0.783	0.717	0.717	158,614	220,317
FW-02.8C-03P	0.938	0.834	0.717	0.717	411,621	220,317
FW-02.8C-04T	0.938	0.813	0.717	0.717	281,604	220,317
FW-02.8C-04T (D/S)	0.000	0.813	0.717	0.717	281,604	220,317
FW-02.8C-05V	0.938	1.192	0.889	0.889	378,679	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: FW-02.8C SG HDR to SG 34							
FW-02.8C-24R	0.000	1.579	0.832	0.832	1,883,149	No	220,317
FW-02.8C-24R (D/S)	0.000	0.820	0.589	0.589	395,454	Yes	220,317
FW-02.8C-06V	1.312	1.715	0.630	0.630	1,066,691	No	220,317
FW-02.8C-25R	0.000	0.677	0.589	0.589	172,042	No	220,317
FW-02.8C-25R (D/S)	0.000	1.691	0.832	0.832	2,526,481	No	220,317
FW-02.8C-07E	0.938	0.921	0.717	0.717	486,071	Yes	220,317
FW-02.8C-08P	0.938	0.862	0.717	0.717	400,901	Yes	220,317
FW-02.8C-09T	0.938	0.813	0.717	0.717	281,604	No	220,317
FW-02.8C-09T (D/S)	0.000	0.813	0.717	0.717	281,604	No	220,317
FW-02.8C-10P	0.938	0.854	0.717	0.717	606,647	No	220,317
FW-02.8C-11E	0.938	0.783	0.717	0.717	158,614	No	220,317
FW-02.8C-12P_1	0.938	0.804	0.717	0.717	240,973	No	220,317
FW-02.8C-12P_2	0.938	0.884	0.717	0.717	1,125,436	No	220,317
FW-02.8C-13F	0.938	0.699	0.717	0.717	-27,194	No	220,317
FW-02.8C-14P	0.938	0.899	0.717	0.717	1,402,504	Yes	220,317
FW-02.8C-15E	0.938	0.800	0.717	0.717	222,505	No	220,317
FW-02.8C-16E	0.938	0.783	0.717	0.717	158,614	No	220,317
FW-02.8C-17P	0.938	0.834	0.717	0.717	411,621	No	220,317
FW-02.8C-18V	0.938	0.664	0.717	0.717	-68,937	No	220,317
FW-02.8C-19V	0.938	0.627	0.717	0.717	-108,237	No	220,317
FW-02.8C-20P	0.750	0.710	0.544	0.544	447,134	No	220,317
FW-02.8C-21T	0.750	0.628	0.544	0.544	253,730	No	220,317
FW-02.8C-21T (D/S)	0.000	0.628	0.544	0.544	253,730	No	220,317
FW-02.8C-22E	0.750	0.600	0.544	0.544	136,014	No	220,317
FW-02.8C-23P	0.750	0.620	0.544	0.544	214,841	No	220,317
FW-03.1C-01P	0.750	0.649	0.544	0.544	378,172	No	220,317
FW-03.1C-02E	0.750	0.600	0.544	0.544	136,014	No	220,317
FW-03.1C-03P	0.750	0.649	0.544	0.544	378,172	No	220,317
FW-03.1C-04B	0.750	0.616	0.544	0.544	197,165	No	220,317
FW-03.1C-16P_1	0.750	0.661	0.544	0.544	479,989	No	220,317
FW-03.1C-16P_2	0.750	0.698	0.544	0.544	1,081,515	No	220,317
FW-03.1C-05B	0.750	0.600	0.544	0.544	136,014	No	220,317
FW-03.1C-06P_1	0.750	0.649	0.544	0.544	378,172	No	220,317
FW-03.1C-06P_2	0.750	0.698	0.544	0.544	1,081,515	No	220,317
FW-03.1C-07B	0.750	0.616	0.544	0.544	197,165	No	220,317
FW-03.1C-09P	0.750	0.661	0.544	0.544	479,989	No	220,317
FW-03.1C-10E	0.750	0.753	0.544	0.544	511,024	Yes	220,317
FW-03.1C-11P	0.750	0.677	0.544	0.544	376,963	Yes	220,317
FW-03.1C-12E	0.750	0.766	0.544	0.544	608,993	Yes	220,317

Sorted By:Flow Order

Component Name	Init.	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop			Time to Tcrit (hrs)	Inspected	
===>Grouped by Line: FW-02.8C SG HDR to SG 34								
FW-03.1C-13P	0.750	0.627	0.544	0.544	0.544	338,748	Yes	220,317
FW-03.1C-14E	0.750	0.726	0.544	0.544	0.544	498,583	No	220,317
FW-03.1C-15N	0.750	0.703	0.478	0.478	0.478	34,976,612	No	220,317
===>Grouped by Line: FW-02.8D SG HDR to SG 33								
FW-02.6-02T (D/S)	0.000	1.205	1.195	1.195	1.195	69,783	No	220,317
FW-02.7-01P	1.372	1.335	1.195	1.195	1.195	1,378,012	No	220,317
FW-02.7-02T	1.260	1.205	1.195	1.195	1.195	69,783	No	220,317
FW-02.7-02T (D/S)	0.000	1.205	1.195	1.195	1.195	69,783	No	220,317
FW-02.7-03P	1.372	1.335	1.195	1.195	1.195	1,378,012	No	220,317
FW-02.7-04T	1.395	1.352	1.195	1.195	1.195	560,200	No	220,317
FW-02.7-04T (BR/SE)	1.013	0.867	0.717	0.717	0.717	373,724	Yes	220,317
FW-02.8D-01P	0.964	0.880	0.717	0.717	0.717	716,935	Yes	220,317
FW-02.8D-02E	0.938	0.783	0.717	0.717	0.717	158,614	No	220,317
FW-02.8D-03P	0.938	0.834	0.717	0.717	0.717	411,621	No	220,317
FW-02.8D-04T	0.938	0.813	0.717	0.717	0.717	281,604	No	220,317
FW-02.8D-04T (D/S)	0.000	0.813	0.717	0.717	0.717	281,604	No	220,317
FW-02.8D-05V	0.938	0.643	0.889	0.889	0.889	-203,071	No	220,317
FW-02.8D-24R	0.000	1.509	0.832	0.832	0.832	1,706,744	No	220,317
FW-02.8D-24R (D/S)	1.312	0.837	0.589	0.589	0.589	379,689	No	220,317
FW-02.8D-06V	1.312	0.937	0.630	0.630	0.630	302,061	No	220,317
FW-02.8D-25R	1.312	0.693	0.589	0.589	0.589	181,519	Yes	220,317
FW-02.8D-25R (D/S)	0.000	0.854	0.832	0.832	0.832	63,190	Yes	220,317
FW-02.8D-07E	0.938	0.891	0.717	0.717	0.717	414,187	Yes	220,317
FW-02.8D-08P	0.938	0.870	0.717	0.717	0.717	420,979	Yes	220,317
FW-02.8D-09T	0.938	0.813	0.717	0.717	0.717	281,604	No	220,317
FW-02.8D-09T (D/S)	0.000	0.813	0.717	0.717	0.717	281,604	No	220,317
FW-02.8D-10P	0.938	0.854	0.717	0.717	0.717	606,647	No	220,317
FW-02.8D-11E	0.938	0.783	0.717	0.717	0.717	158,614	No	220,317
FW-02.8D-12P_1	0.938	0.804	0.717	0.717	0.717	240,973	No	220,317
FW-02.8D-12P_2	0.938	0.884	0.717	0.717	0.717	1,125,436	No	220,317
FW-02.8D-13F	0.938	0.699	0.717	0.717	0.717	-27,194	No	220,317
FW-02.8D-14P	0.938	0.901	0.717	0.717	0.717	1,417,945	Yes	220,317
FW-02.8D-15E	0.938	0.783	0.717	0.717	0.717	158,614	No	220,317
FW-02.8D-16P	0.938	0.834	0.717	0.717	0.717	411,621	No	220,317
FW-02.8D-17V	0.938	0.664	0.717	0.717	0.717	-68,937	No	220,317
FW-02.8D-18V	0.938	0.627	0.717	0.717	0.717	-108,237	No	220,317
FW-02.8D-19P	0.750	0.699	0.544	0.544	0.544	417,504	Yes	220,317
FW-02.8D-20T	0.750	0.628	0.544	0.544	0.544	253,730	No	220,317

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: FW-02.8D SG HDR to SG 33						
FW-02.8D-20T (D/S)	0.000	0.628	0.544	0.544	No	253,730
FW-02.8D-21E	0.750	0.600	0.544	0.544	No	136,014
FW-02.8D-22E	0.750	0.600	0.544	0.544	No	136,014
FW-02.8D-23P	0.750	0.620	0.544	0.544	No	214,841
FW-03.1D-01P	0.750	0.649	0.544	0.544	No	378,172
FW-03.1D-02E	0.750	0.600	0.544	0.544	No	136,014
FW-03.1D-03P	0.750	0.649	0.544	0.544	No	378,172
FW-03.1D-04B	0.750	0.616	0.544	0.544	No	197,165
FW-03.1D-05B	0.750	0.608	0.544	0.544	No	164,842
FW-03.1D-06P_1	0.750	0.649	0.544	0.544	No	378,172
FW-03.1D-06P_2	0.750	0.698	0.544	0.544	No	1,081,515
FW-03.1D-07B	0.750	0.616	0.544	0.544	No	197,165
FW-03.1D-08B	0.750	0.709	0.544	0.544	No	426,934
FW-03.1D-09P	0.750	0.649	0.544	0.544	Yes	378,172
FW-03.1D-10N	0.750	0.748	0.478	0.478	No	41,824,940
FW-02.6-02T	1.260	1.205	1.195	1.195	No	69,783

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: HD: HD PMP TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.733

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrp Tcrit			
====>Grouped by Line: HD-11.1A HD PMP 31 to HDR						
HD-11.1A-01N	0.500	0.473	0.304 0.304	479,424	No	220,317
HD-11.1A-02V	0.500	0.380	0.326 0.326	155,379	No	220,317
HD-11.2A-01R	0.000	0.512	0.304 0.304	842,135	Yes	220,317
HD-11.2A-01R (D/S)	0.000	0.327	0.206 0.206	329,625	No	220,317
HD-12.1A-01V	0.500	0.238	0.220 0.220	29,679	No	220,317
HD-12.1A-02R	0.000	0.257	0.206 0.206	160,170	Yes	220,317
HD-12.1A-02R (D/S)	0.000	0.464	0.304 0.304	755,992	Yes	220,317
HD-12.2A-01V	0.500	0.380	0.326 0.326	155,379	No	220,317
HD-12.2A-02P	0.500	0.447	0.304 0.304	923,897	No	220,317
HD-12.2A-03E	0.500	0.452	0.304 0.304	569,007	Yes	220,317
HD-12.2A-04T	0.500	0.428	0.304 0.304	586,762	No	220,317
HD-12.2A-04T (D/S)	0.000	0.428	0.304 0.304	586,762	No	220,317
HD-12.2A-05P	0.664	0.614	0.304 0.304	2,126,449	No	220,317
HD-12.2A-06O	0.500	0.484	0.304 0.304	286,037	No	220,317
HD-12.2A-07P	0.569	0.447	0.304 0.304	1,131,366	Yes	220,317
Sorted By:Flow Order						

====>Grouped by Line: HD-11.1B HD PMP 32 to HDR

HD-11.1B-01N	0.500	0.380	0.304 0.304	215,913	No	220,317
HD-11.1B-02V	0.500	0.380	0.326 0.326	155,379	No	220,317
HD-11.2B-01R	0.000	0.505	0.304 0.304	813,706	Yes	220,317
HD-11.2B-01R (D/S)	0.000	0.314	0.206 0.206	294,128	Yes	220,317
HD-12.1B-01V	0.322	0.280	0.220 0.220	103,526	No	220,317
HD-12.1B-02R	0.000	0.318	0.206 0.206	349,905	No	220,317
HD-12.1B-02R (D/S)	0.000	0.467	0.304 0.304	768,420	Yes	220,317
HD-12.2B-01V	0.500	0.380	0.326 0.326	155,379	No	220,317
HD-12.2B-02P	0.539	0.469	0.304 0.304	1,057,919	Yes	220,317
HD-12.2B-03E	0.535	0.438	0.304 0.304	510,281	Yes	220,317
HD-12.2B-04T	0.500	0.562	0.304 0.304	1,220,324	No	220,317
HD-12.2B-04T (D/S)	0.000	0.532	0.304 0.304	1,078,181	No	220,317
Sorted By:Flow Order						

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: HD-11.1B HD PMP 32 to HDR							
HD-12.2B-05P	0.516	0.472	0.304	0.304	1,189,290	Yes	220,317
HD-12.2B-06O	0.500	0.286	0.304	0.304	-29,263	No	220,317
HD-12.2B-07P	0.527	0.451	0.304	0.304	1,164,343	Yes	220,317
HD-12.2B-08T (BR/SE)	0.000	0.444	0.304	0.304	496,589	Yes	220,317
HD-12.2B-08T (D/S)	0.000	0.634	0.382	0.382	950,288	Yes	220,317
HD-12.3-01P	0.654	0.628	0.382	0.382	1,545,838	Yes	220,317
====>Grouped by Line: HD-12.2A HD PMP HDR to CD SYS							
HD-12.2A-08T (BR/SE)	0.000	0.457	0.304	0.304	637,115	Yes	220,317
HD-12.2A-08T	0.700	0.617	0.382	0.382	1,069,916	Yes	220,317
HD-12.2A-08T (D/S)	0.000	0.524	0.382	0.382	441,603	No	220,317
HD-12.4-01E	0.789	0.610	0.382	0.382	769,716	Yes	220,317
HD-12.4-02P	0.656	0.553	0.382	0.382	681,817	No	220,317
HD-12.4-03E	0.656	0.537	0.382	0.382	533,937	No	220,317
HD-12.4-04P	0.656	0.575	0.382	0.382	988,224	No	220,317
HD-12.4-05E	0.656	0.549	0.382	0.382	648,656	No	220,317
HD-12.4-06P	0.656	0.585	0.382	0.382	1,179,231	No	220,317
HD-12.4-07E	0.656	0.537	0.382	0.382	533,937	No	220,317
HD-12.4-08P	0.656	0.575	0.382	0.382	988,224	No	220,317
HD-12.4-09E	0.656	0.537	0.382	0.382	533,937	No	220,317
HD-12.4-10P_1	0.656	0.575	0.382	0.382	988,224	No	220,317
HD-12.4-10P_2	0.656	0.611	0.382	0.382	2,059,043	No	220,317
HD-12.4-11E	0.656	0.537	0.382	0.382	533,937	No	220,317
HD-12.4-12P	0.656	0.575	0.382	0.382	988,224	No	220,317
HD-12.4-13E	0.656	0.537	0.382	0.382	533,937	No	220,317
HD-12.4-14P	0.656	0.575	0.382	0.382	988,224	No	220,317
HD-12.4-15T	0.656	0.559	0.382	0.382	754,771	No	220,317
HD-12.4-15T (D/S)	0.000	0.559	0.382	0.382	754,771	No	220,317
HD-12.4-16P	0.656	0.591	0.382	0.382	1,338,403	No	220,317
HD-12.4-17E	0.656	0.537	0.382	0.382	533,937	No	220,317
HD-12.4-18P	0.656	0.575	0.382	0.382	988,224	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: HD: HTR 31 TO COND
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.000

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Init.	Pred.[1]	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	-----	-----							
====>Grouped by Line: HD-13.1 FWH 31A to Cond 33									
HD-13.1-01N	0.000	0.219	0.025	0.025	0.000	0.219	2,220,907	No	220,317
HD-13.1-02P	0.000	0.233	0.025	0.025	0.000	0.233	4,417,253	No	220,317
HD-13.1-03E	0.000	0.227	0.021	0.021	0.000	0.227	3,183,163	No	220,317
HD-13.1-04P	0.000	0.230	0.025	0.025	0.000	0.230	3,671,211	No	220,317
HD-13.1-05E	0.000	0.227	0.021	0.021	0.000	0.227	3,183,163	No	220,317
HD-13.1-06P	0.000	0.234	0.025	0.025	0.000	0.234	4,799,226	No	220,317
HD-13.1-07T	0.000	0.231	0.021	0.021	0.000	0.231	4,009,297	No	220,317
HD-13.1-07T (D/S)	0.000	0.231	0.021	0.021	0.000	0.231	4,009,297	No	220,317
HD-13.1-08E	0.000	0.227	0.021	0.021	0.000	0.227	3,183,163	No	220,317
HD-13.1-09V	0.000	0.219	0.023	0.023	0.000	0.219	2,245,279	No	220,317
HD-13.1-10E	0.000	0.227	0.021	0.021	0.000	0.227	3,183,163	No	220,317
HD-13.1-11E	0.000	0.227	0.021	0.021	0.000	0.227	3,183,163	No	220,317
HD-13.1-12E	0.000	0.228	0.021	0.021	0.000	0.228	3,385,482	No	220,317
HD-13.1-13P	0.000	0.234	0.025	0.025	0.000	0.234	4,799,226	No	220,317
HD-13.1-14E	0.000	0.227	0.021	0.021	0.000	0.227	3,183,163	No	220,317
HD-13.1-15P	0.000	0.234	0.025	0.025	0.000	0.234	4,799,226	No	220,317
HD-13.1-16E	0.000	0.227	0.021	0.021	0.000	0.227	3,183,163	No	220,317
HD-13.1-17P	0.000	0.234	0.025	0.025	0.000	0.234	4,799,226	No	220,317
HD-13.1-18E	0.000	0.234	0.021	0.021	0.000	0.234	4,882,639	No	220,317
HD-13.1-18E (D/S)	0.000	2.393	0.014	0.014	0.000	2.393	7,986,195	No	220,317
HD-13.1-19V	0.000	0.188	0.015	0.015	0.000	0.188	989,301	No	220,317
HD-13.1-20R	0.000	2.403	0.014	0.014	0.000	2.403	8,880,289	No	220,317
HD-13.1-20R (D/S)	0.000	0.231	0.021	0.021	0.000	0.231	4,009,297	No	220,317
HD-13.1-21V	0.000	0.219	0.023	0.023	0.000	0.219	2,245,279	No	220,317
HD-13.1-22P	0.000	0.236	0.025	0.025	0.000	0.236	5,502,404	No	220,317
HD-13.1-23N	0.000	0.225	0.025	0.025	0.000	0.225	2,865,487	No	220,317
====>Grouped by Line: HD-13.2 FWH 31B to Cond 32									
HD-13.2-01N	0.000	0.219	0.025	0.025	0.000	0.219	2,240,979	No	220,317

Sorted By: Flow Order

Sorted By: Flow Order

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: HD-13.2 FWH 31B to Cond 32						
HD-13.2-02P	0.000	0.233	0.025	0.025	No	220,317
HD-13.2-03E	0.000	0.227	0.021	0.021	No	220,317
HD-13.2-04P	0.000	0.230	0.025	0.025	No	220,317
HD-13.2-05E	0.000	0.230	0.021	0.021	No	220,317
HD-13.2-06P	0.000	0.236	0.025	0.025	No	220,317
HD-13.2-07T	0.000	0.225	0.021	0.021	No	220,317
HD-13.2-07T (BR/SE)	0.000	0.229	0.021	0.021	No	220,317
HD-13.2-08V	0.000	0.219	0.023	0.023	No	220,317
HD-13.2-09E	0.000	0.227	0.021	0.021	No	220,317
HD-13.2-10E	0.000	0.227	0.021	0.021	No	220,317
HD-13.2-11P	0.000	0.230	0.025	0.025	No	220,317
HD-13.2-12E	0.000	0.227	0.021	0.021	No	220,317
HD-13.2-13P	0.000	0.234	0.025	0.025	No	220,317
HD-13.2-14E	0.000	0.227	0.021	0.021	No	220,317
HD-13.2-15P	0.000	0.234	0.025	0.025	No	220,317
HD-13.2-16E	0.000	0.234	0.021	0.021	No	220,317
HD-13.2-16E (D/S)	0.000	0.211	0.014	0.014	No	220,317
HD-13.2-17V	0.000	0.188	0.015	0.015	No	220,317
HD-13.2-18R	0.000	0.215	0.014	0.014	No	220,317
HD-13.2-18R (D/S)	0.000	0.231	0.021	0.021	No	220,317
HD-13.2-19V	0.000	0.219	0.023	0.023	No	220,317
HD-13.2-20P	0.000	0.236	0.025	0.025	No	220,317
HD-13.2-21N	0.000	0.225	0.025	0.025	No	220,317
====>Grouped by Line: HD-13.3 FWH 31C to Cond 31						
HD-13.3-01N	0.000	0.219	0.025	0.025	No	220,317
HD-13.3-02P	0.000	0.233	0.025	0.025	No	220,317
HD-13.3-03E	0.000	0.227	0.021	0.021	No	220,317
HD-13.3-04P	0.000	0.230	0.025	0.025	No	220,317
HD-13.3-05E	0.000	0.229	0.021	0.021	No	220,317
HD-13.3-06P	0.000	0.236	0.025	0.025	No	220,317
HD-13.3-07T	0.000	0.225	0.021	0.021	No	220,317
HD-13.3-07T (BR/SE)	0.000	0.229	0.021	0.021	No	220,317
HD-13.3-08V	0.000	0.219	0.023	0.023	No	220,317
HD-13.3-09E	0.000	0.227	0.021	0.021	No	220,317
HD-13.3-10E	0.000	0.227	0.021	0.021	No	220,317
HD-13.3-11P	0.000	0.230	0.025	0.025	No	220,317
HD-13.3-12E	0.000	0.227	0.021	0.021	No	220,317
HD-13.3-13P	0.000	0.234	0.025	0.025	No	220,317

Sorted By:Flow Order

Sorted By:Flow Order

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====>Grouped by Line: HD-13.3 FWH 31C to Cond 31					
HD-13.3-14E	0.000	0.227	0.021	No	220,317
HD-13.3-15P	0.000	0.234	0.025	No	220,317
HD-13.3-16E	0.000	0.234	0.021	No	220,317
HD-13.3-16E (D/S)	0.000	0.211	0.014	No	220,317
HD-13.3-17V	0.000	0.188	0.015	No	220,317
HD-13.3-18R	0.000	0.215	0.014	No	220,317
HD-13.3-18R (D/S)	0.000	0.231	0.021	No	220,317
HD-13.3-19V	0.000	0.219	0.023	No	220,317
HD-13.3-20P	0.000	0.236	0.025	No	220,317
HD-13.3-21N	0.000	0.225	0.025	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: HD: HTR 32 TO HTR 31
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.863

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			

====>Grouped by Line: HD-08.1A FWH 32A to FWH 31A

HD-8.1A-01N	0.375	0.217	0.021	0.021	1,132,961	No	220,317
HD-8.1A-02P	0.250	0.159	0.021	0.021	1,541,283	No	220,317
HD-8.1A-03E	0.250	0.137	0.021	0.021	945,215	No	220,317
HD-8.1A-04P	0.250	0.153	0.021	0.021	1,236,097	No	220,317
HD-8.1A-05E	0.250	0.137	0.021	0.021	945,215	No	220,317
HD-8.1A-06P	0.250	0.174	0.021	0.021	1,838,803	No	220,317
HD-8.1A-07T (BR/SE)	0.000	0.128	0.021	0.021	805,592	No	220,317
HD-8.1A-07T (D/S)	0.000	0.098	0.021	0.021	461,188	No	220,317
HD-8.1A-08P	0.250	0.156	0.021	0.021	1,351,794	No	220,317
HD-8.1A-09E	0.250	0.137	0.021	0.021	945,215	No	220,317
HD-8.1A-10V	0.250	0.098	0.023	0.023	452,074	No	220,317
HD-8.2A-01R	0.000	0.143	0.021	0.021	1,051,595	No	220,317
HD-8.2A-01R (D/S)	0.000	0.114	0.018	0.018	645,780	No	220,317
HD-09.1A-01V	0.250	0.037	0.019	0.019	75,928	No	220,317
HD-09.1A-02R	0.000	0.265	0.018	0.018	1,904,014	No	220,317
HD-09.1A-02R (D/S)	0.000	0.245	0.021	0.021	2,248,733	Yes	220,317
HD-09.2A-01V	0.250	0.098	0.023	0.023	452,074	No	220,317
HD-09.2A-02P	0.406	0.406	0.020	0.020	100,000,000	No	220,317
HD-09.2A-03E	0.406	0.406	0.020	0.020	100,000,000	No	220,317
HD-09.2A-04T	0.406	0.406	0.020	0.020	100,000,000	No	220,317
HD-09.2A-04T (BR/SE)	0.000	0.406	0.020	0.020	100,000,000	No	220,317
HD-09.2A-04T (D/S)	0.000	0.406	0.020	0.020	100,000,000	No	220,317

Sorted By:Flow Order

====>Grouped by Line: HD-08.1B FWH 32B to FWH 31B

HD-8.1B-01N	0.375	0.217	0.021	0.021	1,132,961	No	220,317
HD-8.1B-02P	0.250	0.159	0.021	0.021	1,541,283	No	220,317
HD-8.1B-03E	0.250	0.137	0.021	0.021	945,215	No	220,317
HD-8.1B-04P	0.250	0.153	0.021	0.021	1,236,097	No	220,317
HD-8.1B-05E	0.250	0.137	0.021	0.021	945,215	No	220,317

Sorted By:Flow Order

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			Inspected	Time to Tcrit (hrs)	
===>Grouped by Line: HD-08.1B FWH 32B to FWH 31B							
HD-8.1B-06P	0.250	0.174	0.021	0.021	No	1,838,803	220,317
HD-8.1B-07T (BR/SE)	0.000	0.128	0.021	0.021	No	805,592	220,317
HD-8.1B-07T (D/S)	0.000	0.098	0.021	0.021	No	461,188	220,317
HD-8.1B-08P	0.250	0.156	0.021	0.021	No	1,351,794	220,317
HD-8.1B-09E	0.250	0.137	0.021	0.021	No	945,215	220,317
HD-8.1B-10V	0.250	0.098	0.023	0.023	No	452,074	220,317
HD-8.2B-01R	0.000	0.143	0.021	0.021	No	1,051,595	220,317
HD-8.2B-01R (D/S)	0.000	0.114	0.018	0.018	No	645,780	220,317
HD-09.1B-01V	0.250	0.037	0.019	0.019	No	75,928	220,317
HD-09.1B-02R	0.000	0.220	0.018	0.018	Yes	1,556,678	220,317
HD-09.1B-02R (D/S)	0.000	0.314	0.021	0.021	Yes	2,941,219	220,317
HD-09.2B-01V	0.250	0.098	0.023	0.023	No	452,074	220,317
HD-09.2B-02P	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.2B-03E	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.2B-04T	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.2B-04T (BR/SE)	0.000	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.2B-04T (D/S)	0.000	0.406	0.020	0.020	No	100,000,000	220,317
===>Grouped by Line: HD-08.1C FWH 32C to FWH 31C							
HD-8.1C-01N	0.375	0.217	0.021	0.021	No	1,132,961	220,317
HD-8.1C-02P	0.250	0.159	0.021	0.021	No	1,541,283	220,317
HD-8.1C-03E	0.250	0.137	0.021	0.021	No	945,215	220,317
HD-8.1C-04P	0.250	0.153	0.021	0.021	No	1,236,097	220,317
HD-8.1C-05E	0.250	0.137	0.021	0.021	No	945,215	220,317
HD-8.1C-06P	0.250	0.174	0.021	0.021	No	1,838,803	220,317
HD-8.1C-07T (BR/SE)	0.000	0.128	0.021	0.021	No	805,592	220,317
HD-8.1C-07T (D/S)	0.000	0.098	0.021	0.021	No	461,188	220,317
HD-8.1C-08P	0.250	0.156	0.021	0.021	No	1,351,794	220,317
HD-8.1C-09E	0.250	0.137	0.021	0.021	No	945,215	220,317
HD-8.1C-10V	0.250	0.098	0.023	0.023	No	452,074	220,317
HD-8.2C-01R	0.000	0.143	0.021	0.021	No	1,051,595	220,317
HD-8.2C-01R (D/S)	0.000	0.114	0.018	0.018	No	645,780	220,317
HD-09.1C-01V	0.250	0.037	0.019	0.019	No	75,928	220,317
HD-09.1C-02R	0.000	0.229	0.018	0.018	No	1,626,600	220,317
HD-09.1C-02R (D/S)	0.000	0.260	0.021	0.021	No	2,392,768	220,317
HD-09.2C-01V	0.250	0.098	0.023	0.023	No	452,074	220,317
HD-09.2C-02P	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.2C-03E	0.406	0.406	0.020	0.020	No	100,000,000	220,317
HD-09.2C-04T	0.406	0.406	0.020	0.020	No	100,000,000	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: HD-08.1C FWH 32C to FWH 31C								
HD-09.2C-04T (BR/SE)	0.000	0.406	0.020	0.020	0.020	No	No	220,317
HD-09.2C-04T (D/S)	0.000	0.406	0.020	0.020	0.020	No	No	220,317
====>Grouped by Line: HD-09.3A FWH 32A to FWH 31A								
HD-09.3A-01P	0.409	0.409	0.020	0.020	0.020	No	No	220,317
HD-09.3A-02N	0.406	0.363	0.020	0.020	0.020	No	No	220,317
====>Grouped by Line: HD-09.3B FWH 32B to FWH 31B								
HD-09.3B-01P	0.406	0.406	0.020	0.020	0.020	No	No	220,317
HD-09.3B-02N	0.406	0.406	0.020	0.020	0.020	No	No	220,317
====>Grouped by Line: HD-09.3C FWH 32C to FWH 31C								
HD-09.3C-01P	0.406	0.406	0.020	0.020	0.020	No	No	220,317
HD-09.3C-02N	0.406	0.406	0.020	0.020	0.020	No	No	220,317
====>Grouped by Line: HD-09.4A FWH 32A to FWH 31A								
HD-09.4A-01P	0.406	0.406	0.020	0.020	0.020	No	No	220,317
HD-09.4A-02E	0.462	0.462	0.020	0.020	0.020	No	No	220,317
HD-09.4A-03P	0.406	0.406	0.020	0.020	0.020	No	No	220,317
HD-09.4A-04N	0.375	0.354	0.020	0.020	0.020	No	No	220,317
====>Grouped by Line: HD-09.4B FWH 32B to FWH 31B								
HD-09.4B-01P	0.406	0.406	0.020	0.020	0.020	No	No	220,317
HD-09.4B-02E	0.406	0.406	0.020	0.020	0.020	No	No	220,317
HD-09.4B-03P	0.406	0.406	0.020	0.020	0.020	No	No	220,317
HD-09.4B-04N	0.375	0.375	0.020	0.020	0.020	No	No	220,317
====>Grouped by Line: HD-09.4C FWH 32C to FWH 31C								
HD-09.4C-01P	0.406	0.406	0.020	0.020	0.020	No	No	220,317
HD-09.4C-02E	0.406	0.406	0.020	0.020	0.020	No	No	220,317
HD-09.4C-03P	0.406	0.406	0.020	0.020	0.020	No	No	220,317
HD-09.4C-04N	0.375	0.375	0.020	0.020	0.020	No	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: HD: HTR 33 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.045

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A							
HD-6.1A-01N	0.250	0.106	0.014	0.014	457,415	No	220,317
HD-6.1A-02P	0.250	0.162	0.014	0.014	1,370,246	No	220,317
HD-6.1A-03E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1A-04P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-05E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1A-06P_1	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-06P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
HD-6.1A-07E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1A-08P	0.250	0.169	0.014	0.014	1,545,026	No	220,317
HD-6.1A-09E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1A-10P	0.250	0.158	0.014	0.014	1,121,033	No	220,317
HD-6.1A-11E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1A-12P_1	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-12P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
HD-6.1A-13E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1A-43P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-14E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1A-15P	0.250	0.146	0.014	0.014	1,028,879	No	220,317
HD-6.1A-16E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1A-17P_1	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-17P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
HD-6.1A-18E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1A-19P	0.250	0.169	0.014	0.014	1,545,026	No	220,317
HD-6.1A-20E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1A-21P_1	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-21P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
HD-6.1A-22E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1A-23P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1A-24E	0.250	0.143	0.014	0.014	871,927	No	220,317

Sorted By: Flow Order

Component Name	Init.	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop			Time to Tcrit (hrs)	Inspected	
===>Grouped by Line: HD-06.1A FWH 33A to FWH 32A								
HD-6.1A-25P_1	0.250	0.178	0.014	0.014	0.014	1,637,180	No	220,317
HD-6.1A-25P_2	0.250	0.218	0.014	0.014	0.014	4,640,220	No	220,317
HD-6.1A-26E	0.250	0.143	0.014	0.014	0.014	871,927	No	220,317
HD-6.1A-27P	0.250	0.178	0.014	0.014	0.014	1,637,180	No	220,317
HD-6.1A-28T	0.250	0.163	0.014	0.014	0.014	1,243,925	No	220,317
HD-6.1A-28T (D/S)	0.000	0.163	0.014	0.014	0.014	1,243,925	No	220,317
HD-6.1A-29P	0.250	0.192	0.014	0.014	0.014	2,227,063	No	220,317
HD-6.1A-44T	0.250	0.163	0.014	0.014	0.014	1,243,925	No	220,317
HD-6.1A-44T (D/S)	0.000	0.163	0.014	0.014	0.014	1,243,925	No	220,317
HD-6.1A-30E	0.250	0.143	0.014	0.014	0.014	871,927	No	220,317
HD-6.1A-31P	0.250	0.174	0.014	0.014	0.014	1,602,413	No	220,317
HD-6.1A-32E	0.250	0.143	0.014	0.014	0.014	871,927	No	220,317
HD-6.1A-33P	0.250	0.178	0.014	0.014	0.014	1,637,180	No	220,317
HD-6.1A-34E	0.250	0.143	0.014	0.014	0.014	871,927	No	220,317
HD-6.1A-37E	0.250	0.149	0.014	0.014	0.014	963,029	No	220,317
HD-6.1A-38P	0.250	0.176	0.014	0.014	0.014	1,620,547	No	220,317
HD-6.1A-39E	0.250	0.155	0.014	0.014	0.014	1,065,173	No	220,317
HD-6.1A-40P	0.250	0.187	0.014	0.014	0.014	1,958,935	No	220,317
HD-6.1A-41E	0.250	0.256	0.014	0.014	0.014	1,637,958	Yes	220,317
HD-6.1A-42P	0.250	0.232	0.014	0.014	0.014	1,703,758	Yes	220,317
HD-6.2A-01E	0.000	0.423	0.014	0.014	0.014	4,087,039	Yes	220,317
HD-6.2A-01E (D/S)	0.000	0.330	0.011	0.011	0.011	1,532,806	Yes	220,317
HD-07.1A-01V	0.280	0.022	0.012	0.012	0.012	29,368	No	220,317
HD-07.1A 02R	0.000	0.338	0.011	0.011	0.011	1,738,043	Yes	220,317
HD-07.1A 02R (D/S)	0.000	0.257	0.014	0.014	0.014	2,023,262	Yes	220,317
HD-07.2A-01V	0.250	0.106	0.015	0.015	0.015	452,288	No	220,317
HD-07.2A-02P	0.250	0.208	0.014	0.014	0.014	2,198,171	Yes	220,317
HD-07.2A-03T	0.250	0.470	0.014	0.014	0.014	2,279,653	Yes	220,317
HD-07.2A-03T (BR/SE)	0.000	0.375	0.014	0.014	0.014	1,804,030	Yes	220,317
HD-07.2A-04P	0.250	0.190	0.014	0.014	0.014	2,203,380	No	220,317
HD-07.2A-05R	0.000	0.167	0.014	0.014	0.014	1,360,690	No	220,317
HD-07.2A-05R (D/S)	0.000	0.192	0.018	0.018	0.018	2,239,172	No	220,317
HD-07.3A-01N	0.365	0.287	0.018	0.018	0.018	2,491,262	No	220,317
===>Grouped by Line: HD-06.1B FWH 33B to FWH 32B								
HD-6.1B-01N	0.250	0.106	0.014	0.014	0.014	457,415	No	220,317
HD-6.1B-02P	0.250	0.162	0.014	0.014	0.014	1,370,246	No	220,317
HD-6.1B-03E	0.250	0.143	0.014	0.014	0.014	871,927	No	220,317
HD-6.1B-04E	0.250	0.143	0.014	0.014	0.014	871,927	No	220,317

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: HD-06.1B FWH 33B to FWH 32B							
HD-6.1B-05P_1	0.250	0.158	0.014	0.014	1,121,033	No	220,317
HD-6.1B-05P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
HD-6.1B-06E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-07P	0.250	0.169	0.014	0.014	1,545,026	No	220,317
HD-6.1B-08E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-09P	0.250	0.158	0.014	0.014	1,121,033	No	220,317
HD-6.1B-10E	0.250	0.149	0.014	0.014	963,029	No	220,317
HD-6.1B-11P_1	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1B-11P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
HD-6.1B-12E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-13E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-14P	0.250	0.146	0.014	0.014	1,028,879	No	220,317
HD-6.1B-15E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-16P_1	0.250	0.158	0.014	0.014	1,121,033	No	220,317
HD-6.1B-16P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
HD-6.1B-17E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-18P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1B-19E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-20P	0.250	0.169	0.014	0.014	1,545,026	No	220,317
HD-6.1B-21E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-22P_1	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1B-22P_2	0.250	0.218	0.014	0.014	4,640,220	No	220,317
HD-6.1B-23T	0.250	0.163	0.014	0.014	1,243,925	No	220,317
HD-6.1B-23T (D/S)	0.000	0.163	0.014	0.014	1,243,925	No	220,317
HD-6.1B-24P	0.250	0.192	0.014	0.014	2,227,063	No	220,317
HD-6.1B-38T	0.250	0.163	0.014	0.014	1,243,925	No	220,317
HD-6.1B-38T (D/S)	0.000	0.163	0.014	0.014	1,243,925	No	220,317
HD-6.1B-25E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-26P	0.250	0.174	0.014	0.014	1,602,413	No	220,317
HD-6.1B-27E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-28P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1B-29E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-32E	0.250	0.149	0.014	0.014	963,029	No	220,317
HD-6.1B-33P	0.250	0.176	0.014	0.014	1,620,547	No	220,317
HD-6.1B-34E	0.250	0.155	0.014	0.014	1,065,173	No	220,317
HD-6.1B-35P	0.250	0.187	0.014	0.014	1,958,935	No	220,317
HD-6.1B-36E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1B-37P	0.250	0.158	0.014	0.014	1,121,033	No	220,317
HD-6.2B-01E	0.000	0.178	0.014	0.014	1,637,180	No	220,317

Sorted By:Flow Order

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====>Grouped by Line: HD-06.1B FWH 33B to FWH 32B					
HD-6.2B-01E (D/S)	0.000	0.127	0.011	No	220,317
HD-07.1B-01V	0.280	0.033	0.012	No	220,317
HD-07.1B-02R	0.000	0.261	0.011	Yes	220,317
HD-07.1B-02R (D/S)	0.000	0.238	0.014	Yes	220,317
HD-07.2B-01V	0.250	0.106	0.015	No	220,317
HD-07.2B-02P	0.250	0.187	0.014	No	220,317
HD-07.2B-03T	0.250	0.445	0.014	Yes	220,317
HD-07.2B-03T (BR/SE)	0.000	0.354	0.014	Yes	220,317
HD-07.2B-04P	0.250	0.190	0.014	No	220,317
HD-07.2B-05R	0.000	0.167	0.014	No	220,317
HD-07.2B-05R (D/S)	0.000	0.192	0.018	No	220,317
HD-07.3B-01N	0.365	0.287	0.018	No	220,317

Sorted By:Flow Order

Sorted By:Flow Order

====>Grouped by Line: HD-06.1C FWH 33C to FWH 32C					
HD-6.1C-01N	0.250	0.106	0.014	No	220,317
HD-6.1C-02P	0.250	0.162	0.014	No	220,317
HD-6.1C-03E	0.250	0.143	0.014	No	220,317
HD-6.1C-04P	0.250	0.178	0.014	No	220,317
HD-6.1C-05E	0.250	0.143	0.014	No	220,317
HD-6.1C-06P	0.250	0.169	0.014	No	220,317
HD-6.1C-07E	0.250	0.143	0.014	No	220,317
HD-6.1C-08P_1	0.250	0.158	0.014	No	220,317
HD-6.1C-08P_2	0.250	0.218	0.014	No	220,317
HD-6.1C-09E	0.250	0.143	0.014	No	220,317
HD-6.1C-10P	0.250	0.178	0.014	No	220,317
HD-6.1C-11E	0.250	0.143	0.014	No	220,317
HD-6.1C-12P	0.250	0.169	0.014	No	220,317
HD-6.1C-13E	0.250	0.143	0.014	No	220,317
HD-6.1C-14P	0.250	0.178	0.014	No	220,317
HD-6.1C-15E	0.250	0.143	0.014	No	220,317
HD-6.1C-16P	0.250	0.178	0.014	No	220,317
HD-6.1C-17E	0.250	0.143	0.014	No	220,317
HD-6.1C-18P	0.250	0.178	0.014	No	220,317
HD-6.1C-19T	0.250	0.163	0.014	No	220,317
HD-6.1C-19T (D/S)	0.000	0.163	0.014	No	220,317
HD-6.1C-20P	0.250	0.192	0.014	No	220,317
HD-6.1C-34T	0.250	0.163	0.014	No	220,317
HD-6.1C-34T (D/S)	0.000	0.163	0.014	No	220,317
HD-6.1C-35P	0.250	0.192	0.014	No	220,317

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			Time to Tcrit (hrs)	Inspected	
====>Grouped by Line: HD-06.1C FWH 33C to FWH 32C							
HD-6.1C-21E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1C-22P	0.250	0.174	0.014	0.014	1,602,413	No	220,317
HD-6.1C-23E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1C-24P	0.250	0.178	0.014	0.014	1,637,180	No	220,317
HD-6.1C-25E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1C-28E	0.250	0.149	0.014	0.014	963,029	No	220,317
HD-6.1C-29P	0.250	0.176	0.014	0.014	1,620,547	No	220,317
HD-6.1C-30E	0.250	0.155	0.014	0.014	1,065,173	No	220,317
HD-6.1C-31P	0.250	0.187	0.014	0.014	1,958,935	No	220,317
HD-6.1C-32E	0.250	0.143	0.014	0.014	871,927	No	220,317
HD-6.1C-33P	0.250	0.153	0.014	0.014	1,086,266	No	220,317
HD-6.2C-01E	0.000	0.391	0.014	0.014	3,774,667	Yes	220,317
HD-6.2C-01E (D/S)	0.000	0.405	0.011	0.011	1,893,876	Yes	220,317
HD-07.1C-01V	0.280	0.506	0.012	0.012	1,472,439	No	220,317
HD-07.1C-02R	0.000	0.282	0.011	0.011	1,439,634	Yes	220,317
HD-07.1C-02R (D/S)	0.000	0.236	0.014	0.014	1,849,406	Yes	220,317
HD-07.2C-01V	0.250	0.633	0.015	0.015	3,090,431	No	220,317
HD-07.2C-02P	0.250	0.219	0.014	0.014	2,325,466	Yes	220,317
HD-07.2C-03T	0.250	0.277	0.014	0.014	1,313,388	Yes	220,317
HD-07.2C-03T (BR/SE)	0.000	0.430	0.014	0.014	2,079,391	Yes	220,317
HD-07.2C-04P	0.250	0.190	0.014	0.014	2,203,380	No	220,317
HD-07.2C-05R	0.000	0.167	0.014	0.014	1,360,690	No	220,317
HD-07.2C-05R (D/S)	0.000	0.192	0.018	0.018	2,239,172	No	220,317
HD-07.3C-01N	0.365	0.287	0.018	0.018	2,491,262	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: HD: HTR 34 TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.911

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: HD-04.1A FWH 34A to FWH 33A							
HD-4.1A-01N	0.280	0.161	0.022	0.022	No	515,316	220,317
HD-4.1A-02P	0.280	0.204	0.022	0.022	No	1,254,936	220,317
HD-4.1A-03T	0.280	0.196	0.022	0.022	No	1,077,242	220,317
HD-4.1A-03T (D/S)	0.000	0.196	0.022	0.022	No	1,077,242	220,317
HD-4.1A-04P	0.280	0.224	0.022	0.022	No	1,876,867	220,317
HD-4.1A-05E	0.280	0.192	0.022	0.022	No	852,455	220,317
HD-4.1A-06E	0.280	0.196	0.022	0.022	No	926,552	220,317
HD-4.1A-07P	0.280	0.220	0.022	0.022	No	1,474,866	220,317
HD-4.1A-08E	0.280	0.192	0.022	0.022	No	852,455	220,317
HD-4.1A-09P_1	0.280	0.220	0.022	0.022	No	1,474,866	220,317
HD-4.1A-09P_2	0.280	0.254	0.022	0.022	No	3,917,358	220,317
HD-4.1A-10E	0.280	0.192	0.022	0.022	No	852,455	220,317
HD-4.1A-11P	0.280	0.216	0.022	0.022	No	1,441,491	220,317
HD-4.1A-12E	0.280	0.192	0.022	0.022	No	852,455	220,317
HD-4.1A-13P	0.280	0.220	0.022	0.022	No	1,474,866	220,317
HD-4.1A-14E	0.280	0.192	0.022	0.022	No	852,455	220,317
HD-4.1A-15P	0.280	0.216	0.022	0.022	No	1,441,491	220,317
HD-4.2A-01E	0.000	0.300	0.022	0.022	No	2,068,289	220,317
HD-4.2A-01E (D/S)	0.000	0.225	0.015	0.015	No	643,254	220,317
HD-4.2A-02V	0.237	-0.003	0.016	0.016	No	-36,452	220,317
HD-4.3A-01R	0.000	0.193	0.015	0.015	No	484,524	220,317
HD-4.3A-01R (D/S)	0.000	0.175	0.012	0.012	No	345,422	220,317
HD-05.1A-01V	0.216	0.171	0.012	0.012	No	213,992	220,317
HD-05.1A-02R	0.000	0.026	0.012	0.012	Yes	35,368	220,317
HD-05.1A-02R (D/S)	0.000	0.261	0.022	0.022	Yes	1,483,413	220,317
HD-05.2A-01T	0.280	0.223	0.022	0.022	Yes	747,287	220,317
HD-05.2A-01T (BR/SE)	0.000	0.247	0.022	0.022	Yes	836,556	220,317
HD-05.2A-02P	0.280	0.230	0.022	0.022	Yes	1,930,908	220,317
HD-05.2A-03E	0.280	0.201	0.022	0.022	No	1,009,630	220,317

Sorted By: Flow Order

Component Name	Init.	Thickness (in)		Inspected	Component Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop			
===>Grouped by Line: HD-04.1A FWH 34A to FWH 33A						
HD-05.2A-04E	0.280	0.192	0.022	0.022	852,455 No	220,317
HD-05.2A-05P	0.280	0.204	0.022	0.022	1,055,063 No	220,317
HD-05.2A-06N	0.280	0.184	0.022	0.022	755,203 No	220,317
===>Grouped by Line: HD-04.1B FWH 34B to FWH 33B						
HD-4.1B-01N	0.280	0.161	0.022	0.022	515,316 No	220,317
HD-4.1B-02P	0.280	0.204	0.022	0.022	1,254,936 No	220,317
HD-4.1B-03E	0.280	0.201	0.022	0.022	1,009,630 No	220,317
HD-4.1B-04P	0.280	0.218	0.022	0.022	1,658,788 No	220,317
HD-4.1B-05T (BR/SE)	0.000	0.184	0.022	0.022	755,203 No	220,317
HD-4.1B-05T (D/S)	0.000	0.161	0.022	0.022	515,316 No	220,317
HD-4.1B-06P	0.280	0.208	0.022	0.022	1,155,016 No	220,317
HD-4.1B-07E	0.280	0.192	0.022	0.022	852,455 No	220,317
HD-4.1B-08P	0.280	0.210	0.022	0.022	1,397,092 No	220,317
HD-4.1B-09E	0.280	0.192	0.022	0.022	852,455 No	220,317
HD-4.1B-10E	0.280	0.196	0.022	0.022	926,552 No	220,317
HD-4.1B-11P_1	0.280	0.220	0.022	0.022	1,474,866 No	220,317
HD-4.1B-11P_2	0.280	0.254	0.022	0.022	3,917,358 No	220,317
HD-4.1B-12E	0.280	0.192	0.022	0.022	852,455 No	220,317
HD-4.1B-13P	0.280	0.216	0.022	0.022	1,441,491 No	220,317
HD-4.1B-14E	0.280	0.192	0.022	0.022	852,455 No	220,317
HD-4.1B-15P	0.280	0.220	0.022	0.022	1,474,866 No	220,317
HD-4.1B-16E	0.280	0.192	0.022	0.022	852,455 No	220,317
HD-4.1B-17P	0.280	0.216	0.022	0.022	1,441,491 No	220,317
HD-4.2B-01E	0.000	0.231	0.022	0.022	1,551,574 Yes	220,317
HD-4.2B-01E (D/S)	0.000	0.250	0.015	0.015	720,958 Yes	220,317
HD-4.2B-02V	0.237	-0.003	0.016	0.016	-36,452 No	220,317
HD-4.3B-01R	0.000	0.203	0.015	0.015	509,439 Yes	220,317
HD-4.3B-01R (D/S)	0.000	0.177	0.012	0.012	348,073 No	220,317
HD-05.1B-01V	0.216	0.217	0.012	0.012	275,911 No	220,317
HD-05.1B-02R	0.000	0.197	0.012	0.012	446,987 No	220,317
HD-05.1B-02R (D/S)	0.000	0.141	0.022	0.022	739,505 No	220,317
HD-05.2B-01T	0.280	0.276	0.022	0.022	945,380 Yes	220,317
HD-05.2B-01T (BR/SE)	0.000	0.308	0.022	0.022	1,064,406 Yes	220,317
HD-05.2B-02P	0.280	0.229	0.022	0.022	1,921,266 No	220,317
HD-05.2B-03E	0.280	0.201	0.022	0.022	1,009,630 No	220,317
HD-05.2B-04E	0.280	0.192	0.022	0.022	852,455 No	220,317
HD-05.2B-05P	0.280	0.204	0.022	0.022	1,055,063 No	220,317
HD-05.2B-06N	0.280	0.184	0.022	0.022	755,203 No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop		Time to Tcrit (hrs)	Inspected	
====>Grouped by Line: HD-04.1C FWH 34C to FWH 33C							
HD-4.1C-01N	0.280	0.161	0.022	0.022	No	515,316	220,317
HD-4.1C-02P	0.280	0.204	0.022	0.022	No	1,254,936	220,317
HD-4.1C-03E	0.280	0.192	0.022	0.022	No	852,455	220,317
HD-4.1C-04P	0.280	0.220	0.022	0.022	No	1,474,866	220,317
HD-4.1C-05E	0.280	0.192	0.022	0.022	No	852,455	220,317
HD-4.1C-06T	0.280	0.196	0.022	0.022	No	1,077,242	220,317
HD-4.1C-06T (D/S)	0.000	0.196	0.022	0.022	No	1,077,242	220,317
HD-4.1C-07P	0.280	0.224	0.022	0.022	No	1,876,867	220,317
HD-4.1C-08E	0.280	0.192	0.022	0.022	No	852,455	220,317
HD-4.1C-09P	0.280	0.204	0.022	0.022	No	1,055,063	220,317
HD-4.1C-10E	0.280	0.192	0.022	0.022	No	852,455	220,317
HD-4.1C-11P	0.280	0.210	0.022	0.022	No	1,397,092	220,317
HD-4.1C-12E	0.280	0.192	0.022	0.022	No	852,455	220,317
HD-4.1C-13P_1	0.280	0.220	0.022	0.022	No	1,474,866	220,317
HD-4.1C-13P_2	0.280	0.254	0.022	0.022	No	3,917,358	220,317
HD-4.1C-14E	0.280	0.192	0.022	0.022	No	852,455	220,317
HD-4.1C-15P	0.280	0.220	0.022	0.022	No	1,474,866	220,317
HD-4.1C-16E	0.280	0.192	0.022	0.022	No	852,455	220,317
HD-4.1C-17P_1	0.280	0.220	0.022	0.022	No	1,474,866	220,317
HD-4.1C-17P_2	0.280	0.254	0.022	0.022	No	3,917,358	220,317
HD-4.1C-18E	0.280	0.192	0.022	0.022	No	852,455	220,317
HD-4.1C-19P	0.280	0.216	0.022	0.022	No	1,441,491	220,317
HD-4.1C-20E	0.280	0.192	0.022	0.022	No	852,455	220,317
HD-4.1C-21P	0.280	0.220	0.022	0.022	No	1,474,866	220,317
HD-4.1C-22E	0.280	0.192	0.022	0.022	No	852,455	220,317
HD-4.1C-23P	0.280	0.216	0.022	0.022	No	1,441,491	220,317
HD-4.2C-01E	0.000	0.226	0.022	0.022	Yes	1,514,661	220,317
HD-4.2C-01E (D/S)	0.000	0.220	0.015	0.015	Yes	627,577	220,317
HD-4.2C-02V	0.237	-0.003	0.016	0.016	No	-36,452	220,317
HD-4.3C-01R	0.000	0.185	0.015	0.015	No	460,590	220,317
HD-4.3C-01R (D/S)	0.000	0.202	0.012	0.012	No	400,793	220,317
HD-05.1C-01V	0.216	0.149	0.012	0.012	No	183,674	220,317
HD-05.1C-02R	0.000	0.201	0.012	0.012	No	455,430	220,317
HD-05.1C-02R (D/S)	0.000	0.122	0.022	0.022	No	617,806	220,317
HD-05.2C-01T	0.280	0.299	0.022	0.022	Yes	1,031,144	220,317
HD-05.2C-01T (BR/SE)	0.000	0.328	0.022	0.022	Yes	1,139,011	220,317
HD-05.2C-02P	0.280	0.229	0.022	0.022	No	1,921,266	220,317
HD-05.2C-03E	0.280	0.201	0.022	0.022	No	1,009,630	220,317
HD-05.2C-04E	0.280	0.192	0.022	0.022	No	852,455	220,317

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
===>Grouped by Line: HD-04.1C FWH 34C to FWH 33C								
HD-05.2C-05P	0.280	0.204	0.022	0.022	0.022	1,055,063	No	220,317
HD-05.2C-06N	0.280	0.184	0.022	0.022	0.022	755,203	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: HD: HTR 35 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.487

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			

====>Grouped by Line: HD-03.1A FWH 35A to HD TK

HD-03.1A-01N	0.240	0.150	0.089	0.089	243,564	No	220,317
HD-03.1A-02P	0.250	0.201	0.089	0.089	826,032	No	220,317
HD-03.1A-03E	0.250	0.183	0.089	0.089	505,869	No	220,317
HD-03.1A-04P	0.250	0.205	0.089	0.089	920,800	No	220,317
HD-03.1A-05E	0.250	0.183	0.089	0.089	505,869	No	220,317
HD-03.1A-06P	0.250	0.192	0.089	0.089	640,937	No	220,317
HD-03.1A-07E	0.250	0.183	0.089	0.089	505,869	No	220,317
HD-03.1A-08P	0.250	0.205	0.089	0.089	920,800	No	220,317
HD-03.1A-09E	0.250	0.183	0.089	0.089	505,869	No	220,317
HD-03.1A-10P	0.250	0.205	0.089	0.089	920,800	No	220,317
HD-03.1A-11E	0.250	0.214	0.089	0.089	672,303	Yes	220,317
HD-03.1A-12E	0.250	0.246	0.089	0.089	844,107	Yes	220,317
HD-03.1A-13P	0.250	0.216	0.089	0.089	789,923	Yes	220,317
HD-03.1A-14E	0.250	0.227	0.089	0.089	742,099	Yes	220,317
HD-03.1A-15V	0.250	0.160	0.095	0.095	256,039	No	220,317
HD-03.1A-16N	0.250	0.303	0.089	0.089	1,061,811	No	220,317

Sorted By:Flow Order

====>Grouped by Line: HD-03.1B FWH 35B to HD TK

HD-03.1B-01N	0.240	0.150	0.089	0.089	243,564	No	220,317
HD-03.1B-02P	0.250	0.201	0.089	0.089	826,032	No	220,317
HD-03.1B-03E	0.250	0.183	0.089	0.089	505,869	No	220,317
HD-03.1B-04P	0.250	0.205	0.089	0.089	920,800	No	220,317
HD-03.1B-05E	0.250	0.183	0.089	0.089	505,869	No	220,317
HD-03.1B-06P	0.250	0.205	0.089	0.089	920,800	No	220,317
HD-03.1B-07E	0.250	0.183	0.089	0.089	505,869	No	220,317
HD-03.1B-08P	0.250	0.205	0.089	0.089	920,800	No	220,317
HD-03.1B-09E	0.250	0.232	0.089	0.089	770,022	Yes	220,317
HD-03.1B-10E	0.250	0.183	0.089	0.089	505,869	No	220,317
HD-03.1B-11P	0.250	0.192	0.089	0.089	640,937	No	220,317

Sorted By:Flow Order

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====>Grouped by Line: HD-03.1B FWH 35B to HD TK					
HD-03.1B-12E	0.250	0.183	0.089	No	220,317
HD-03.1B-13V	0.250	0.160	0.095	No	220,317
HD-03.1B-14N	0.250	0.178	0.089	No	220,317
====>Grouped by Line: HD-03.1C FWH 35C to HD TK					
HD-03.1C-01N	0.240	0.150	0.089	No	220,317
HD-03.1C-02P	0.250	0.201	0.089	No	220,317
HD-03.1C-03E	0.250	0.183	0.089	No	220,317
HD-03.1C-04P	0.250	0.205	0.089	No	220,317
HD-03.1C-05E	0.250	0.183	0.089	No	220,317
HD-03.1C-06P	0.250	0.205	0.089	No	220,317
HD-03.1C-07E	0.250	0.183	0.089	No	220,317
HD-03.1C-08P	0.250	0.205	0.089	No	220,317
HD-03.1C-09E	0.250	0.183	0.089	No	220,317
HD-03.1C-10P	0.250	0.205	0.089	No	220,317
HD-03.1C-11E	0.250	0.183	0.089	No	220,317
HD-03.1C-12P	0.250	0.205	0.089	No	220,317
HD-03.1C-13E	0.250	0.241	0.089	Yes	220,317
HD-03.1C-14E	0.250	0.221	0.089	Yes	220,317
HD-03.1C-15P	0.250	0.225	0.089	Yes	220,317
HD-03.1C-16E	0.250	0.244	0.089	Yes	220,317
HD-03.1C-17V	0.250	0.160	0.095	No	220,317
HD-03.1C-18N	0.250	0.178	0.089	No	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Pass 2 Analysis Include Measured Wear

Run Name: HD: HTR 36 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.405

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			

====>Grouped by Line: HD-01.1A FWH 36A to HD TK

HD-01.1A-01N	0.288	0.166	0.137	0.137	No	220,317
HD-01.1A-02P	0.307	0.240	0.159	0.159	No	220,317
HD-01.1A-03E	0.307	0.216	0.159	0.159	No	220,317
HD-01.1A-04P	0.307	0.245	0.159	0.159	No	220,317
HD-01.1A-05E	0.307	0.216	0.159	0.159	No	220,317
HD-01.1A-06P	0.307	0.245	0.159	0.159	No	220,317
HD-01.1A-07E	0.307	0.216	0.159	0.159	No	220,317
HD-01.1A-08P	0.307	0.245	0.159	0.159	No	220,317
HD-01.1A-09E	0.307	0.321	0.159	0.159	Yes	220,317
HD-01.1A-10P	0.307	0.245	0.159	0.159	No	220,317
HD-01.2A-01R	0.000	0.313	0.159	0.159	Yes	220,317
HD-01.2A-01R (D/S)	0.000	0.288	0.098	0.098	Yes	220,317
HD-02.1A 01V	0.280	0.278	0.105	0.105	No	220,317
HD-02.1A-02R	0.000	0.279	0.098	0.098	Yes	220,317
HD-02.1A-02R (D/S)	0.000	0.348	0.159	0.159	Yes	220,317
HD-02.2A-01V	0.365	0.364	0.171	0.171	No	220,317
HD-02.2A-02N	0.365	0.341	0.137	0.137	Yes	220,317
Sorted By:Flow Order						
				90,577	No	220,317
				469,353	No	220,317
				238,383	No	220,317
				537,720	No	220,317
				238,383	No	220,317
				537,720	No	220,317
				238,383	No	220,317
				537,720	No	220,317
				238,383	No	220,317
				537,720	No	220,317
				31,942,670	No	220,317
				481,361	Yes	220,317
				961,492	Yes	220,317
				73,483,920	No	220,317
				781,685	Yes	220,317

====>Grouped by Line: HD-01.1B FWH 36B to HD TK

HD-01.1B-01N	0.288	0.166	0.137	0.137	No	220,317
HD-01.1B-02P	0.307	0.240	0.159	0.159	No	220,317
HD-01.1B-03E	0.307	0.216	0.159	0.159	No	220,317
HD-01.1B-04P	0.307	0.245	0.159	0.159	No	220,317
HD-01.1B-05E	0.307	0.216	0.159	0.159	No	220,317
HD-01.1B-06P	0.307	0.245	0.159	0.159	No	220,317
HD-01.1B-07E	0.307	0.317	0.159	0.159	Yes	220,317
HD-01.2B-01R	0.000	0.333	0.159	0.159	Yes	220,317
HD-01.2B-01R (D/S)	0.000	0.236	0.098	0.098	Yes	220,317
HD-02.1B-01V	0.280	0.440	0.105	0.105	No	220,317
Sorted By:Flow Order						
				90,577	No	220,317
				469,353	No	220,317
				238,383	No	220,317
				537,720	No	220,317
				238,383	No	220,317
				537,720	No	220,317
				238,383	No	220,317
				537,720	No	220,317
				664,996	Yes	220,317
				773,513	Yes	220,317
				319,992	Yes	220,317
				61,972,848	No	220,317

Component Name	Init.	Thickness (in)		Inspected	Comp. Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop			
====>Grouped by Line: HD-01.1B FWH 36B to HD TK						
HD-02.1B-02R	0.000	0.288	0.098	0.098	505,509	220,317
HD-02.1B-02R (D/S)	0.000	0.319	0.159	0.159	815,982	220,317
HD-02.2B-01V	0.365	0.364	0.171	0.171	73,483,920	220,317
HD-02.2B-02N	0.365	0.264	0.137	0.137	487,326	220,317
====>Grouped by Line: HD-01.1C FWH 36C to HD TK						
HD-01.1C-01N	0.288	0.166	0.137	0.137	90,577	220,317
HD-01.1C-02P	0.307	0.240	0.159	0.159	469,353	220,317
HD-01.1C-03E	0.307	0.216	0.159	0.159	238,383	220,317
HD-01.1C-04P	0.307	0.245	0.159	0.159	537,720	220,317
HD-01.1C-05E	0.307	0.216	0.159	0.159	238,383	220,317
HD-01.1C-06P	0.307	0.245	0.159	0.159	537,720	220,317
HD-01.1C-07E	0.307	0.216	0.159	0.159	238,383	220,317
HD-01.1C-08P	0.307	0.228	0.159	0.159	335,823	220,317
HD-01.1C-09E	0.307	0.216	0.159	0.159	238,383	220,317
HD-01.1C-10P	0.307	0.245	0.159	0.159	537,720	220,317
HD-01.1C-11E	0.421	0.263	0.159	0.159	418,028	220,317
HD-01.2C-01R	0.000	0.304	0.159	0.159	645,712	220,317
HD-01.2C-01R (D/S)	0.000	0.251	0.098	0.098	354,371	220,317
HD-02.1C-01V	0.280	0.278	0.105	0.105	31,942,670	220,317
HD-02.1C-02R	0.000	0.312	0.098	0.098	568,680	220,317
HD-02.1C-02R (D/S)	0.000	0.285	0.159	0.159	639,808	220,317
HD-02.2C-01V	0.000	0.364	0.171	0.171	73,483,920	220,317
HD-02.2C-02N	0.000	0.370	0.137	0.137	892,089	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: HD: HTR DN TO PUMPS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.912

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: HD-10.1A HD TK to HD PMP 31							
HD-10.1A-01N	0.562	0.483	0.199	0.199	No	966,984	220,317
HD-10.1A-02P	0.375	0.345	0.199	0.199	No	952,073	220,317
HD-10.2A-01E	0.000	0.353	0.199	0.199	Yes	1,082,782	220,317
HD-10.2A-01E (D/S)	0.000	0.347	0.149	0.149	Yes	651,300	220,317
HD-10.2A-02E	0.312	0.362	0.149	0.149	Yes	621,432	220,317
HD-10.2A-03P	0.312	0.290	0.149	0.149	Yes	575,417	220,317
HD-10.2A-04V	0.312	0.180	0.160	0.160	No	42,565	220,317
HD-10.2A-05P	0.312	0.254	0.149	0.149	No	486,945	220,317
HD-10.2A-07X	0.312	0.153	0.149	0.149	No	5,909	220,317
HD-10.2A-06N	0.312	0.207	0.149	0.149	No	147,163	220,317
Sorted By:Flow Order							
====>Grouped by Line: HD-10.1B HD TK to HD PMP 32							
HD-10.1B-01N	0.562	0.483	0.199	0.199	No	966,984	220,317
HD-10.1B-02P	0.375	0.334	0.199	0.199	No	875,883	220,317
HD-10.2B-01E	0.000	0.337	0.199	0.199	No	967,404	220,317
HD-10.2B-01E (D/S)	0.000	0.230	0.149	0.149	No	267,731	220,317
HD-10.2B-02P	0.312	0.228	0.149	0.149	No	250,985	220,317
HD-10.2B-03V	0.312	0.180	0.160	0.160	No	42,565	220,317
HD-10.2B-04P	0.312	0.254	0.149	0.149	No	486,945	220,317
HD-10.2B-06X	0.312	0.153	0.149	0.149	No	5,909	220,317
HD-10.2B-05N	0.312	0.207	0.149	0.149	No	147,163	220,317
Sorted By:Flow Order							

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB
 Run Name: MSD: MS 31 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 12.299

Service Life Report

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Pass 2 Analysis Include Measured Wear

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====>Grouped by Line: MSD-01.1A_1 MSEP 31A to HDR					
MSD-01.1A-01N	0.250	0.183	0.106	No	220,317
MSD-01.1A-02T (BR/SE)	0.000	0.343	0.106	No	220,317
MSD-01.1A-02T (D/S)	0.000	0.311	0.106	No	220,317
MSD-01.1A-03P	0.250	0.223	0.106	Yes	220,317
====>Grouped by Line: MSD-01.1A_2 MSEP 31A to HDR					
MSD-01.1A-04N	0.250	0.183	0.106	No	220,317
MSD-01.1A-08P	0.250	0.214	0.106	No	220,317
====>Grouped by Line: MSD-01.1A_3 MSEP 31A to HDR					
MSD-01.1A-05N	0.250	0.183	0.106	No	220,317
MSD-01.1A-06T (BR/SE)	0.000	0.196	0.106	No	220,317
MSD-01.1A-06T (D/S)	0.000	0.183	0.106	No	220,317
MSD-01.1A-07P	0.250	0.210	0.106	No	220,317
====>Grouped by Line: MSD-01.1B_1 MSEP 31B to HDR					
MSD-01.1B-01N	0.250	0.183	0.106	No	220,317
MSD-01.1B-02T (BR/SE)	0.000	0.196	0.106	No	220,317
MSD-01.1B-02T (D/S)	0.000	0.183	0.106	No	220,317
MSD-01.1B-03P	0.250	0.210	0.106	No	220,317
====>Grouped by Line: MSD-01.1B_2 MSEP 31B to HDR					
MSD-01.1B-04N	0.250	0.183	0.106	No	220,317
MSD-01.1B-08P	0.250	0.214	0.106	No	220,317
====>Grouped by Line: MSD-01.1B_3 MSEP 31B to HDR					
MSD-01.1B-05N	0.250	0.183	0.106	No	220,317
MSD-01.1B-06T (BR/SE)	0.000	0.392	0.106	No	220,317
MSD-01.1B-06T (D/S)	0.000	0.183	0.106	No	220,317
MSD-01.1B-07P	0.250	0.210	0.106	No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: MSD-01.2A MSEP 31A DR HDR							
MSD-01.2A-01T	0.250	0.195	0.106	0.106	No	759,819	220,317
MSD-01.2A-01T (BR/SE)	0.000	0.204	0.106	0.106	No	1,012,284	220,317
MSD-01.2A-01T (D/S)	0.000	0.151	0.106	0.106	No	214,398	220,317
====>Grouped by Line: MSD-01.2B MSEP 31B DR HDR							
MSD-01.2B-01T	0.250	0.195	0.106	0.106	No	759,819	220,317
MSD-01.2B-01T (BR/SE)	0.000	0.204	0.106	0.106	No	1,012,284	220,317
MSD-01.2B-01T (D/S)	0.000	0.151	0.106	0.106	No	214,398	220,317
====>Grouped by Line: MSD-01.3A HDR to MSEP TK 31A							
MSD-01.3A-01T (D/S)	0.000	0.406	0.106	0.106	No	2,093,091	220,317
MSD-01.3A-01T	0.250	0.561	0.106	0.106	No	1,761,865	220,317
MSD-01.3A-01T (BR/SE)	0.000	0.527	0.106	0.106	No	1,146,407	220,317
MSD-01.3A-02P	0.250	0.211	0.106	0.106	Yes	528,701	220,317
MSD-01.3A-03E	0.250	0.348	0.106	0.106	Yes	889,393	220,317
MSD-01.3A-04V	0.250	0.079	0.113	0.113	No	-99,377	220,317
MSD-01.3A-05P	0.250	0.175	0.106	0.106	No	426,546	220,317
MSD-01.3A-06V	0.250	0.079	0.113	0.113	No	-99,377	220,317
MSD-01.3A-07P	0.250	0.175	0.106	0.106	No	426,546	220,317
MSD-01.3A-08N	0.250	0.113	0.106	0.106	No	24,698	220,317
====>Grouped by Line: MSD-01.3B HDR to MSEP TK 31B							
MSD-01.3B-01T (D/S)	0.000	0.183	0.106	0.106	No	539,092	220,317
MSD-01.3B-01T	0.250	0.129	0.106	0.106	No	91,846	220,317
MSD-01.3B-01T (BR/SE)	0.000	0.079	0.106	0.106	No	-73,101	220,317
MSD-01.3B-02P	0.250	0.157	0.106	0.106	No	261,176	220,317
MSD-01.3B-03E	0.250	0.306	0.106	0.106	Yes	737,177	220,317
MSD-01.3B-04V	0.250	0.079	0.113	0.113	No	-99,377	220,317
MSD-01.3B-05P	0.250	0.175	0.106	0.106	No	426,546	220,317
MSD-01.3B-06V	0.250	0.079	0.113	0.113	No	-99,377	220,317
MSD-01.3B-07P	0.250	0.175	0.106	0.106	No	426,546	220,317
MSD-01.3B-08N	0.250	0.228	0.106	0.106	Yes	415,827	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: MSD: MS 32 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 12.801

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====>Grouped by Line: MSD-01.6A_1 MSEP 32A to HDR					
MSD-01.6A-01N	0.250	0.180	0.106	No	220,317
MSD-01.6A-02T (BR/SE)	0.000	0.194	0.106	No	220,317
MSD-01.6A-02T (D/S)	0.000	0.180	0.106	No	220,317
MSD-01.6A-03P	0.250	0.208	0.106	No	220,317
====>Grouped by Line: MSD-01.6A_2 MSEP 32A to HDR					
MSD-01.6A-04N	1.125	1.032	0.106	No	220,317
MSD-01.6A-08P	0.250	0.212	0.106	No	220,317
====>Grouped by Line: MSD-01.6A_3 MSEP 32A to HDR					
MSD-01.6A-05N	0.250	0.180	0.106	No	220,317
MSD-01.6A-06T (BR/SE)	0.000	0.194	0.106	No	220,317
MSD-01.6A-06T (D/S)	0.000	0.180	0.106	No	220,317
MSD-01.6A-07P	0.250	0.208	0.106	No	220,317
====>Grouped by Line: MSD-01.6B_1 MSEP 32B to HDR					
MSD-01.6B-01N	0.250	0.180	0.106	No	220,317
MSD-01.6B-02T (BR/SE)	0.000	0.194	0.106	No	220,317
MSD-01.6B-02T (D/S)	0.000	0.180	0.106	No	220,317
MSD-01.6B-03P	0.312	0.269	0.106	No	220,317
====>Grouped by Line: MSD-01.6B_2 MSEP 32B to HDR					
MSD-01.6B-04N	1.125	1.032	0.106	No	220,317
MSD-01.6B-08P	0.312	0.274	0.106	No	220,317
====>Grouped by Line: MSD-01.6B_3 MSEP 32B to HDR					
MSD-01.6B-05N	0.250	0.180	0.106	No	220,317
MSD-01.6B-06T (BR/SE)	0.000	0.194	0.106	No	220,317
MSD-01.6B-06T (D/S)	0.000	0.180	0.106	No	220,317
MSD-01.6B-07P	0.264	0.222	0.106	Yes	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: MSD-01.7A MSEP 32A DR HDR							
MSD-01.7A-01T	0.250	0.321	0.106	0.106	1,754,469	No	220,317
MSD-01.7A-01T (BR/SE)	0.000	0.509	0.106	0.106	3,968,795	No	220,317
MSD-01.7A-01T (D/S)	0.000	0.430	0.106	0.106	1,469,166	Yes	220,317
MSD-01.7A-02P	0.250	0.213	0.106	0.106	994,499	Yes	220,317
====>Grouped by Line: MSD-01.7B MSEP 32B DR HDR							
MSD-01.7B-01T	0.250	0.321	0.106	0.106	1,754,469	Yes	220,317
MSD-01.7B-01T (BR/SE)	0.000	0.270	0.106	0.106	1,618,262	No	220,317
MSD-01.7B-01T (D/S)	0.000	0.338	0.106	0.106	1,052,568	Yes	220,317
MSD-01.7B-02P	0.304	0.253	0.106	0.106	1,345,682	No	220,317
====>Grouped by Line: MSD-01.8A HDR to MSEP TK 32A							
MSD-01.8A-01T (D/S)	0.000	0.275	0.106	0.106	1,131,055	Yes	220,317
MSD-01.8A-01T	0.250	0.191	0.106	0.106	316,538	Yes	220,317
MSD-01.8A-01T (BR/SE)	0.000	0.282	0.106	0.106	462,291	No	220,317
MSD-01.8A-02P	0.250	0.219	0.106	0.106	548,861	Yes	220,317
MSD-01.8A-03E	0.250	0.367	0.106	0.106	922,076	Yes	220,317
MSD-01.8A-04V	0.250	0.072	0.113	0.113	-117,250	No	220,317
MSD-01.8A-05P	0.250	0.211	0.106	0.106	627,010	Yes	220,317
MSD-01.8A-06V	0.250	0.072	0.113	0.113	-117,250	No	220,317
MSD-01.8A-07P	0.250	0.171	0.106	0.106	391,493	No	220,317
MSD-01.8A-08N	0.250	0.171	0.106	0.106	212,750	Yes	220,317
====>Grouped by Line: MSD-01.8B HDR to MSEP TK 32B							
MSD-01.8B-01T (D/S)	0.000	0.325	0.106	0.106	1,467,444	Yes	220,317
MSD-01.8B-01T	0.250	0.302	0.106	0.106	728,466	Yes	220,317
MSD-01.8B-01T (BR/SE)	0.000	0.312	0.106	0.106	539,769	No	220,317
MSD-01.8B-02P	0.285	0.212	0.106	0.106	511,643	Yes	220,317
MSD-01.8B-03E	0.250	0.240	0.106	0.106	476,404	Yes	220,317
MSD-01.8B-04V	0.250	0.072	0.113	0.113	-117,250	No	220,317
MSD-01.8B-05P	0.250	0.171	0.106	0.106	391,493	No	220,317
MSD-01.8B-06V	0.250	0.072	0.113	0.113	-117,250	No	220,317
MSD-01.8B-07P	0.250	0.238	0.106	0.106	784,571	Yes	220,317
MSD-01.8B-08N	0.250	0.270	0.106	0.106	536,014	Yes	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: MSD: MS 33 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 8.046

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Tcrit			
====>Grouped by Line: MSD-01.11A_1 MSEP 33A to HDR						
MSD-01.11A-01N	0.250	0.206	0.106	0.106	No	220,317
MSD-01.11A-02T (BR/SE)	0.000	0.215	0.106	0.106	No	220,317
MSD-01.11A-02T (D/S)	0.000	0.206	0.106	0.106	No	220,317
MSD-01.11A-03P	0.250	0.224	0.106	0.106	No	220,317
====>Grouped by Line: MSD-01.11A_2 MSEP 33A to HDR						
MSD-01.11A-04N	0.250	0.206	0.106	0.106	No	220,317
MSD-01.11A-08P	0.250	0.226	0.106	0.106	No	220,317
====>Grouped by Line: MSD-01.11A_3 MSEP 33A to HDR						
MSD-01.11A-05N	0.250	0.206	0.106	0.106	No	220,317
MSD-01.11A-06T (BR/SE)	0.000	0.215	0.106	0.106	No	220,317
MSD-01.11A-06T (D/S)	0.000	0.206	0.106	0.106	No	220,317
MSD-01.11A-07P	0.250	0.224	0.106	0.106	No	220,317
====>Grouped by Line: MSD-01.11B_1 MSEP 33B to HDR						
MSD-01.11B-01N	0.250	0.206	0.106	0.106	No	220,317
MSD-01.11B-02T (BR/SE)	0.000	0.215	0.106	0.106	No	220,317
MSD-01.11B-02T (D/S)	0.000	0.206	0.106	0.106	No	220,317
MSD-01.11B-03P	0.250	0.224	0.106	0.106	No	220,317
====>Grouped by Line: MSD-01.11B_2 MSEP 33B to HDR						
MSD-01.11B-04N	0.250	0.206	0.106	0.106	No	220,317
MSD-01.11B-08P	0.250	0.226	0.106	0.106	No	220,317
====>Grouped by Line: MSD-01.11B_3 MSEP 33B to HDR						
MSD-01.11B-05N	0.250	0.206	0.106	0.106	No	220,317
MSD-01.11B-06T (BR/SE)	0.000	0.215	0.106	0.106	No	220,317
MSD-01.11B-06T (D/S)	0.000	0.206	0.106	0.106	No	220,317
MSD-01.11B-07P	0.250	0.224	0.106	0.106	No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop		Time to Tcrit (hrs)	Inspected	
====>Grouped by Line: MSD-01.12A MSEP 33A DR HDR							
MSD-01.12A-01T	0.250	0.214	0.106	0.106	No	1,407,931	220,317
MSD-01.12A-01T (BR/SE)	0.000	0.220	0.106	0.106	No	1,793,831	220,317
MSD-01.12A-01T (D/S)	0.000	0.185	0.106	0.106	No	574,250	220,317
MSD-01.12A-02P	0.250	0.218	0.106	0.106	No	1,666,981	220,317
====>Grouped by Line: MSD-01.12B MSEP 33B DR HDR							
MSD-01.12B-01T	0.250	0.214	0.106	0.106	No	1,407,931	220,317
MSD-01.12B-01T (BR/SE)	0.000	0.220	0.106	0.106	No	1,793,831	220,317
MSD-01.12B-01T (D/S)	0.000	0.185	0.106	0.106	No	574,250	220,317
MSD-01.12B-02P	0.250	0.218	0.106	0.106	No	1,666,981	220,317
====>Grouped by Line: MSD-01.13A HDR to MSEP TK 33A							
MSD-01.13A-01T (D/S)	0.000	0.338	0.106	0.106	No	2,477,062	220,317
MSD-01.13A-01T	0.250	0.361	0.106	0.106	No	1,509,315	220,317
MSD-01.13A-01T (BR/SE)	0.000	0.318	0.106	0.106	No	882,422	220,317
MSD-01.13A-02P	0.250	0.208	0.106	0.106	Yes	791,132	220,317
MSD-01.13A-03E	0.250	0.342	0.106	0.106	Yes	1,331,226	220,317
MSD-01.13A-04V	0.250	0.138	0.113	0.113	No	103,016	220,317
MSD-01.13A-05P	0.250	0.201	0.106	0.106	No	898,526	220,317
MSD-01.13A-06V	0.250	0.138	0.113	0.113	No	103,016	220,317
MSD-01.13A-07P	0.268	0.218	0.106	0.106	Yes	1,060,232	220,317
MSD-01.13A-08E	0.437	0.232	0.106	0.106	Yes	668,757	220,317
MSD-01.13A-09P	0.382	0.227	0.106	0.106	Yes	968,035	220,317
MSD-01.13A-10N	0.250	0.160	0.106	0.106	No	284,286	220,317
====>Grouped by Line: MSD-01.13B HDR to MSEP TK 33B							
MSD-01.13B-01T (D/S)	0.000	0.292	0.106	0.106	No	1,986,529	220,317
MSD-01.13B-01T	0.250	0.515	0.106	0.106	Yes	2,419,131	220,317
MSD-01.13B-01T (BR/SE)	0.000	0.272	0.106	0.106	No	692,758	220,317
MSD-01.13B-02P	0.250	0.216	0.106	0.106	Yes	852,664	220,317
MSD-01.13B-03E	0.250	0.317	0.106	0.106	Yes	1,189,868	220,317
MSD-01.13B-04V	0.250	0.138	0.113	0.113	No	103,016	220,317
MSD-01.13B-05P	0.250	0.201	0.106	0.106	No	898,526	220,317
MSD-01.13B-06V	0.250	0.138	0.113	0.113	No	103,016	220,317
MSD-01.13B-07P	0.250	0.201	0.106	0.106	No	898,526	220,317
MSD-01.13B-08E	0.250	0.167	0.106	0.106	No	345,157	220,317
MSD-01.13B-09P	0.250	0.194	0.106	0.106	No	734,728	220,317
MSD-01.13B-10N	0.250	0.236	0.106	0.106	Yes	676,049	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

3

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: MSD: MSDT 31 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.466

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: MSD-01.4A TK 31A to HD TK							
MSD-01.4A-01N	0.322	0.246	0.071	0.071	1,066,042	No	220,317
MSD-01.4A-02P	0.322	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.4A-03T	0.322	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.4A-03T (D/S)	0.000	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.4A-04P	0.349	0.349	0.071	0.071	100,000,000	No	112,406
MSD-01.5A-01E	0.000	0.322	0.061	0.061	100,000,000	No	112,406
MSD-01.5A-01E (D/S)	0.000	0.280	0.047	0.047	171,152,544	No	112,406
MSD-01.5A-02P	0.314	0.314	0.055	0.055	100,000,000	No	112,406
MSD-01.5A-03E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-04P	0.349	0.349	0.055	0.055	256,816,240	No	112,406
MSD-01.5A-05E	0.319	0.319	0.047	0.047	163,418,752	No	112,406
MSD-01.5A-06V	0.280	0.280	0.059	0.059	100,751,304	No	112,406
MSD-01.5A-07P	0.289	0.289	0.055	0.055	100,000,000	No	112,406
MSD-01.5A-08E	0.319	0.319	0.047	0.047	163,418,752	No	112,406
MSD-01.5A-09P	0.317	0.317	0.055	0.055	182,389,072	No	112,406
MSD-01.5A-10E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-11P	0.280	0.280	0.055	0.055	205,152,512	No	112,406
MSD-01.5A-12E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-13P	0.280	0.280	0.055	0.055	205,152,512	No	112,406
MSD-01.5A-14E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-15P_1	0.280	0.280	0.055	0.055	205,152,512	No	112,406
MSD-01.5A-15P_2	0.280	0.216	0.055	0.055	1,186,159	No	220,317
MSD-01.5A-28P_1	0.280	0.252	0.055	0.055	3,289,482	No	220,317
MSD-01.5A-28P_2	0.280	0.280	0.055	0.055	100,000,000	No	112,406
MSD-01.5A-16E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-17P	0.280	0.280	0.055	0.055	205,152,512	No	112,406
MSD-01.5A-18E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-19P	0.280	0.280	0.055	0.055	205,152,512	No	112,406
MSD-01.5A-20E	0.280	0.280	0.047	0.047	143,381,184	No	112,406

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: MSD-01.4A TK 31A to HD TK							
MSD-01.5A-21P	0.280	0.280	0.055	0.055	205,152,512	No	112,406
MSD-01.5A-29P	0.280	0.280	0.055	0.055	100,000,000	No	112,406
MSD-01.5A-22E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-23P	0.314	0.314	0.055	0.055	231,244,384	No	112,406
MSD-01.5A-24E	0.302	0.302	0.047	0.047	154,819,808	No	112,406
MSD-01.5A-25P	0.318	0.318	0.055	0.055	234,232,608	No	112,406
MSD-01.5A-26E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5A-27N	0.280	0.276	0.055	0.055	1,012,646	Yes	220,317
====>Grouped by Line: MSD-01.4B TK 31B to HD TK							
MSD-01.4B-01N	0.322	0.305	0.071	0.071	1,428,362	No	112,406
MSD-01.4B-02P	0.322	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.4B-03E	0.322	0.322	0.061	0.061	100,000,000	No	112,406
MSD-01.4B-04P	0.322	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.4B-05E	0.322	0.322	0.061	0.061	100,000,000	No	112,406
MSD-01.4B-07P	0.322	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.4B-06T	0.322	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.4B-06T (D/S)	0.000	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.4B-08P	0.322	0.322	0.071	0.071	100,000,000	No	112,406
MSD-01.5B-01R	0.000	0.322	0.061	0.061	100,000,000	No	112,406
MSD-01.5B-01R (D/S)	0.000	0.280	0.047	0.047	165,800,784	No	112,406
MSD-01.5B-02P	0.280	0.280	0.055	0.055	205,152,512	No	112,406
MSD-01.5B-03E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5B-04V	0.280	0.280	0.059	0.059	100,751,304	No	112,406
MSD-01.5B-05P	0.307	0.307	0.055	0.055	100,000,000	No	112,406
MSD-01.5B-06E	0.303	0.303	0.047	0.047	155,331,424	No	112,406
MSD-01.5B-07P	0.313	0.313	0.055	0.055	230,494,672	No	112,406
MSD-01.5B-08E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5B-09P	0.280	0.280	0.055	0.055	205,152,512	No	112,406
MSD-01.5B-10E	0.280	0.280	0.047	0.047	143,381,184	No	112,406
MSD-01.5B-11P_1	0.280	0.280	0.055	0.055	160,252,640	No	112,406
MSD-01.5B-11P_2	0.280	0.256	0.055	0.055	1,153,163	Yes	220,317
MSD-01.5B-29P	0.280	0.252	0.055	0.055	3,289,482	No	220,317
MSD-01.5B-12E	0.280	0.268	0.055	0.055	1,057,518	Yes	220,317
MSD-01.5B-13P	0.280	0.254	0.055	0.055	1,463,367	Yes	220,317
MSD-01.5B-14E	0.280	0.186	0.055	0.055	650,178	No	220,317
MSD-01.5B-15P	0.280	0.216	0.055	0.055	1,186,159	No	220,317
MSD-01.5B-30P_1	0.280	0.252	0.055	0.055	3,289,482	No	220,317
MSD-01.5B-30P_2	0.000	0.280	0.055	0.055	100,000,000	No	112,406

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
====>Grouped by Line: MSD-01.4B TK 31B to HD TK					
MSD-01.5B-16E	0.280	0.280	0.047	No	112,406
MSD-01.5B-17P	0.280	0.280	0.055	No	112,406
MSD-01.5B-18E	0.280	0.280	0.047	No	112,406
MSD-01.5B-19P	0.280	0.280	0.055	No	112,406
MSD-01.5B-20E	0.280	0.280	0.047	No	112,406
MSD-01.5B-21P	0.280	0.280	0.055	No	112,406
MSD-01.5B-22E	0.280	0.280	0.047	No	112,406
MSD-01.5B-23P	0.280	0.280	0.055	No	112,406
MSD-01.5B-31P	0.280	0.280	0.055	No	112,406
MSD-01.5B-24E	0.280	0.280	0.047	No	112,406
MSD-01.5B-25P	0.302	0.302	0.055	No	112,406
MSD-01.5B-32P	0.302	0.302	0.055	No	112,406
MSD-01.5B-26E	0.280	0.280	0.047	No	112,406
MSD-01.5B-27P	0.311	0.311	0.055	No	112,406
MSD-01.5B-28N	0.280	0.178	0.055	No	220,317
				566,431	

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: MSD: MSDT 32 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 4.384

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: MSD-01.9A TK 32A to HD TK							
MSD-01.9A-01N	0.322	0.186	0.071	0.071	No	395,385	220,317
MSD-01.9A-02P	0.322	0.322	0.071	0.071	No	198,120,432	112,406
MSD-01.9A-03T	0.322	0.322	0.071	0.071	No	178,297,968	112,406
MSD-01.9A-03T (D/S)	0.000	0.322	0.071	0.071	No	178,297,968	112,406
MSD-01.9A-04P	0.322	0.322	0.071	0.071	No	100,000,000	112,406
MSD-01.10A-01E	0.000	0.322	0.061	0.061	No	222,642,384	112,406
MSD-01.10A-01E (D/S)	0.000	0.280	0.047	0.047	No	96,206,304	112,406
MSD-01.10A-02P	0.304	0.304	0.055	0.055	No	157,222,496	112,406
MSD-01.10A-03E	0.309	0.309	0.047	0.047	No	89,026,592	112,406
MSD-01.10A-04P	0.280	0.280	0.055	0.055	No	115,327,032	112,406
MSD-01.10A-05E	0.280	0.280	0.047	0.047	No	80,588,392	112,406
MSD-01.10A-06V	0.280	0.280	0.059	0.059	No	56,614,424	112,406
MSD-01.10A-07P	0.293	0.293	0.055	0.055	No	137,536,928	112,406
MSD-01.10A-08E	0.307	0.307	0.047	0.047	No	88,455,656	112,406
MSD-01.10A-09P	0.293	0.293	0.055	0.055	No	121,020,000	112,406
MSD-01.10A-10E	0.280	0.280	0.047	0.047	No	90,369,304	112,406
MSD-01.10A-11P	0.280	0.280	0.055	0.055	No	131,067,648	112,406
MSD-01.10A-12E	0.280	0.280	0.047	0.047	No	80,588,392	112,406
MSD-01.10A-13P	0.280	0.280	0.055	0.055	No	115,327,032	112,406
MSD-01.10A-26P_1	0.280	0.280	0.055	0.055	No	100,000,000	112,406
MSD-01.10A-26P_2	0.280	0.230	0.055	0.055	No	1,645,791	220,317
MSD-01.10A-26P_3	0.280	0.280	0.055	0.055	No	100,000,000	112,406
MSD-01.10A-14E	0.280	0.280	0.047	0.047	No	80,588,392	112,406
MSD-01.10A-15P	0.280	0.280	0.055	0.055	No	115,327,032	112,406
MSD-01.10A-16E	0.280	0.280	0.047	0.047	No	80,588,392	112,406
MSD-01.10A-17P	0.280	0.280	0.055	0.055	No	115,327,032	112,406
MSD-01.10A-18E	0.280	0.280	0.047	0.047	No	80,588,392	112,406
MSD-01.10A-19P	0.280	0.280	0.055	0.055	No	115,327,032	112,406
MSD-01.10A-27P	0.280	0.280	0.055	0.055	No	100,000,000	112,406

Sorted By: Flow Order

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: MSD-01.9A TK 32A to HD TK							
MSD-01.10A-20E	0.280	0.280	0.047	0.047	No		112,406
MSD-01.10A-21P	0.294	0.294	0.055	0.055	No		112,406
MSD-01.10A-22E	0.317	0.317	0.047	0.047	No		112,406
MSD-01.10A-23P	0.289	0.289	0.055	0.055	No		112,406
MSD-01.10A-24E	0.280	0.280	0.047	0.047	No		112,406
MSD-01.10A-25N	0.280	0.244	0.055	0.055	No		220,317
====>Grouped by Line: MSD-01.9B TK 32B to HD TK							
MSD-01.9B-01N	0.322	0.186	0.071	0.071	No		220,317
MSD-01.9B-02P	0.322	0.322	0.071	0.071	No		112,406
MSD-01.9B-03T	0.322	0.322	0.071	0.071	No		112,406
MSD-01.9B-03T (D/S)	0.000	0.322	0.071	0.071	No		112,406
MSD-01.9B-04P	0.322	0.322	0.071	0.071	No		112,406
MSD-01.10B-01E	0.000	0.322	0.061	0.061	No		112,406
MSD-01.10B-01E (D/S)	0.000	0.280	0.047	0.047	No		112,406
MSD-01.10B-02E	0.280	0.252	0.047	0.047	No		112,406
MSD-01.10B-03P	0.280	0.280	0.055	0.055	No		112,406
MSD-01.10B-04E	0.280	0.280	0.047	0.047	No		112,406
MSD-01.10B-05V	0.280	0.280	0.059	0.059	No		112,406
MSD-01.10B-06P	0.299	0.299	0.055	0.055	No		112,406
MSD-01.10B-07E	0.328	0.251	0.047	0.047	No		112,406
MSD-01.10B-08P	0.289	0.289	0.055	0.055	No		112,406
MSD-01.10B-09E	0.280	0.280	0.047	0.047	No		112,406
MSD-01.10B-10P	0.280	0.280	0.055	0.055	No		112,406
MSD-01.10B-28P	0.280	0.230	0.055	0.055	No		220,317
MSD-01.10B-11E	0.280	0.182	0.055	0.055	Yes		220,317
MSD-01.10B-12P	0.280	0.205	0.055	0.055	Yes		220,317
MSD-01.10B-13E	0.280	0.113	0.055	0.055	No		220,317
MSD-01.10B-14P	0.280	0.167	0.055	0.055	No		220,317
MSD-01.10B-29P_1	0.280	0.230	0.055	0.055	No		220,317
MSD-01.10B-29P_2	0.280	0.280	0.055	0.055	No		112,406
MSD-01.10B-15E	0.280	0.280	0.047	0.047	No		112,406
MSD-01.10B-16P	0.280	0.280	0.055	0.055	No		112,406
MSD-01.10B-17E	0.280	0.280	0.047	0.047	No		112,406
MSD-01.10B-18P	0.280	0.280	0.055	0.055	No		112,406
MSD-01.10B-19E	0.280	0.280	0.047	0.047	No		112,406
MSD-01.10B-20P	0.280	0.280	0.055	0.055	No		112,406
MSD-01.10B-21E	0.280	0.280	0.047	0.047	No		112,406
MSD-01.10B-22P	0.280	0.280	0.055	0.055	No		112,406

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
===>Grouped by Line: MSD-01.9B TK 32B to HD TK								
MSD-01.10B-30P	0.280	0.280	0.055	0.055	0.055	100,000,000	No	112,406
MSD-01.10B-23E	0.280	0.280	0.047	0.047	0.047	80,588,392	No	112,406
MSD-01.10B-24P	0.285	0.285	0.055	0.055	0.055	117,528,776	No	112,406
MSD-01.10B-25E	0.316	0.316	0.047	0.047	0.047	91,012,136	No	112,406
MSD-01.10B-26P	0.290	0.290	0.055	0.055	0.055	119,715,344	No	112,406
MSD-01.10B-27N	0.280	0.099	0.055	0.055	0.055	114,415	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: MSD: MSDT 33 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.770

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: MSD-01.14A TK 33A to HD TK							
MSD-01.14A-01N	0.322	0.205	0.071	0.071	535,803	No	220,317
MSD-01.14A-02P	0.322	0.322	0.071	0.071	230,417,056	No	112,406
MSD-01.14A-03T	0.322	0.322	0.071	0.071	207,364,944	No	112,406
MSD-01.14A-03T (D/S)	0.000	0.322	0.071	0.071	207,364,944	No	112,406
MSD-01.14A-04P	0.324	0.324	0.071	0.071	100,000,000	No	112,406
MSD-01.15A-01E	0.000	0.322	0.061	0.061	100,000,000	No	112,406
MSD-01.15A-01E (D/S)	0.000	0.280	0.047	0.047	111,898,120	No	112,406
MSD-01.15A-02V	0.280	0.280	0.059	0.059	65,855,548	No	112,406
MSD-01.15A-03P	0.280	0.280	0.055	0.055	152,439,408	No	112,406
MSD-01.15A-04E	0.341	0.341	0.047	0.047	113,916,600	No	112,406
MSD-01.15A-05E	0.322	0.322	0.047	0.047	107,818,480	No	112,406
MSD-01.15A-06P	0.285	0.285	0.055	0.055	106,769,912	No	112,406
MSD-01.15A-07E	0.280	0.280	0.047	0.047	93,735,584	No	112,406
MSD-01.15A-08P	0.280	0.280	0.055	0.055	134,134,176	No	112,406
MSD-01.15A-21P	0.000	0.280	0.055	0.055	100,000,000	No	112,406
MSD-01.15A-09E	0.302	0.302	0.047	0.047	101,216,472	No	112,406
MSD-01.15A-10P	0.306	0.306	0.055	0.055	147,256,224	No	112,406
MSD-01.15A-11E	0.290	0.290	0.047	0.047	97,164,536	No	112,406
MSD-01.15A-12P	0.272	0.272	0.055	0.055	130,000,616	No	112,406
MSD-01.15A-13E	0.334	0.334	0.047	0.047	111,689,528	No	112,406
MSD-01.15A-14P	0.281	0.281	0.055	0.055	134,647,712	No	112,406
MSD-01.15A-22P	0.281	0.281	0.055	0.055	100,000,000	No	112,406
MSD-01.15A-15E	0.331	0.331	0.047	0.047	110,728,080	No	112,406
MSD-01.15A-16P	0.284	0.284	0.055	0.055	136,184,000	No	112,406
MSD-01.15A-17E	0.280	0.280	0.047	0.047	93,735,584	No	112,406
MSD-01.15A-18P	0.280	0.280	0.055	0.055	134,134,176	No	112,406
MSD-01.15A-19E	0.280	0.280	0.047	0.047	93,735,584	No	112,406
MSD-01.15A-20N	0.280	0.240	0.055	0.055	555,413	Yes	220,317

Sorted By: Flow Order

Component Name	Init.	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop			
====>Grouped by Line: MSD-01.14B TK 33B to HD TK						
MSD-01.14B-01N	0.322	0.205	0.071	0.071	No	220,317
MSD-01.14B-02P	0.322	0.322	0.071	0.071	No	112,406
MSD-01.14B-03T	0.322	0.322	0.071	0.071	No	112,406
MSD-01.14B-03T (D/S)	0.000	0.322	0.071	0.071	No	112,406
MSD-01.14B-04P	0.322	0.322	0.071	0.071	No	112,406
MSD-01.15B-01E	0.000	0.322	0.061	0.061	No	112,406
MSD-01.15B-01E (D/S)	0.000	0.280	0.047	0.047	No	112,406
MSD-01.15B-02E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.15B-03P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.15B-04E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.15B-05V	0.280	0.280	0.059	0.059	No	112,406
MSD-01.15B-06P	0.265	0.265	0.055	0.055	No	112,406
MSD-01.15B-07E	0.309	0.309	0.047	0.047	No	112,406
MSD-01.15B-08P	0.299	0.299	0.055	0.055	No	112,406
MSD-01.15B-09E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.15B-10P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.15B-11E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.15B-12P_1	0.280	0.280	0.055	0.055	No	112,406
MSD-01.15B-12P_2	0.280	0.183	0.055	0.055	No	220,317
MSD-01.15B-30P	0.280	0.237	0.055	0.055	No	220,317
MSD-01.15B-13E	0.280	0.209	0.055	0.055	Yes	220,317
MSD-01.15B-14P	0.280	0.203	0.055	0.055	Yes	220,317
MSD-01.15B-15E	0.280	0.169	0.055	0.055	Yes	220,317
MSD-01.15B-16P	0.280	0.254	0.055	0.055	Yes	220,317
MSD-01.15B-31P_1	0.280	0.237	0.055	0.055	No	220,317
MSD-01.15B-31P_2	0.280	0.280	0.055	0.055	No	112,406
MSD-01.15B-17E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.15B-18P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.15B-19E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.15B-20P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.15B-21E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.15B-22P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.15B-23E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.15B-24P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.15B-32P	0.280	0.280	0.055	0.055	No	112,406
MSD-01.15B-25E	0.280	0.280	0.047	0.047	No	112,406
MSD-01.15B-26P	0.278	0.278	0.055	0.055	No	112,406
MSD-01.15B-27E	0.341	0.341	0.047	0.047	No	112,406
MSD-01.15B-28P	0.282	0.282	0.055	0.055	No	112,406

Sorted By:Flow Order

Component Name	Init.	Pred.[1]	Thickness (in)	Thoop	Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
====>Grouped by Line: MSD-01.14B TK 33B to HD TK								
MSD-01.15B-29N	0.280	0.243	0.055	0.055	0.055	564,414	Yes	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: PD: PRESEPRTR DRAINS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.643

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			

=====>Grouped by Line: PD-01.1 PRESEPR 1B DR to HDR

PD-01.1-01N	0.375	0.375	0.094	0.094	100,000,000	No	171,511
PD-01.2-01R	0.000	0.331	0.116	0.116	2,080,753	No	171,511
PD-01.2-01R (D/S)	0.000	0.297	0.089	0.089	1,311,015	No	171,511
PD-01.2-02B	0.365	0.291	0.089	0.089	1,162,166	No	171,511
PD-01.2-03P	0.365	0.312	0.089	0.089	1,797,255	No	171,511
PD-01.2-04E	0.365	0.287	0.089	0.089	1,076,343	No	171,511
PD-01.2-05P	0.365	0.312	0.089	0.089	1,797,255	No	171,511
PD-01.2-06E	0.365	0.287	0.089	0.089	1,076,343	No	171,511
PD-01.2-07P	0.365	0.312	0.089	0.089	1,797,255	No	171,511
PD-01.2-08E	0.365	0.295	0.089	0.089	1,258,391	No	171,511
PD-01.2-09V	0.365	0.259	0.095	0.095	660,435	No	171,511
PD-01.2-10O	0.365	0.303	0.089	0.089	209,374	No	171,511
PD-02.1-01T (BR/SE)	0.000	0.267	0.083	0.083	803,574	No	171,511
PD-02.1-01T (D/S)	0.000	0.327	0.132	0.132	1,707,569	No	171,511

Sorted By:Flow Order

=====>Grouped by Line: PD-01.3 PRESEPR 1A DR to HDR

PD-01.3-01N	0.375	0.375	0.094	0.094	100,000,000	No	171,511
PD-01.4-01R	0.000	0.357	0.116	0.116	2,327,628	Yes	171,511
PD-01.4-01R (D/S)	0.000	0.403	0.089	0.089	1,977,934	Yes	171,511
PD-01.4-02B	0.365	0.340	0.089	0.089	1,442,236	Yes	171,511
PD-01.4-03P	0.365	0.329	0.089	0.089	1,934,665	Yes	171,511
PD-01.4-04E	0.365	0.295	0.089	0.089	1,258,391	No	171,511
PD-01.4-05P	0.365	0.318	0.089	0.089	2,100,365	No	171,511
PD-01.4-06E	0.365	0.287	0.089	0.089	1,076,343	No	171,511
PD-01.4-07P	0.365	0.312	0.089	0.089	1,797,255	No	171,511
PD-01.4-08E	0.365	0.295	0.089	0.089	1,258,391	No	171,511
PD-01.4-09V	0.365	0.259	0.095	0.095	660,435	No	171,511
PD-01.4-10O	0.380	0.131	0.089	0.089	41,439	No	171,511

Sorted By:Flow Order

=====>Grouped by Line: PD-01.5 PRESEPR 2B DR to HDR

PD-01.5-01N	0.375	0.375	0.094	0.094	100,000,000	No	171,511
PD-01.5-01R	0.000	0.357	0.116	0.116	2,327,628	Yes	171,511
PD-01.5-01R (D/S)	0.000	0.403	0.089	0.089	1,977,934	Yes	171,511
PD-01.5-02B	0.365	0.340	0.089	0.089	1,442,236	Yes	171,511
PD-01.5-03P	0.365	0.329	0.089	0.089	1,934,665	Yes	171,511
PD-01.5-04E	0.365	0.295	0.089	0.089	1,258,391	No	171,511
PD-01.5-05P	0.365	0.318	0.089	0.089	2,100,365	No	171,511
PD-01.5-06E	0.365	0.287	0.089	0.089	1,076,343	No	171,511
PD-01.5-07P	0.365	0.312	0.089	0.089	1,797,255	No	171,511
PD-01.5-08E	0.365	0.295	0.089	0.089	1,258,391	No	171,511
PD-01.5-09V	0.365	0.259	0.095	0.095	660,435	No	171,511
PD-01.5-10O	0.380	0.131	0.089	0.089	41,439	No	171,511

Sorted By:Flow Order

Component Name	Thickness (in)		Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]			
===>Grouped by Line: PD-01.5 PRESEP 2B DR to HDR					
PD-01.5-01N	0.375	0.375	0.094	No	171,511
PD-01.6-01R	0.000	0.331	0.116	No	171,511
PD-01.6-01R (D/S)	0.000	0.297	0.089	No	171,511
PD-01.6-02B	0.365	0.291	0.089	No	171,511
PD-01.6-03P	0.365	0.312	0.089	No	171,511
PD-01.6-04E	0.365	0.287	0.089	No	171,511
PD-01.6-05P	0.365	0.312	0.089	No	171,511
PD-01.6-06E	0.365	0.287	0.089	No	171,511
PD-01.6-07P	0.365	0.312	0.089	No	171,511
PD-01.6-08E	0.365	0.287	0.089	No	171,511
PD-01.6-09P	0.365	0.297	0.089	No	171,511
PD-01.6-10E	0.365	0.287	0.089	No	171,511
PD-01.6-11P	0.365	0.297	0.089	No	171,511
PD-01.6-12E	0.365	0.326	0.089	Yes	171,511
PD-01.6-13V	0.365	0.259	0.095	No	171,511
PD-01.6-14O	0.365	0.257	0.089	No	171,511

===>Grouped by Line: PD-01.7 PRESEP 2A DR to HDR

PD-01.7-01N	0.375	0.375	0.094	No	171,511
PD-01.8-01R	0.000	0.331	0.116	No	171,511
PD-01.8-01R (D/S)	0.000	0.297	0.089	No	171,511
PD-01.8-02B	0.365	0.291	0.089	No	171,511
PD-01.8-03P	0.365	0.312	0.089	No	171,511
PD-01.8-04E	0.365	0.287	0.089	No	171,511
PD-01.8-05P	0.365	0.312	0.089	No	171,511
PD-01.8-06E	0.365	0.287	0.089	No	171,511
PD-01.8-07P	0.365	0.312	0.089	No	171,511
PD-01.8-08E	0.365	0.287	0.089	No	171,511
PD-01.8-09P	0.365	0.312	0.089	No	171,511
PD-01.8-10E	0.365	0.287	0.089	No	171,511
PD-01.8-11P	0.365	0.312	0.089	No	171,511
PD-01.8-12E	0.365	0.295	0.089	No	171,511
PD-01.8-13V	0.365	0.259	0.095	No	171,511
PD-01.8-14O	0.365	0.130	0.089	No	171,511

===>Grouped by Line: PD-02.2 PRESEP HDR to HD TK

PD-02.2-01T (BR/SE)	0.000	0.300	0.083	No	171,511
PD-02.2-01T (D/S)	0.000	0.453	0.132	No	171,511
PD-02.4-22T	0.375	0.322	0.132	No	171,511

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
===>Grouped by Line: PD-02.2 PRESEP HDR to HD TK							
PD-02.4-22T (D/S)	0.000	0.322	0.132	0.132	No	1,533,200	171,511
PD-02.2-01T	0.375	0.439	0.132	0.132	No	3,286,230	171,511
===>Grouped by Line: PD-02.3 PRESEP HDR to HD TK							
PD-02.3-01T (BR/SE)	0.000	0.499	0.083	0.083	No	2,130,477	171,511
PD-02.3-01T (D/S)	0.000	0.437	0.132	0.132	No	1,268,961	171,511
PD-02.3-01T	0.375	0.446	0.132	0.132	No	1,852,986	171,511
===>Grouped by Line: PD-02.4 PRESEP HDR to HD TK							
PD-02.4-01T (BR/SE)	0.000	0.344	0.083	0.083	No	1,340,576	171,511
PD-02.4-01T	0.375	0.403	0.132	0.132	No	1,127,673	171,511
PD-02.4-01T (D/S)	0.000	0.345	0.132	0.132	No	690,808	171,511
PD-02.4-02E	0.375	0.351	0.132	0.132	No	789,525	83,116
PD-02.4-03P	0.375	0.355	0.132	0.132	No	926,245	83,116
PD-02.4-04E	0.375	0.351	0.132	0.132	No	789,525	83,116
PD-02.4-05P	0.375	0.359	0.132	0.132	No	1,209,531	83,116
PD-02.4-22E	0.000	0.351	0.132	0.132	No	789,525	83,116
PD-02.4-23R	0.000	0.357	0.132	0.132	No	1,070,779	83,116
PD-02.4-23R (D/S)	0.000	0.619	0.248	0.248	No	5,364,844	83,116
PD-02.4-24P	0.000	0.620	0.248	0.248	No	6,454,911	83,116
PD-02.4-25T	0.000	0.615	0.248	0.248	No	3,184,711	83,116
PD-02.4-25T (BR/SE)	0.000	0.343	0.132	0.132	No	562,021	83,116
PD-02.4-27P	0.000	0.362	0.132	0.132	No	1,533,285	83,116
PD-02.4-28E	0.000	0.351	0.132	0.132	No	789,525	83,116
PD-02.4-06E	0.375	0.351	0.132	0.132	No	789,525	83,116
PD-02.4-07P	0.375	0.273	0.132	0.132	No	586,177	171,511
PD-02.4-08E	0.375	0.270	0.132	0.132	No	555,518	171,511
PD-02.4-09P	0.375	0.305	0.132	0.132	No	1,046,055	171,511
PD-02.4-10E	0.375	0.270	0.132	0.132	No	555,518	171,511
PD-02.4-11P	0.375	0.305	0.132	0.132	No	1,046,055	171,511
PD-02.4-12E	0.375	0.257	0.132	0.132	No	449,456	171,511
PD-02.4-13P	0.375	0.295	0.132	0.132	No	869,462	171,511
PD-02.4-14E	0.375	0.270	0.132	0.132	No	555,518	171,511
PD-02.4-15P	0.375	0.305	0.132	0.132	No	1,046,055	171,511
PD-02.4-16E	0.375	0.346	0.132	0.132	Yes	771,124	171,511
PD-02.4-17P	0.375	0.336	0.132	0.132	Yes	1,089,253	171,511
PD-02.4-18E	0.375	0.257	0.132	0.132	No	449,456	171,511
PD-02.4-19P	0.375	0.295	0.132	0.132	No	869,462	171,511
PD-02.4-29R	0.000	0.483	0.132	0.132	No	1,817,514	83,116

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
===>Grouped by Line: PD-02.4 PRESEP HDR to HD TK							
PD-02.4-29R (D/S)	0.000	0.286	0.071	0.071	504,096	No	83,116
PD-02.4-30V	0.000	0.221	0.076	0.076	122,183	No	83,116
PD-02.4-31R	0.000	0.277	0.071	0.071	79,967,056	No	83,116
PD-02.4-31R (D/S)	0.000	0.375	0.132	0.132	100,000,000	No	83,116
PD-02.4-32P	0.000	0.375	0.132	0.132	100,000,000	No	83,116
PD-02.4-200	0.421	0.139	0.132	0.132	3,036	No	171,511
PD-02.4-21N	0.899	0.777	0.114	0.114	1,939,184	Yes	171,511
PD-02.4-25T (D/S)	0.000	0.625	0.248	0.248	100,000,000	No	0
PD-02.4-26P	0.000	0.625	0.248	0.248	100,000,000	No	0

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: RHD: RH 31 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.091

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====>Grouped by Line: RHD-01.1A_1 RH 31A to TK 31A						
RHD01.1A-01N	0.432	0.520	0.233 0.233	846,699	Yes	220,317
RHD01.1A-02P	0.432	0.356	0.233 0.233	673,079	Yes	220,317
RHD01.1A-03N	0.432	0.359	0.233 0.233	465,221	Yes	220,317
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR						
RHD01.1A-04N	0.432	0.362	0.233 0.233	380,279	No	220,317
RHD01.1A-05P	0.432	0.374	0.233 0.233	769,557	Yes	220,317
RHD01.1A-06E	0.432	0.330	0.233 0.233	387,831	No	220,317
RHD01.1A-07P_1	0.432	0.363	0.233 0.233	768,428	No	220,317
RHD01.1A-07P_2	0.432	0.402	0.233 0.233	2,261,984	No	220,317
RHD01.1A-08E	0.432	0.330	0.233 0.233	387,831	No	220,317
RHD01.1A-09P_1	0.432	0.363	0.233 0.233	768,428	No	220,317
RHD01.1A-09P_2	0.432	0.402	0.233 0.233	2,261,984	No	220,317
RHD01.1A-10E	0.432	0.330	0.233 0.233	387,831	No	220,317
RHD01.1A-11P	0.432	0.363	0.233 0.233	768,428	No	220,317
RHD01.1A-12E	0.432	0.330	0.233 0.233	387,831	No	220,317
RHD01.1A-13P_1	0.432	0.363	0.233 0.233	768,428	No	220,317
RHD01.1A-13P_2	0.432	0.402	0.233 0.233	2,261,984	No	220,317
RHD01.1A-14E	0.432	0.341	0.233 0.233	483,942	No	220,317
RHD01.1A-15P	0.432	0.372	0.233 0.233	928,452	No	220,317
RHD01.1A-16E	0.432	0.330	0.233 0.233	387,831	No	220,317
RHD01.1A-17P	0.432	0.363	0.233 0.233	768,428	No	220,317
RHD01.1A-18E	0.432	0.330	0.233 0.233	387,831	No	220,317
RHD01.1A-19P	0.432	0.363	0.233 0.233	768,428	No	220,317
RHD01.1A-20E	0.432	0.330	0.233 0.233	387,831	No	220,317
RHD01.1A-21P_1	0.432	0.344	0.233 0.233	511,724	No	220,317
RHD01.1A-21P_2	0.432	0.402	0.233 0.233	2,261,984	No	220,317
RHD01.1A-22E	0.432	0.341	0.233 0.233	483,942	No	220,317
RHD01.1A-23P	0.432	0.372	0.233 0.233	928,452	No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR							
RHD01.1A-24E	0.432	0.341	0.233	0.233	483,942	No	220,317
RHD01.1A-25E	0.432	0.336	0.233	0.233	433,140	No	220,317
RHD01.1A-26P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-27E	0.432	0.336	0.233	0.233	433,140	No	220,317
RHD01.1A-28P_1	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-28P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1A-29E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-30P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-31E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-32P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-33E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-34P_1	0.475	0.385	0.233	0.233	678,940	No	220,317
RHD01.1A-34P_2	0.475	0.444	0.233	0.233	2,748,432	No	220,317
RHD01.1A-35F	0.432	0.265	0.233	0.233	77,271	No	220,317
RHD01.1A-36P	0.462	0.428	0.233	0.233	2,357,898	Yes	220,317
RHD01.1A-37T	0.432	0.350	0.233	0.233	572,844	No	220,317
RHD01.1A-37T (D/S)	0.000	0.350	0.233	0.233	572,844	No	220,317
RHD01.1A-38P	0.432	0.377	0.233	0.233	1,061,806	No	220,317
RHD01.1A-39E	0.432	0.341	0.233	0.233	483,942	No	220,317
RHD01.1A-40P	0.432	0.372	0.233	0.233	928,452	No	220,317
RHD01.1A-41E	0.432	0.341	0.233	0.233	483,942	No	220,317
RHD01.1A-42P_1	0.432	0.372	0.233	0.233	928,452	No	220,317
RHD01.1A-42P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1A-43E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-44P_1	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-44P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1A-45E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-46P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1A-47E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1A-48P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.2A-01R	0.000	0.363	0.233	0.233	768,428	No	220,317
RHD01.2A-01R (D/S)	0.000	0.238	0.158	0.158	335,376	No	220,317
RHD02.1A-01V	0.337	0.501	0.132	0.132	301,100,000	No	220,317
RHD02.1A-02R	0.000	0.324	0.158	0.158	447,426	No	33,725
RHD02.1A-02R (D/S)	0.000	0.425	0.233	0.233	944,198	No	33,725
RHD02.2A-01P	0.432	0.389	0.233	0.233	917,809	Yes	151,585
RHD02.2A-02E	0.473	0.317	0.233	0.233	324,913	Yes	220,317
RHD02.2A-03P	0.432	0.332	0.233	0.233	585,562	Yes	220,317
RHD02.2A-04E	0.432	0.373	0.233	0.233	627,515	Yes	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR							
RHD02.2A-05P	0.432	0.372	0.233	0.233	928,452	No	220,317
====>Grouped by Line: RHD-01.1B_1 RH 31B to TK 31B							
RHD01.1B-01N	0.432	0.295	0.233	0.233	181,674	No	220,317
RHD01.1B-02P	0.432	0.358	0.233	0.233	681,502	No	220,317
RHD01.1B-03N	0.432	0.322	0.233	0.233	328,363	No	220,317
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR							
RHD01.1B-04N	0.432	0.295	0.233	0.233	181,674	No	220,317
RHD01.1B-05P	0.432	0.358	0.233	0.233	681,502	No	220,317
RHD01.1B-06E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-07P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-08E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-09P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-10E	0.432	0.341	0.233	0.233	483,942	No	220,317
RHD01.1B-11P	0.432	0.372	0.233	0.233	928,452	No	220,317
RHD01.1B-12E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-13P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-14F	0.432	0.265	0.233	0.233	77,271	No	220,317
RHD01.1B-15P	0.432	0.417	0.233	0.233	2,233,337	Yes	220,317
RHD01.1B-16E	0.432	0.354	0.233	0.233	480,606	Yes	220,317
RHD01.1B-17P	0.432	0.415	0.233	0.233	1,074,628	Yes	220,317
RHD01.1B-18E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-19P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-20E	0.432	0.341	0.233	0.233	483,942	No	220,317
RHD01.1B-21P_1	0.432	0.372	0.233	0.233	928,452	No	220,317
RHD01.1B-21P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1B-22E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-23P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-24E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-25P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-26E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-27P_1	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-27P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1B-28E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-29P	0.473	0.402	0.233	0.233	972,809	No	220,317
RHD01.1B-30E	0.473	0.345	0.233	0.233	435,043	Yes	220,317
RHD01.1B-31P	0.469	0.390	0.233	0.233	706,132	Yes	220,317
RHD01.1B-32E	0.432	0.330	0.233	0.233	387,831	No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR							
RHD01.1B-33P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-34T	0.432	0.350	0.233	0.233	572,844	No	220,317
RHD01.1B-34T (D/S)	0.000	0.350	0.233	0.233	572,844	No	220,317
RHD01.1B-35E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-36P	0.432	0.344	0.233	0.233	511,724	No	220,317
RHD01.1B-37E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-38P_1	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-38P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1B-39E	0.432	0.364	0.233	0.233	523,196	Yes	220,317
RHD01.1B-40P	0.432	0.405	0.233	0.233	1,012,098	Yes	220,317
RHD01.1B-41E	0.432	0.363	0.233	0.233	519,214	Yes	220,317
RHD01.1B-42P_1	0.432	0.420	0.233	0.233	1,100,495	Yes	220,317
RHD01.1B-42P_2	0.432	0.402	0.233	0.233	2,261,984	No	220,317
RHD01.1B-43E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-44P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-45E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-46P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-47E	0.432	0.341	0.233	0.233	483,942	No	220,317
RHD01.1B-48P	0.432	0.372	0.233	0.233	928,452	No	220,317
RHD01.1B-49E	0.432	0.330	0.233	0.233	387,831	No	220,317
RHD01.1B-50P	0.432	0.363	0.233	0.233	768,428	No	220,317
RHD01.1B-51E	0.432	0.394	0.233	0.233	641,942	Yes	220,317
RHD01.1B-52P	0.476	0.402	0.233	0.233	967,985	Yes	220,317
RHD01.2B-01R	0.000	0.450	0.233	0.233	1,282,312	Yes	220,317
RHD01.2B-01R (D/S)	0.401	0.333	0.158	0.158	702,105	Yes	220,317
RHD02.1B-01V	0.337	0.596	0.132	0.132	378,736,192	No	220,317
RHD02.1B-02R	0.000	0.299	0.158	0.158	378,911	No	99,292
RHD02.1B-02R (D/S)	0.000	0.411	0.233	0.233	875,445	No	99,292
RHD02.2B-01P	0.432	0.398	0.233	0.233	970,847	No	151,585
RHD02.2B-02E	0.432	0.357	0.233	0.233	495,323	Yes	220,317
RHD02.2B-03P	0.432	0.354	0.233	0.233	711,552	Yes	220,317
RHD02.2B-04E	0.432	0.341	0.233	0.233	483,942	No	220,317
RHD02.2B-05P	0.432	0.372	0.233	0.233	928,452	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: RHD: RH 32A TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.356

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)			Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]	Thoop Tcrit			
====>Grouped by Line: RHD-01.3A_1 RH 32A to TK 32A						
RHD01.3A-01N	0.432	0.277	0.233 0.233	No	115,697	220,317
RHD01.3A-02P	0.432	0.368	0.233 0.233	Yes	656,045	220,317
RHD01.3A-03N	0.432	0.308	0.233 0.233	No	245,891	220,317
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR						
RHD01.3A-04N	0.432	0.385	0.233 0.233	No	398,648	220,317
RHD01.3A-05P	0.432	0.421	0.233 0.233	Yes	912,979	220,317
RHD01.3A-06E	0.432	0.379	0.233 0.233	Yes	516,596	220,317
RHD01.3A-07P	0.432	0.355	0.233 0.233	No	636,473	220,317
RHD01.3A-08E	0.432	0.317	0.233 0.233	No	298,672	220,317
RHD01.3A-09P	0.432	0.355	0.233 0.233	No	636,473	220,317
RHD01.3A-10E	0.432	0.317	0.233 0.233	No	298,672	220,317
RHD01.3A-11P	0.432	0.355	0.233 0.233	No	636,473	220,317
RHD01.3A-12E	0.432	0.317	0.233 0.233	No	298,672	220,317
RHD01.3A-13P	0.432	0.355	0.233 0.233	No	636,473	220,317
RHD01.3A-14E	0.432	0.317	0.233 0.233	No	298,672	220,317
RHD01.3A-15R	0.000	0.345	0.233 0.233	No	524,878	220,317
RHD01.3A-15R (D/S)	0.000	0.445	0.303 0.303	No	1,040,014	220,317
RHD01.4A-01P_1	0.500	0.454	0.303 0.303	No	1,329,033	220,317
RHD01.4A-01P_2	0.500	0.480	0.303 0.303	No	3,536,084	220,317
RHD01.5A-01R	0.000	0.457	0.303 0.303	No	1,355,566	220,317
RHD01.5A-01R (D/S)	0.000	0.454	0.233 0.233	No	1,605,777	220,317
RHD01.5A-02P	0.432	0.364	0.233 0.233	Yes	854,533	220,317
RHD01.5A-03F	0.432	0.244	0.233 0.233	No	23,033	220,317
RHD01.5A-04P	0.432	0.407	0.233 0.233	Yes	1,870,006	220,317
RHD01.5A-05R	0.000	0.462	0.233 0.233	Yes	1,070,972	220,317
RHD01.5A-05R (D/S)	0.000	0.472	0.303 0.303	Yes	1,239,811	220,317
RHD01.6A-01P	0.500	0.459	0.303 0.303	Yes	1,373,186	220,317
RHD01.6A-02T	0.500	0.445	0.303 0.303	No	1,040,014	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR							
RHD01.6A-02T (D/S)	0.000	0.445	0.303	0.303	1,040,014	No	220,317
RHD01.6A-03P_1	0.500	0.463	0.303	0.303	1,762,561	No	220,317
RHD01.6A-03P_2	0.500	0.480	0.303	0.303	3,536,084	No	220,317
RHD01.6A-04E	0.500	0.432	0.303	0.303	766,618	No	220,317
RHD01.6A-05P	0.500	0.454	0.303	0.303	1,329,033	No	220,317
RHD01.6A-06E	0.500	0.432	0.303	0.303	766,618	No	220,317
RHD01.6A-07P	0.500	0.441	0.303	0.303	949,696	No	220,317
RHD01.6A-08E	0.500	0.432	0.303	0.303	766,618	No	220,317
RHD01.6A-09P	0.500	0.454	0.303	0.303	1,329,033	No	220,317
RHD01.6A-10E	0.500	0.432	0.303	0.303	766,618	No	220,317
RHD01.6A-11P	0.500	0.454	0.303	0.303	1,329,033	No	220,317
RHD01.6A-12E	0.500	0.432	0.303	0.303	766,618	No	220,317
RHD01.6A-13P	0.500	0.454	0.303	0.303	1,329,033	No	220,317
RHD01.6A-14E	0.500	0.432	0.303	0.303	766,618	No	220,317
RHD01.6A-15P_1	0.500	0.454	0.303	0.303	1,329,033	No	220,317
RHD01.6A-15P_2	0.500	0.480	0.303	0.303	3,536,084	No	220,317
RHD01.7A-01R	0.000	0.454	0.303	0.303	1,329,033	No	220,317
RHD01.7A-01R (D/S)	0.000	0.376	0.233	0.233	1,041,521	No	220,317
RHD01.7A-02E	0.432	0.317	0.233	0.233	298,672	No	220,317
RHD01.7A-03P	0.432	0.333	0.233	0.233	408,633	No	220,317
RHD01.7A-04E	0.458	0.365	0.233	0.233	458,701	Yes	220,317
RHD01.8A-01R	0.000	0.379	0.233	0.233	546,641	Yes	220,317
RHD01.8A-01R (D/S)	0.000	0.324	0.158	0.158	346,189	Yes	220,317
RHD01.8A-02P	0.376	0.274	0.158	0.158	301,303	Yes	220,317
RHD02.3A-01V	0.337	0.318	0.132	0.132	134,482,784	No	220,317
RHD02.3A-02R	0.000	0.365	0.158	0.158	493,109	Yes	151,585
RHD02.3A-02R (D/S)	0.000	0.396	0.233	0.233	710,962	Yes	151,585
RHD02.4A-01P	0.432	0.379	0.233	0.233	764,967	Yes	151,585
RHD02.4A-02E	0.473	0.371	0.233	0.233	474,085	No	220,317
RHD02.4A-03P	0.432	0.355	0.233	0.233	636,473	No	220,317
RHD02.4A-04E	0.432	0.330	0.233	0.233	383,975	No	220,317
RHD02.4A-05P	0.432	0.364	0.233	0.233	778,502	No	220,317
RHD02.4A-06L	0.594	0.553	0.378	0.378	1,177,423	Yes	220,317
RHD02.4A-06L (D/S)	0.000	0.534	0.378	0.378	1,045,490	No	220,317
RHD02.7A-01P	0.594	0.558	0.378	0.378	2,012,537	No	220,317

Sorted By:Flow Order

Note:
[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: RHD: RH 32B TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.055

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Terit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: RHD-01.3B_1 RH 32B to TK 32B							
RHD01.3B-01N	0.432	0.733	0.233	0.233	1,007,941	Yes	220,317
RHD01.3B-02P	0.432	0.360	0.233	0.233	474,995	Yes	220,317
RHD01.3B-03N	0.432	0.375	0.233	0.233	358,929	Yes	220,317
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR							
RHD01.3B-04N	0.432	0.366	0.233	0.233	269,522	Yes	220,317
RHD01.3B-05P	0.432	0.388	0.233	0.233	581,393	Yes	220,317
RHD01.3B-06E	0.432	0.336	0.233	0.233	279,992	Yes	220,317
RHD01.3B-07P	0.432	0.394	0.233	0.233	648,740	Yes	220,317
RHD01.3B-08E	0.432	0.366	0.233	0.233	362,305	Yes	220,317
RHD01.3B-09P	0.432	0.365	0.233	0.233	534,989	Yes	220,317
RHD01.3B-10E	0.432	0.367	0.233	0.233	365,086	Yes	220,317
RHD01.3B-11P	0.432	0.383	0.233	0.233	606,687	Yes	220,317
RHD01.3B-12E	0.432	0.389	0.233	0.233	425,061	Yes	220,317
RHD01.3B-13P	0.432	0.376	0.233	0.233	578,445	Yes	220,317
RHD01.3B-14E	0.432	0.372	0.233	0.233	378,717	Yes	220,317
RHD01.3B-15P	0.432	0.371	0.233	0.233	558,271	Yes	220,317
RHD01.3B-16E	0.432	0.327	0.233	0.233	257,735	Yes	220,317
RHD01.3B-17P	0.432	0.373	0.233	0.233	563,782	Yes	220,317
RHD01.3B-18E	0.432	0.389	0.233	0.233	426,755	Yes	220,317
RHD01.3B-19P	0.432	0.361	0.233	0.233	515,365	Yes	220,317
RHD01.3B-20R	0.000	0.419	0.233	0.233	668,914	Yes	220,317
RHD01.3B-20R (D/S)	0.000	0.721	0.378	0.378	2,961,764	Yes	220,317
RHD01.4B-01P_1	0.594	0.546	0.378	0.378	1,741,974	Yes	220,317
RHD01.4B-01P_2	0.594	0.577	0.378	0.378	4,681,058	No	220,317
RHD01.5B-01R	0.000	0.555	0.378	0.378	1,832,821	No	220,317
RHD01.5B-01R (D/S)	0.000	0.360	0.233	0.233	710,809	No	220,317
RHD01.5B-02P	0.458	0.376	0.233	0.233	711,358	No	220,317
RHD01.5B-03F	0.432	0.188	0.233	0.233	-71,644	No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR							
RHD01.5B-04P	0.475	0.404	0.233	0.233	1,418,090	Yes	220,317
RHD01.5B-05R	0.000	0.836	0.233	0.233	2,171,754	Yes	220,317
RHD01.5B-05R (D/S)	0.000	0.720	0.378	0.378	2,951,687	Yes	220,317
RHD01.6B-01P	0.634	0.564	0.378	0.378	1,899,339	Yes	220,317
RHD01.6B-02E	0.594	0.567	0.378	0.378	1,323,751	Yes	220,317
RHD01.6B-03P_1	0.594	0.530	0.378	0.378	1,578,315	Yes	220,317
RHD01.6B-03P_2	0.594	0.577	0.378	0.378	4,681,058	No	220,317
RHD01.6B-04E	0.594	0.542	0.378	0.378	1,290,300	No	220,317
RHD01.6B-05P	0.594	0.560	0.378	0.378	2,137,989	No	220,317
RHD01.6B-06E	0.594	0.536	0.378	0.378	1,107,015	No	220,317
RHD01.6B-07P	0.594	0.555	0.378	0.378	1,832,821	No	220,317
RHD01.6B-08E	0.594	0.536	0.378	0.378	1,107,015	No	220,317
RHD01.6B-09P_1	0.594	0.555	0.378	0.378	1,832,821	No	220,317
RHD01.6B-09P_2	0.594	0.577	0.378	0.378	4,681,058	No	220,317
RHD01.6B-10E	0.594	0.536	0.378	0.378	1,107,015	No	220,317
RHD01.6B-11E	0.594	0.536	0.378	0.378	1,107,015	No	220,317
RHD01.6B-12P	0.594	0.544	0.378	0.378	1,343,280	No	220,317
RHD01.6B-13E	0.594	0.536	0.378	0.378	1,107,015	No	220,317
RHD01.6B-14P	0.594	0.555	0.378	0.378	1,832,821	No	220,317
RHD01.6B-15E	0.594	0.536	0.378	0.378	1,107,015	No	220,317
RHD01.6B-16P	0.594	0.555	0.378	0.378	1,832,821	No	220,317
RHD01.6B-17T	0.594	0.547	0.378	0.378	1,459,838	No	220,317
RHD01.6B-17T (D/S)	0.000	0.547	0.378	0.378	1,459,838	No	220,317
RHD01.6B-18P	0.594	0.563	0.378	0.378	2,392,296	No	220,317
RHD01.6B-19E	0.594	0.536	0.378	0.378	1,107,015	No	220,317
RHD01.6B-20P_1	0.594	0.555	0.378	0.378	1,832,821	No	220,317
RHD01.6B-20P_2	0.594	0.577	0.378	0.378	4,681,058	No	220,317
RHD01.6B-21T	0.594	0.547	0.378	0.378	1,459,838	No	220,317
RHD01.6B-21T (D/S)	0.000	0.547	0.378	0.378	1,459,838	No	220,317
RHD01.6B-22P_1	0.594	0.563	0.378	0.378	2,392,296	No	220,317
RHD01.6B-22P_2	0.594	0.577	0.378	0.378	4,681,058	No	220,317
RHD01.7B-01R	0.000	0.555	0.378	0.378	1,832,821	No	220,317
RHD01.7B-01R (D/S)	0.000	0.360	0.233	0.233	710,809	No	220,317
RHD01.7B-02P	0.432	0.352	0.233	0.233	599,220	No	220,317
RHD01.7B-03R	0.000	0.521	0.233	0.233	1,038,461	Yes	220,317
RHD01.7B-03R (D/S)	0.000	0.502	0.378	0.378	1,070,856	Yes	220,317
RHD01.8B-01P_1	0.594	0.546	0.378	0.378	1,739,674	Yes	220,317
RHD01.8B-01P_2	0.594	0.577	0.378	0.378	4,681,058	No	220,317
RHD01.8B-02E	0.594	0.542	0.378	0.378	1,290,300	No	220,317

Sorted By:Flow Order

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR						
RHD01.8B-03P	0.594	0.560	0.378	2,137,989	No	220,317
RHD01.8B-04E	0.594	0.536	0.378	1,107,015	No	220,317
RHD01.8B-05P	0.594	0.555	0.378	1,832,821	No	220,317
RHD01.8B-06E	0.594	0.678	0.378	2,101,489	Yes	220,317
RHD01.9B-01R	0.000	0.570	0.378	1,986,744	Yes	220,317
RHD01.9B-01R (D/S)	0.000	0.317	0.158	455,780	Yes	220,317
RHD02.3B-01V	0.337	0.621	0.132	273,256,288	No	220,317
RHD02.3B-02R	0.000	0.434	0.158	507,537	No	66,848
RHD02.3B-02R (D/S)	0.000	0.797	0.378	3,617,238	No	66,848
RHD02.4B-01P	0.594	0.479	0.378	1,044,540	No	151,585
RHD02.4B-02E	0.000	0.624	0.378	1,723,226	Yes	220,317
RHD02.4B-03P	0.594	0.558	0.378	1,866,221	Yes	220,317
RHD02.4B-04E	0.594	0.542	0.378	1,290,300	No	220,317
RHD02.4B-05P	0.594	0.560	0.378	2,137,989	No	220,317
RHD02.4B-06E	0.594	0.542	0.378	1,290,300	No	220,317
RHD02.4B-07P	0.609	0.574	0.378	2,298,627	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report
 Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: RHD: RH 33 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.596

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Terit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					
====>Grouped by Line: RHD-01.10A_1 RH 33A to TK 33A							
RHD01.10A-01N	0.432	0.196	0.233	0.233	No	-61,644	220,317
RHD01.10A-02P	0.432	0.304	0.233	0.233	No	226,787	220,317
RHD01.10A-03N	0.432	0.243	0.233	0.233	No	21,430	220,317
====>Grouped by Line: RHD-01.10A_2 TK 33A to A HDR							
RHD01.10A-04N	0.432	0.375	0.233	0.233	No	243,155	220,317
RHD01.10A-05P	0.432	0.389	0.233	0.233	Yes	496,942	220,317
RHD01.10A-06E	0.432	0.366	0.233	0.233	Yes	346,288	220,317
RHD01.10A-07P	0.432	0.328	0.233	0.233	No	370,393	220,317
RHD01.10A-08E	0.432	0.276	0.233	0.233	No	111,902	220,317
RHD01.10A-09P	0.432	0.328	0.233	0.233	No	370,393	220,317
RHD01.10A-10E	0.432	0.257	0.233	0.233	No	56,012	220,317
RHD01.10A-11P	0.432	0.314	0.233	0.233	No	277,336	220,317
RHD01.10A-12E	0.432	0.276	0.233	0.233	No	111,902	220,317
RHD01.10A-13P	0.432	0.328	0.233	0.233	No	370,393	220,317
RHD01.10A-14E	0.432	0.257	0.233	0.233	No	56,012	220,317
RHD01.10A-15P	0.432	0.314	0.233	0.233	No	277,336	220,317
RHD01.10A-16E	0.432	0.257	0.233	0.233	No	56,012	220,317
RHD01.10A-17P	0.432	0.314	0.233	0.233	No	277,336	220,317
RHD01.10A-18F	0.432	0.144	0.233	0.233	No	-118,891	220,317
RHD01.10A-19P	0.432	0.398	0.233	0.233	Yes	1,159,584	220,317
RHD01.10A-20R	0.000	0.466	0.233	0.233	No	714,170	220,317
RHD01.10A-20R (D/S)	0.000	0.441	0.303	0.303	No	664,731	220,317
RHD01.11A-01E	0.500	0.441	0.303	0.303	Yes	535,656	220,317
RHD01.11A-02P	0.500	0.462	0.303	0.303	Yes	716,791	220,317
RHD01.11A-03E	0.500	0.396	0.303	0.303	No	362,606	220,317
RHD01.11A-04P	0.500	0.430	0.303	0.303	No	731,095	220,317
RHD01.12A-01T	0.000	0.418	0.303	0.303	No	301,608	220,317
RHD01.12A-01T (D/S)	0.000	0.430	0.303	0.303	No	333,093	220,317

Component Name	Init.	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop			Time to Tcrit (hrs)	Inspected	
====>Grouped by Line: RHD-01.10A_2 TK 33A to A HDR								
RHD01.12A-02P	0.432	0.384	0.233	0.233	0.233	647,930	No	220,317
RHD01.12A-03E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.12A-04E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.12A-05P	0.432	0.281	0.233	0.233	0.233	128,058	No	220,317
RHD01.12A-06E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.12A-07P	0.432	0.314	0.233	0.233	0.233	277,336	No	220,317
RHD01.12A-08E	0.432	0.346	0.233	0.233	0.233	262,601	Yes	220,317
RHD01.13A-01R	0.000	0.412	0.233	0.233	0.233	438,098	No	220,317
RHD01.13A-01R (D/S)	0.000	0.314	0.158	0.158	0.158	213,612	No	220,317
RHD02.5A-01V	0.337	0.490	0.132	0.132	0.132	169,811,632	No	220,317
RHD02.5A-02R	0.000	0.366	0.158	0.158	0.158	324,863	No	151,585
RHD02.5A-02R (D/S)	0.000	0.361	0.233	0.233	0.233	365,534	Yes	151,585
RHD02.6A-01P	0.432	0.374	0.233	0.233	0.233	483,983	Yes	151,585
RHD02.6A-02E	0.432	0.301	0.233	0.233	0.233	157,027	Yes	220,317
RHD02.6A-03P	0.432	0.348	0.233	0.233	0.233	394,281	Yes	220,317
RHD02.6A-04E	0.432	0.276	0.233	0.233	0.233	111,902	No	220,317
RHD02.6A-05P	0.000	0.419	0.233	0.233	0.233	723,796	No	50,194
====>Grouped by Line: RHD-01.10B_1 RH 33B to TK 33B								
RHD01.10B-01N	0.432	0.335	0.233	0.233	0.233	174,671	Yes	220,317
RHD01.10B-02P	0.432	0.358	0.233	0.233	0.233	396,157	Yes	220,317
RHD01.10B-03N	0.432	0.359	0.233	0.233	0.233	270,682	No	220,317
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR								
RHD01.10B-04N	0.432	0.196	0.233	0.233	0.233	-61,644	No	220,317
RHD01.10B-05P	0.432	0.304	0.233	0.233	0.233	226,787	No	220,317
RHD01.10B-06E	0.432	0.276	0.233	0.233	0.233	111,902	No	220,317
RHD01.10B-07P	0.432	0.328	0.233	0.233	0.233	370,393	No	220,317
RHD01.10B-08E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-09P	0.432	0.314	0.233	0.233	0.233	277,336	No	220,317
RHD01.10B-10E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-11P	0.432	0.314	0.233	0.233	0.233	277,336	No	220,317
RHD01.10B-12E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-13P_1	0.432	0.281	0.233	0.233	0.233	128,058	No	220,317
RHD01.10B-13P_2	0.432	0.380	0.233	0.233	0.233	1,145,865	No	220,317
RHD01.10B-14E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-15E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317
RHD01.10B-16P	0.432	0.281	0.233	0.233	0.233	128,058	No	220,317
RHD01.10B-17E	0.432	0.257	0.233	0.233	0.233	56,012	No	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR							
RHD01.10B-18P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-19E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-20P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-21E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-22E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-23P	0.432	0.281	0.233	0.233	128,058	No	220,317
RHD01.10B-24E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-25P_1	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-25P_2	0.432	0.380	0.233	0.233	1,145,865	No	220,317
RHD01.10B-26F	0.432	0.144	0.233	0.233	-118,891	No	220,317
RHD01.10B-27P	0.432	0.437	0.233	0.233	1,434,256	Yes	220,317
RHD01.10B-28E	0.432	0.443	0.233	0.233	486,612	Yes	220,317
RHD01.10B-29P	0.432	0.389	0.233	0.233	534,182	Yes	220,317
RHD01.10B-30E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-31P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-32E	0.432	0.276	0.233	0.233	111,902	No	220,317
RHD01.10B-33P	0.432	0.328	0.233	0.233	370,393	No	220,317
RHD01.10B-34E	0.432	0.276	0.233	0.233	111,902	No	220,317
RHD01.10B-35P	0.432	0.328	0.233	0.233	370,393	No	220,317
RHD01.10B-36E	0.432	0.276	0.233	0.233	111,902	No	220,317
RHD01.10B-37P_1	0.432	0.328	0.233	0.233	370,393	No	220,317
RHD01.10B-37P_2	0.432	0.380	0.233	0.233	1,145,865	No	220,317
RHD01.10B-38E	0.432	0.276	0.233	0.233	111,902	No	220,317
RHD01.10B-39P	0.432	0.328	0.233	0.233	370,393	No	220,317
RHD01.10B-40E	0.432	0.276	0.233	0.233	111,902	No	220,317
RHD01.10B-41P	0.432	0.328	0.233	0.233	370,393	No	220,317
RHD01.10B-42E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-43P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-44E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-45P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-46E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-47P_1	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-47P_2	0.432	0.380	0.233	0.233	1,145,865	No	220,317
RHD01.10B-48E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-49P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-50E	0.432	0.257	0.233	0.233	56,012	No	220,317
RHD01.10B-51P	0.432	0.314	0.233	0.233	277,336	No	220,317
RHD01.10B-52T	0.432	0.453	0.233	0.233	376,860	No	220,317
RHD01.10B-52T (D/S)	0.000	0.417	0.233	0.233	315,175	Yes	220,317

Sorted By:Flow Order

Component Name	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]				
====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR						
RHD01.10B-53P	0.432	0.372	0.233	396,432	Yes	220,317
RHD01.10B-54E	0.432	0.257	0.233	56,012	No	220,317
RHD01.10B-55P	0.432	0.314	0.233	277,336	No	220,317
RHD01.10B-56E	0.432	0.257	0.233	56,012	No	220,317
RHD01.10B-57P_1	0.432	0.314	0.233	277,336	No	220,317
RHD01.10B-57P_2	0.432	0.380	0.233	1,145,865	No	220,317
RHD01.10B-58E	0.432	0.257	0.233	56,012	No	220,317
RHD01.10B-59P	0.432	0.314	0.233	277,336	No	220,317
RHD01.10B-60E	0.432	0.257	0.233	56,012	No	220,317
RHD01.10B-61P_1	0.432	0.314	0.233	277,336	No	220,317
RHD01.10B-61P_2	0.432	0.380	0.233	1,145,865	No	220,317
RHD01.10B-62E	0.432	0.257	0.233	56,012	No	220,317
RHD01.10B-63E	0.432	0.257	0.233	56,012	No	220,317
RHD01.10B-64R	0.000	0.300	0.233	204,220	No	220,317
RHD01.10B-64R (D/S)	0.000	0.416	0.303	541,733	No	220,317
RHD01.11B-01P_1	0.500	0.430	0.303	731,095	No	220,317
RHD01.11B-01P_2	0.500	0.469	0.303	2,177,135	No	220,317
RHD01.11B-02E	0.500	0.396	0.303	362,606	No	220,317
RHD01.11B-03P	0.500	0.430	0.303	731,095	No	220,317
RHD01.11B-04E	0.500	0.396	0.303	362,606	No	220,317
RHD01.11B-05P	0.500	0.430	0.303	731,095	No	220,317
RHD01.12B-01R	0.000	0.430	0.303	731,095	No	220,317
RHD01.12B-01R (D/S)	0.000	0.167	0.158	22,160	No	220,317
RHD02.5B-01V	0.337	0.552	0.132	199,288,848	No	220,317
RHD02.6B-01E	0.559	0.541	0.303	899,851	No	66,848
RHD02.6B-02P	0.528	0.437	0.303	595,018	No	220,317

Sorted By:Flow Order

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Service Life Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 7/29/2011 4:06:01PM
 AnalysisDate/Time:

Run Name: RHD: RHD HDR TO HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.184

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Thickness (in)		Thoop	Terit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
	Init.	Pred.[1]					

====>Grouped by Line: RHD-02.10A TK A HDR to FWH 36

RHD02.10A-01R	0.000	0.491	0.378	0.378	No	441,988	220,317
RHD02.10A-01R (D/S)	0.000	0.356	0.303	0.303	No	148,710	220,317
RHD02.10A-02P	0.500	0.388	0.303	0.303	No	303,771	220,317
RHD02.10A-03E	0.500	0.352	0.303	0.303	No	131,928	220,317
RHD02.10A-04P	0.500	0.401	0.303	0.303	No	400,432	220,317
RHD02.10A-05E	0.500	0.352	0.303	0.303	No	131,928	220,317
RHD02.10A-06P	0.500	0.401	0.303	0.303	No	400,432	220,317
RHD02.10A-07E	0.500	0.352	0.303	0.303	No	131,928	220,317
RHD02.10A-08P	0.500	0.401	0.303	0.303	No	400,432	220,317
RHD02.10A-09E	0.500	0.352	0.303	0.303	No	131,928	220,317
RHD02.10A-10P	0.500	0.401	0.303	0.303	No	400,432	220,317
RHD02.10A-11T	0.500	0.576	0.303	0.303	Yes	447,098	220,317
RHD02.10A-11T (D/S)	0.000	0.544	0.303	0.303	Yes	713,961	220,317
RHD02.10A-11T (BR/SE)	0.000	0.341	0.211	0.211	Yes	290,862	220,317

Sorted By:Flow Order

====>Grouped by Line: RHD-02.10B B HDR to FWH 36A

RHD02.10B-01R	0.000	0.537	0.378	0.378	No	1,128,422	220,317
RHD02.10B-01R (D/S)	0.000	0.298	0.233	0.233	No	197,084	220,317
RHD02.10B-02P_1	0.432	0.327	0.233	0.233	No	365,690	220,317
RHD02.10B-02P_2	0.432	0.386	0.233	0.233	No	1,346,669	220,317
RHD02.10B-03E	0.432	0.277	0.233	0.233	No	115,711	220,317
RHD02.10B-04P	0.432	0.327	0.233	0.233	No	365,690	220,317
RHD02.10B-05E	0.432	0.277	0.233	0.233	No	115,711	220,317
RHD02.10B-06P	0.432	0.298	0.233	0.233	No	197,084	220,317
RHD02.10B-07E	0.432	0.277	0.233	0.233	No	115,711	220,317
RHD02.10B-08P	0.432	0.327	0.233	0.233	No	365,690	220,317
RHD02.10B-09E	0.432	0.277	0.233	0.233	No	115,711	220,317
RHD02.10B-10P	0.432	0.327	0.233	0.233	No	365,690	220,317
RHD02.10B-11E	0.432	0.277	0.233	0.233	No	115,711	220,317

Sorted By:Flow Order

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1] Time to Tcrit (hrs)	Inspected	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop				
===>Grouped by Line: RHD-02.10B B HDR to FWH 36A							
RHD02.10B-12V	0.432	0.223	0.200	0.200	43,128	No	220,317
RHD02.10B-13P	0.432	0.340	0.233	0.233	470,795	No	220,317
RHD02.10B-14T	0.432	0.537	0.233	0.233	587,767	Yes	220,317
RHD02.10B-14T (BR/SE)	0.000	0.485	0.211	0.211	429,112	Yes	220,317
RHD02.10B-15P	0.432	0.348	0.233	0.233	558,382	No	220,317
RHD02.10B-16T	0.432	0.543	0.233	0.233	599,379	Yes	220,317
RHD02.10B-16T (BR/SE)	0.000	0.476	0.211	0.211	415,044	Yes	220,317
RHD02.10B-17R	0.000	0.306	0.233	0.233	252,446	Yes	220,317
RHD02.10B-17R (D/S)	0.000	0.629	0.303	0.303	1,771,469	Yes	220,317
RHD02.11B-01N	0.500	0.401	0.261	0.261	569,173	No	220,317
===>Grouped by Line: RHD-02.11A A HDR to FWH 36A							
RHD02.11A-01R	0.000	0.413	0.303	0.303	511,547	No	220,317
RHD02.11A-01R (D/S)	0.000	0.298	0.233	0.233	197,084	No	220,317
RHD02.11A-02P_1	0.432	0.327	0.233	0.233	365,690	No	220,317
RHD02.11A-02P_2	0.432	0.386	0.233	0.233	1,346,669	No	220,317
RHD02.11A-03E	0.432	0.277	0.233	0.233	115,711	No	220,317
RHD02.11A-04P	0.432	0.327	0.233	0.233	365,690	No	220,317
RHD02.11A-05E	0.432	0.277	0.233	0.233	115,711	No	220,317
RHD02.11A-06P	0.432	0.298	0.233	0.233	197,084	No	220,317
RHD02.11A-07E	0.432	0.277	0.233	0.233	115,711	No	220,317
RHD02.11A-08E	0.432	0.277	0.233	0.233	115,711	No	220,317
RHD02.11A-09P_1	0.432	0.298	0.233	0.233	197,084	No	220,317
RHD02.11A-09P_2	0.432	0.386	0.233	0.233	1,346,669	No	220,317
RHD02.11A-10E	0.432	0.277	0.233	0.233	115,711	No	220,317
RHD02.11A-11P	0.432	0.327	0.233	0.233	365,690	No	220,317
RHD02.11A-12E	0.432	0.277	0.233	0.233	115,711	No	220,317
RHD02.11A-13P	0.432	0.327	0.233	0.233	365,690	No	220,317
RHD02.11A-14E	0.432	0.277	0.233	0.233	115,711	No	220,317
RHD02.11A-15V	0.432	0.223	0.200	0.200	43,128	No	220,317
RHD02.11A-16P	0.489	0.393	0.233	0.233	680,393	No	220,317
RHD02.11A-17T	0.432	0.459	0.233	0.233	436,813	Yes	220,317
RHD02.11A-17T (BR/SE)	0.000	0.436	0.211	0.211	352,520	No	220,317
RHD02.11A-18P	0.473	0.387	0.233	0.233	726,180	No	220,317
RHD02.11A-19T	0.432	0.468	0.233	0.233	454,231	Yes	220,317
RHD02.11A-19T (BR/SE)	0.000	0.401	0.211	0.211	297,812	Yes	220,317
RHD02.11A-20R	0.000	0.315	0.233	0.233	283,107	No	220,317
RHD02.11A-20R (D/S)	0.000	0.425	0.303	0.303	664,318	No	220,317
RHD02.12A-01N	0.500	0.401	0.261	0.261	569,173	No	220,317

Component Name	Init.	Thickness (in)		Thoop	Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop			Time to Tcrit (hrs)	Inspected	
===>Grouped by Line: RHD-02.12B B HDR to FWH 36B								
RHD02.12B-01P	0.432	0.348	0.233	0.233	0.233	558,382	No	220,317
RHD02.12B-02E	0.432	0.290	0.233	0.233	0.233	150,049	Yes	220,317
RHD02.12B-03P	0.432	0.298	0.233	0.233	0.233	197,084	No	220,317
RHD02.12B-04E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.12B-05P	0.432	0.327	0.233	0.233	0.233	365,690	No	220,317
RHD02.12B-06E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.12B-07P	0.432	0.327	0.233	0.233	0.233	365,690	No	220,317
RHD02.12B-08E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.12B-09V	0.432	0.223	0.200	0.200	0.200	43,128	No	220,317
RHD02.12B-10P	0.432	0.340	0.233	0.233	0.233	470,795	No	220,317
RHD02.12B-11T	0.432	0.589	0.233	0.233	0.233	689,126	Yes	220,317
RHD02.12B-11T (BR/SE)	0.000	0.464	0.211	0.211	0.211	395,298	Yes	220,317
RHD02.12B-12P	0.432	0.348	0.233	0.233	0.233	558,382	No	220,317
RHD02.12B-13T	0.432	0.504	0.233	0.233	0.233	523,902	Yes	220,317
RHD02.12B-13T (BR/SE)	0.000	0.341	0.211	0.211	0.211	204,026	Yes	220,317
RHD02.12B-14R	0.000	0.315	0.233	0.233	0.233	283,107	No	220,317
RHD02.12B-14R (D/S)	0.000	0.425	0.303	0.303	0.303	664,318	No	220,317
RHD02.13B-01N	0.500	1.085	0.261	0.261	0.261	3,359,273	No	220,317
===>Grouped by Line: RHD-02.13A A HDR to FWH 36B								
RHD02.13A-01P	0.432	0.338	0.233	0.233	0.233	510,209	Yes	220,317
RHD02.13A-02E	0.432	0.355	0.233	0.233	0.233	320,042	Yes	220,317
RHD02.13A-03P	0.432	0.298	0.233	0.233	0.233	197,084	No	220,317
RHD02.13A-04E	0.432	0.416	0.233	0.233	0.233	478,463	Yes	220,317
RHD02.13A-05E	0.432	0.303	0.233	0.233	0.233	182,936	Yes	220,317
RHD02.13A-06P_1	0.432	0.387	0.233	0.233	0.233	466,422	Yes	220,317
RHD02.13A-06P_2	0.432	0.386	0.233	0.233	0.233	1,346,669	No	220,317
RHD02.13A-07E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.13A-08P	0.432	0.327	0.233	0.233	0.233	365,690	No	220,317
RHD02.13A-09E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.13A-10P	0.432	0.327	0.233	0.233	0.233	365,690	No	220,317
RHD02.13A-11E	0.432	0.277	0.233	0.233	0.233	115,711	No	220,317
RHD02.13A-12V	0.432	0.223	0.200	0.200	0.200	43,128	No	220,317
RHD02.13A-13P	0.432	0.340	0.233	0.233	0.233	470,795	No	220,317
RHD02.13A-14T	0.432	0.463	0.233	0.233	0.233	444,554	Yes	220,317
RHD02.13A-14T (BR/SE)	0.000	0.419	0.211	0.211	0.211	325,947	Yes	220,317
RHD02.13A-15P	0.432	0.348	0.233	0.233	0.233	558,382	No	220,317
RHD02.13A-16T	0.432	0.425	0.233	0.233	0.233	371,735	Yes	220,317
RHD02.13A-16T (BR/SE)	0.000	0.290	0.211	0.211	0.211	123,318	Yes	220,317

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop		Time to Tcrit (hrs)	Inspected	
====>Grouped by Line: RHD-02.13A A HDR to FWH 36B							
RHD02.13A-17R	0.000	0.315	0.233	0.233	No	283,107	220,317
RHD02.13A-17R (D/S)	0.000	0.425	0.303	0.303	No	664,318	220,317
RHD02.14A-01N	0.500	1.064	0.261	0.261	Yes	3,271,187	220,317
====>Grouped by Line: RHD-02.14B B HDR to FWH 36C							
RHD02.14B-01P	0.432	0.348	0.233	0.233	No	558,382	220,317
RHD02.14B-02E	0.000	0.412	0.233	0.233	No	469,114	50,194
RHD02.14B-03P	0.432	0.298	0.233	0.233	No	197,084	220,317
RHD02.14B-04E	0.432	0.277	0.233	0.233	No	115,711	220,317
RHD02.14B-05E	0.432	0.277	0.233	0.233	No	115,711	220,317
RHD02.14B-06P	0.432	0.298	0.233	0.233	No	197,084	220,317
RHD02.14B-07E	0.432	0.277	0.233	0.233	No	115,711	220,317
RHD02.14B-08V	0.432	0.223	0.200	0.200	No	43,128	220,317
RHD02.14B-09P	0.432	0.340	0.233	0.233	No	470,795	220,317
RHD02.14B-10T	0.000	0.415	0.233	0.233	No	351,660	33,725
RHD02.14B-10T (BR/SE)	0.000	0.410	0.211	0.211	No	311,880	33,725
RHD02.14B-11P	0.432	0.348	0.233	0.233	No	558,382	220,317
RHD02.14B-12T	0.432	0.495	0.233	0.233	Yes	507,886	220,317
RHD02.14B-12T (BR/SE)	0.000	0.370	0.211	0.211	Yes	248,598	220,317
RHD02.14B-14P	0.000	0.421	0.233	0.233	No	911,785	50,194
RHD02.14B-13R	0.000	0.315	0.233	0.233	No	283,107	220,317
RHD02.14B-13R (D/S)	0.000	0.425	0.303	0.303	No	664,318	220,317
RHD02.15B-01N	0.432	1.086	0.261	0.261	Yes	3,473,298	220,317
====>Grouped by Line: RHD-02.15A A HDR to FWH 36C							
RHD02.15A-01P	0.432	0.348	0.233	0.233	No	558,382	220,317
RHD02.15A-02E	0.000	0.425	0.233	0.233	No	503,112	50,194
RHD02.15A-03P	0.432	0.336	0.233	0.233	Yes	397,832	220,317
RHD02.15A-04E	0.432	0.277	0.233	0.233	No	115,711	220,317
RHD02.15A-05P	0.432	0.327	0.233	0.233	No	365,690	220,317
RHD02.15A-06E	0.432	0.277	0.233	0.233	No	115,711	220,317
RHD02.15A-07V	0.432	0.223	0.200	0.200	No	43,128	220,317
RHD02.15A-08P	0.432	0.340	0.233	0.233	No	470,795	220,317
RHD02.15A-09T	0.432	0.522	0.233	0.233	Yes	558,738	220,317
RHD02.15A-09T (BR/SE)	0.000	0.434	0.211	0.211	Yes	349,394	220,317
RHD02.15A-10P	0.432	0.348	0.233	0.233	No	558,382	220,317
RHD02.15A-11T	0.000	0.405	0.233	0.233	No	333,708	50,194
RHD02.15A-11T (BR/SE)	0.000	0.399	0.211	0.211	No	293,928	50,194
RHD02.15A-13P	0.000	0.421	0.233	0.233	No	911,785	50,194

Component Name	Init.	Thickness (in)		Tcrit	Component Predicted [1]		Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop		Time to Tcrit (hrs)	Inspected	
====>Grouped by Line: RHD-02.15A A HDR to FWH 36C							
RHD02.15A-12R	0.000	0.315	0.233	0.233	283,107	No	220,317
RHD02.15A-12R (D/S)	0.000	0.425	0.303	0.303	664,318	No	220,317
RHD02.16A-01N	0.500	1.062	0.261	0.261	3,265,554	Yes	220,317
====>Grouped by Line: RHD-02.7B TK B HDR to FWH 36							
RHD02.2B-06L (BR/SE)	0.000	0.864	0.211	0.211	1,502,025	No	220,317
RHD02.2B-06L (D/S)	0.000	0.466	0.303	0.303	356,779	No	220,317
RHD02.7B-01P	0.500	0.410	0.303	0.303	480,984	No	220,317
RHD02.7B-02E	0.500	0.334	0.303	0.303	73,874	No	220,317
RHD02.7B-03P	0.500	0.388	0.303	0.303	303,771	No	220,317
RHD02.7B-04E	0.500	0.352	0.303	0.303	131,928	No	220,317
RHD02.7B-05P	0.500	0.401	0.303	0.303	400,432	No	220,317
RHD02.7B-06E	0.500	0.352	0.303	0.303	131,928	No	220,317
RHD02.7B-07P	0.543	0.442	0.303	0.303	555,913	No	220,317
====>Grouped by Line: RHD-02.8A TK A HDR to FWH 36							
RHD02.6A-06L (BR/SE)	0.000	0.208	0.211	0.211	-7,767	Yes	220,317
RHD02.6A-06L	0.594	0.550	0.378	0.378	1,045,428	Yes	220,317
RHD02.6A-06L (D/S)	0.000	0.473	0.378	0.378	318,027	No	220,317
RHD02.8A-01P	0.000	0.535	0.378	0.378	1,077,289	No	220,317
RHD02.8A-02E	0.594	0.497	0.378	0.378	493,326	No	220,317
RHD02.8A-03P	0.594	0.529	0.378	0.378	942,528	No	220,317
====>Grouped by Line: RHD-02.8B TK B HDR to FWH 36							
RHD02.7B-08L	0.605	0.531	0.378	0.378	925,999	Yes	220,317
RHD02.8B-06T (BR/SE)	0.000	0.568	0.211	0.211	797,091	Yes	220,317
RHD02.7B-08L (BR/SE)	0.000	1.106	0.281	0.281	1,863,585	No	220,317
RHD02.7B-08L (D/S)	0.000	0.480	0.378	0.378	241,954	Yes	220,317
RHD02.8B-01P	0.609	0.516	0.378	0.378	665,863	Yes	220,317
RHD02.8B-02E	0.594	0.439	0.378	0.378	159,821	No	220,317
RHD02.8B-03P	0.594	0.489	0.378	0.378	430,974	No	220,317
RHD02.8B-04E	0.594	0.439	0.378	0.378	159,821	No	220,317
RHD02.8B-05P	0.594	0.460	0.378	0.378	248,087	No	220,317
RHD02.8B-06T	0.594	0.577	0.378	0.378	349,446	Yes	220,317
RHD02.8B-06T (D/S)	0.000	0.432	0.378	0.378	133,964	No	220,317
====>Grouped by Line: RHD-02.9A TK A HDR to FWH 36							
RHD02.2A-06L (BR/SE)	0.000	0.256	0.211	0.211	103,162	No	220,317
RHD02.9A-11T (D/S)	0.000	0.432	0.378	0.378	133,964	No	220,317

Component Name	Init.	Thickness (in)		Inspected	Comp. Predicted [1] Time to Tcrit (hrs)	Comp. Actual Service Time (hrs)
		Pred.[1]	Thoop			
====>Grouped by Line: RHD-02.9A TK A HDR to FWH 36						
RHD02.9A-11T (BR/SE)	0.000	0.480	0.211	0.211	600,587	220,317
RHD02.2A-06L	0.594	0.473	0.378	0.378	318,027	220,317
RHD02.2A-06L (D/S)	0.000	0.422	0.378	0.378	104,709	220,317
RHD02.9A-01P	0.594	0.510	0.378	0.378	639,987	220,317
RHD02.9A-02E	0.594	0.456	0.378	0.378	228,294	220,317
RHD02.9A-03P	0.594	0.502	0.378	0.378	544,981	220,317
RHD02.9A-04E	0.594	0.456	0.378	0.378	228,294	220,317
RHD02.9A-05P	0.594	0.502	0.378	0.378	544,981	220,317
RHD02.9A-06E	0.594	0.456	0.378	0.378	228,294	220,317
RHD02.9A-07E	0.594	0.447	0.378	0.378	192,101	220,317
RHD02.9A-08P	0.594	0.489	0.378	0.378	430,974	220,317
RHD02.9A-09E	0.594	0.447	0.378	0.378	192,101	220,317
RHD02.9A-10P	0.594	0.489	0.378	0.378	430,974	220,317
RHD02.9A-11T	0.594	0.621	0.378	0.378	426,808	220,317
====>Grouped by Line: RHD-02.9B TK B HDR to FWH 36						
RHD02.9B-02T (D/S)	0.000	0.504	0.378	0.378	570,785	220,317
RHD02.9B-02T (BR/SE)	0.000	0.251	0.211	0.211	88,641	220,317
RHD02.9B-01P	0.594	0.535	0.378	0.378	1,077,289	220,317
RHD02.9B-02T	0.594	0.432	0.378	0.378	133,964	220,317

Note:

[1] Predictions are based on last Tmeas to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:10 pm

Run Name: CD: HDR TO BFP
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.119

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.
====>Grouped by Line: CD-06.1 FWH 35 OUT HDR													
CD-06.1-01T (BR/SE)	0.000	146.4	204.0	146.4	204.0	0.437	MT	202,797	353.6	437.0	7.4	202,797	
====>Grouped by Line: CD-06.2A HDR to BFP 31													
CD-06.2A-01P	0.721	38.3	50.0	38.3	50.0	0.721	ER	0	651.2	721.0	69.8	78,649	
CD-06.2A-02E	0.729	122.8	53.5	122.8	53.5	0.664	MT	202,797	606.2	664.0	6.5	202,797	
CD-06.2A-03P	0.688	82.6	37.0	82.6	37.0	0.707	MT	202,797	605.4	707.0	4.3	202,797	
CD-06.2A-08P	0.688	72.7	121.0	72.7	121.0	0.646	MT	202,797	615.3	646.0	3.8	202,797	
CD-06.2A-11E	0.688	122.3	50.5	122.3	50.5	0.669	MT	202,797	565.7	669.0	6.4	202,797	
CD-06.2A-25P	0.688	44.4	43.0	44.4	43.0	0.651	GW	153,469	643.6	651.0	10.9	153,469	
CD-06.3A-01R	0.000	78.6	82.0	78.6	82.0	0.630	MT	186,592	609.4	630.0	8.4	186,592	
CD-06.3A-01R (D/S)	0.000	81.8	68.0	81.8	68.0	0.531	MT	186,592	480.2	531.0	8.7	186,592	
CD-06.3A-02N	0.562	110.4	118.0	110.4	118.0	1.093	GW	78,649	451.6	1,093.0	90.8	78,649	
====>Grouped by Line: CD-06.2B HDR to BFP 32													
CD-06.2B-01R	0.000	64.5	123.0	64.5	123.0	0.842	GW	121,025	560.5	842.0	25.6	121,025	
CD-06.2B-01R (D/S)	0.000	79.7	75.0	79.7	75.0	0.696	MT	121,025	608.3	696.0	31.6	121,025	
CD-06.2B-02P	0.702	62.4	51.0	62.4	51.0	0.637	GW	121,025	639.6	637.0	24.7	121,025	
CD-06.2B-04T	0.688	157.2	196.0	157.2	196.0	0.964	MT	186,592	530.8	964.0	16.7	186,592	
CD-06.2B-04T (BR/SE)	0.000	157.2	162.0	157.2	162.0	0.891	MT	186,592	530.8	891.0	16.7	186,592	
CD-06.2B-06E	0.688	116.3	69.0	116.3	69.0	0.642	MT	186,592	571.7	642.0	12.4	186,592	
CD-06.2B-07P	0.688	100.6	63.0	100.6	63.0	0.625	MT	186,592	587.4	625.0	10.7	186,592	
CD-06.2B-09P	0.688	44.4	69.0	44.4	69.0	0.624	GW	153,469	643.6	624.0	10.9	153,469	

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and Time = current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 T_p = Predicted thickness at T_{meas} .
 T_m = Last measured thickness (T_{meas}).
- [5] $PRWEAR$ = Incremental wear from last T_{meas} time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: CD: HDR TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.090

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	[2]	(hrs) [3]	TP	Wear	PRWEAR	Last	Inspected
====>Grouped by Line: CD-02.8A HDR to FWH 33A													
CD-02.7-02T	0.688	70.0	41.0	70.0	41.0	0.658	MT	186,592	618.0	658.0	7.8	186,592	
CD-02.7-02T (BR/SE)	0.000	97.4	84.0	97.4	84.0	0.375	MT	186,592	340.6	375.0	10.7	186,592	
CD-02.8A-02E	0.438	69.6	171.0	69.6	171.0	0.535	GW	92,205	368.4	535.0	44.6	92,205	
CD-02.8A-03P	0.438	78.7	91.0	78.7	91.0	0.371	GW	153,469	359.3	371.0	20.1	153,469	
CD-02.8A-05E	0.438	81.0	81.0	81.0	81.0	0.477	GW	121,025	357.0	477.0	33.3	121,025	
CD-02.8A-06P	0.438	70.1	73.0	70.1	73.0	0.401	GW	121,025	367.9	401.0	28.8	121,025	
CD-02.8A-07E	0.438	81.0	79.0	81.0	79.0	0.482	GW	121,025	357.0	482.0	33.3	121,025	
CD-02.8A-08N	0.438	117.2	71.0	117.2	71.0	0.487	MT	202,797	320.8	487.0	6.4	202,797	
====>Grouped by Line: CD-02.8B HDR to FWH 33B													
CD-02.8B-01P	0.445	52.5	72.0	52.5	72.0	0.376	MT	170,123	392.5	376.0	9.4	170,123	
CD-02.8B-02E	0.000	17.4	60.0	17.4	60.0	0.423	MT	202,797	329.6	423.0	5.9	202,797	
CD-02.8B-03P	0.438	93.8	74.0	93.8	74.0	0.381	MT	202,797	344.2	381.0	5.1	202,797	
CD-02.8B-05E	0.438	108.4	74.0	108.4	74.0	0.480	MT	202,797	329.6	480.0	5.9	202,797	
CD-02.8B-06P	0.438	93.8	73.0	93.8	73.0	0.399	MT	202,797	344.2	399.0	5.1	202,797	
CD-02.8B-07E	0.438	108.4	41.5	108.4	41.5	0.480	MT	202,797	329.6	480.0	5.9	202,797	
CD-02.8B-08N	0.438	117.2	66.0	117.2	66.0	0.472	MT	202,797	320.8	472.0	6.4	202,797	
====>Grouped by Line: CD-02.8C HDR to FWH 33C													
CD-02.8C-02E	0.000	23.4	88.0	23.4	88.0	0.385	MT	202,797	329.6	385.0	5.9	202,797	
CD-02.8C-03P	0.594	96.6	236.0	96.6	236.0	0.364	MT	202,797	497.4	364.0	5.2	202,797	
CD-02.8C-05E	0.438	103.0	125.0	103.0	125.0	0.457	MT	186,592	335.0	457.0	11.3	186,592	
CD-02.8C-06P	0.438	70.1	85.0	70.1	85.0	0.397	GW	121,025	367.9	397.0	28.8	121,025	
CD-02.8C-07E	0.438	81.0	81.0	81.0	81.0	0.482	GW	121,025	357.0	482.0	33.3	121,025	
CD-02.8C-08N	0.438	87.6	68.0	87.6	68.0	0.475	GW	121,025	350.4	475.0	36.0	121,025	

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and Time = current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 T_p = Predicted thickness at T_{meas} .
 T_m = Last measured thickness (T_{meas}).
- [5] $PRWEAR$ = Incremental wear from last T_{meas} time to analysis ending period.

Wear Report

Company: Report Date/Time: 29-Jul-2011 4:10 pm
 Plant: AnalysisDate/Time: 29-Jul-2011 4:11 pm
 Unit:
 DB Name: IPEC 3 (v4).DB

Run Name: CHECWORKS SFA Version:
 Ending Period: Duty Factor (Global) :
 Total Plant Operating Hours:
 WRA Data Option:
 Line Correction Factor:

Component Name	Tinit		Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]	(hrs) [3]	TP		PRWEAR	Last	Inspected

====>Grouped by Line:

Sorted By: Flow Order

- Notes:
- [1] Predictions are for the time of last inspection (last known meas. wear).
 - [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
 - [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
 - [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
 - [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Pass 2 Analysis Include Measured Wear

Run Name: CD: HTR 32 TO 33 HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.808

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm	Incremental Wear (mils) [5] PRWEAR	Time (hrs) Last Inspected		
		Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]				(hrs) [3]	
====>Grouped by Line: CD-02.2 FWH 32 OUT HDR												
CD-02.1B-11T	0.624	44.9	54.0	44.9	54.0	0.570	GW	137,201	579.1	570.0	15.0	137,201
CD-02.1B-11T (BR/SE)	0.000	58.4	95.0	58.4	95.0	0.371	GW	137,201	379.6	371.0	19.5	137,201
CD-02.1B-11T (D/S)	0.624	66.2	52.0	66.2	52.0	0.572	GW	137,201	557.8	572.0	22.1	137,201
CD-02.2-01P	0.594	32.2	53.0	32.2	53.0	0.560	GW	137,201	561.8	560.0	10.7	137,201
CD-02.2-02R	0.000	40.3	105.0	40.3	105.0	0.703	GW	107,311	553.7	703.0	19.8	107,311
CD-02.2-02R (D/S)	0.000	34.2	74.0	34.2	74.0	0.693	GW	107,311	653.8	693.0	16.8	107,311
====>Grouped by Line: CD-02.3 FWH 32 OUT HDR												
CD-02.1C-12T (BR/SE)	0.000	66.0	64.0	66.0	64.0	0.384	MT	170,123	372.0	384.0	11.8	170,123
CD-02.1C-12T	0.692	59.2	43.0	59.2	43.0	0.645	MT	170,123	632.8	645.0	10.6	170,123
CD-02.1C-12T (D/S)	0.692	62.0	33.0	62.0	33.0	0.659	GW	121,025	630.0	659.0	25.5	121,025
CD-02.3-01P	0.736	36.4	47.0	36.4	47.0	0.675	MT	170,123	699.6	675.0	6.5	170,123
CD-02.3-15T (D/S)	0.000	108.9	77.0	108.9	77.0	0.653	MT	202,797	579.1	653.0	5.9	202,797
====>Grouped by Line: CD-02.4 FWH 32 OUT HDR												
CD-02.4-04E	0.864	103.6	99.5	103.6	99.5	0.722	MT	202,797	760.4	722.0	5.6	202,797
CD-02.4-04E (D/S)	0.864	80.8	49.5	80.8	49.5	0.687	MT	202,797	783.2	687.0	4.4	202,797
====>Grouped by Line: CD-02.5 FWH 32 OUT HDR												
CD-02.5-03T	0.688	45.9	46.0	45.9	46.0	0.656	GW	78,649	642.1	656.0	39.7	78,649
CD-02.5-03T (D/S)	0.000	46.9	38.0	46.9	38.0	0.664	GW	78,649	641.1	664.0	40.6	78,649
CD-02.5-04T	0.730	88.4	76.0	88.4	76.0	0.658	MT	186,592	623.8	658.0	11.7	137,201
CD-02.5-04T (D/S)	0.730	84.7	59.0	84.7	59.0	0.646	MT	186,592	645.3	646.0	9.3	186,592
====>Grouped by Line: CD-02.6 FWH 32 OUT HDR												
CD-02.6-01T (D/S)	0.693	38.3	67.0	38.3	67.0	0.660	MT	137,201	654.7	660.0	12.8	137,201
CD-02.6-02P	0.693	20.7	49.0	20.7	49.0	0.653	GW	92,205	672.3	653.0	13.3	92,205

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4]		Incremental Wear (mils) [5] PRWEAR	Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]	(hrs) [3]	Tp			Tm
====>Grouped by Line: CD-02.6 FWH 32 OUT HDR												
CD-02.6-03T	0.694	88.8	77.0	88.8	77.0	0.662	MT	202,797	605.2	662.0	4.8	202,797
CD-02.6-03T (D/S)	0.694	54.7	55.0	54.7	55.0	0.649	MT	202,797	639.3	649.0	3.0	202,797
CD-02.6-03T (BR/SE)	0.000	76.0	76.0	76.0	76.0	0.373	MT	202,797	362.0	373.0	4.1	202,797
CD-02.6-01T	0.693	38.3	77.0	38.3	77.0	0.644	MT	137,201	654.7	644.0	12.8	137,201

Sorted By: Flow Order

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
MT = Tmeas is component minimum thickness.
PW = Tmeas is Tinit - predicted wear.
US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
These two values are used for thickness plot.
- [4] Tp = Predicted thickness at Tmeas.
Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: CD: HTR 32 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.990

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	[2]	[3]	Prd. [1]	Tm	Prd. [1]	PRWEAR	Last

====>Grouped by Line: CD-02.1A FWH 32A to HDR

CD-02.1A-06E	0.438	159.6	57.5	159.6	57.5	0.490	MT	202,797	278.4	490.0	8.7	202,797	
CD-02.1A-13R	0.000	58.9	63.0	58.9	63.0	0.619	GW	137,201	379.1	619.0	19.6	137,201	
CD-02.1A-13R (D/S)	0.000	40.1	39.0	40.1	39.0	0.563	GW	137,201	553.9	563.0	13.4	137,201	

====>Grouped by Line: CD-02.1B FWH 32B to HDR

CD-02.1B-03E	0.438	98.4	122.5	98.4	122.5	0.413	MT	202,797	339.6	413.0	5.3	202,797	
CD-02.1B-09E	0.438	63.2	65.0	63.2	65.0	0.515	GW	92,205	374.8	515.0	40.5	92,205	

====>Grouped by Line: CD-02.1C FWH 32C to HDR

CD-02.1C-02P	0.438	71.8	112.0	71.8	112.0	0.353	MT	202,797	366.2	353.0	3.9	202,797	
CD-02.1C-03E	0.438	98.4	62.5	98.4	62.5	0.466	MT	202,797	339.6	466.0	5.3	202,797	
CD-02.1C-10E	0.575	71.5	60.0	71.5	60.0	0.526	GW	107,311	503.5	526.0	35.1	107,311	

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: CD: HTR 33 TO HTR 34
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.601

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]	In-Service Component Thickness (mils) [4]		Incremental Wear (mils) [5] PRWEAR	Time (hrs)		
		Prd. [1]	Meas.	Prd. [1]	Meas.		Tp	Tm		Last	Inspected	
====>Grouped by Line: CD-03.1A FWH 33A to FWH 34A												
CD-03.1A-01N	0.438	97.1	108.0	97.1	108.0	0.431	GW	137,201	340.9	431.0	31.2	137,201
CD-03.1A-02E	0.438	71.8	100.0	71.8	100.0	0.489	GW	137,201	366.2	489.0	23.1	137,201
CD-03.1A-03E	0.438	71.8	70.0	71.8	70.0	0.504	GW	137,201	366.2	504.0	23.1	137,201
CD-03.1A-04P	0.438	62.1	85.0	62.1	85.0	0.394	GW	137,201	375.9	394.0	20.0	137,201
====>Grouped by Line: CD-03.1B FWH 33B to FWH 34B												
CD-03.1B-02E	0.438	58.4	41.0	58.4	41.0	0.496	GW	92,205	379.6	496.0	36.5	92,205
CD-03.1B-03E	0.438	85.8	76.0	85.8	76.0	0.476	MT	186,592	352.2	476.0	9.2	186,592
CD-03.1B-04P	0.438	74.2	63.0	74.2	63.0	0.396	MT	186,592	363.8	396.0	7.9	186,592
CD-03.1B-05E	0.547	52.5	66.0	52.5	66.0	0.477	GW	78,649	494.5	477.0	44.5	78,649
CD-03.1B-06E	0.555	87.7	79.0	87.7	79.0	0.487	MT	186,592	467.3	487.0	9.4	186,592
CD-03.1B-07P	0.477	44.8	66.0	44.8	66.0	0.403	GW	78,649	432.2	403.0	38.0	78,649
====>Grouped by Line: CD-03.1C FWH 33C to FWH 34C												
CD-03.1C-01N	0.438	109.4	84.0	109.4	84.0	0.443	MT	170,123	328.6	443.0	18.9	170,123
CD-03.1C-02E	0.438	80.9	83.0	80.9	83.0	0.450	MT	170,123	357.1	450.0	14.0	170,123

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tmit - predicted wear.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tmit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: CD: HTR 34 TO HTR 35
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.452

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR	Time (hrs)	
		Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [3]	[2]	(hrs) [3]	TP		Time Last Inspected	

====>Grouped by Line: CD-04.1A FWH 34A to FWH 35A

CD-04.1A-02E	0.438	66.6	117.0	66.6	117.0	0.498	GW	121,025	371.4	498.0	26.6	121,025
CD-04.1A-03E	0.438	66.6	67.0	66.6	67.0	0.502	GW	121,025	371.4	502.0	26.6	121,025
CD-04.1A-04P	0.438	68.7	96.0	68.7	96.0	0.374	MT	170,123	369.3	374.0	11.9	170,123

====>Grouped by Line: CD-04.1B FWH 34B to FWH 35B

CD-04.1B-01N	0.438	95.2	117.0	95.2	117.0	0.420	GW	137,201	342.8	420.0	30.7	137,201
CD-04.1B-02E	0.438	70.5	67.0	70.5	67.0	0.501	GW	137,201	367.5	501.0	22.7	137,201
CD-04.1B-03E	0.438	70.5	140.0	70.5	140.0	0.479	GW	137,201	367.5	479.0	22.7	137,201
CD-04.1B-04P	0.438	60.9	62.0	60.9	62.0	0.418	GW	137,201	377.1	418.0	19.6	137,201

====>Grouped by Line: CD-04.1C FWH 34C to FWH 35C

CD-04.1C-02E	0.594	91.2	67.5	91.2	67.5	0.462	MT	202,797	502.8	462.0	4.8	202,797
CD-04.1C-03E	0.570	90.8	67.5	90.8	67.5	0.464	MT	202,797	479.2	464.0	4.8	202,797
CD-04.1C-05E	0.438	79.5	79.0	79.5	79.0	0.481	MT	170,123	358.5	481.0	13.7	170,123
CD-04.1C-06P	0.438	53.7	44.0	53.7	44.0	0.437	MT	170,123	384.3	437.0	9.3	170,123
CD-04.1C-07E	0.438	79.5	73.0	79.5	73.0	0.449	MT	170,123	358.5	449.0	13.7	170,123

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: CD: HTR 35 TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.422

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR	Time (hrs)	
		Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.		Time Last	Time Inspected
====>Grouped by Line: CD-05.3 FWH 35 OUT HDR												
CD-05.1B-09T	0.724	28.4	76.0	28.4	76.0	0.648	GW	153,469	695.6	648.0	6.9	153,469
CD-05.1B-09T (BR/SE)	0.000	49.8	47.0	49.8	47.0	0.429	GW	153,469	388.2	429.0	11.9	153,469
CD-05.1B-09T (D/S)	0.724	44.8	61.0	44.8	61.0	0.673	GW	153,469	679.2	673.0	10.7	153,469
CD-05.3-01P	0.724	21.8	56.0	21.8	56.0	0.671	GW	153,469	702.2	671.0	5.2	153,469
====>Grouped by Line: CD-05.4 FWH 35 OUT HDR												
CD-05.1C-10T (BR/SE)	0.000	55.9	59.0	55.9	59.0	0.410	MT	186,592	382.1	410.0	5.8	186,592
CD-05.1C-10T	0.000	50.1	31.0	50.1	31.0	0.680	MT	186,592	637.9	680.0	5.2	186,592
CD-05.1C-10T (D/S)	0.000	62.8	29.0	62.8	29.0	0.664	MT	186,592	625.2	664.0	6.5	186,592
CD-05.4-01E	0.688	38.8	99.0	38.8	99.0	0.694	GW	92,205	649.2	694.0	23.8	92,205
CD-05.4-03T (BR/SE)	0.696	54.6	45.0	54.6	45.0	0.682	GW	153,469	641.4	682.0	13.1	153,469
CD-05.4-03T (D/S)	0.696	39.0	36.0	39.0	36.0	0.678	GW	153,469	645.2	678.0	12.2	92,205

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: CD: HTR 35 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.655

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR	Time (hrs)	
		Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	[2]	[3]	Prd. [1]		Meas.	Last
====>Grouped by Line: CD-05.1A FWH 35A to HDR												
CD-05.1A-01N	0.438	133.8	245.0	133.8	245.0	0.354	MT	202,797	304.2	354.0	6.9	202,797
CD-05.1A-02E	0.438	71.0	54.0	71.0	54.0	0.399	GW	107,359	367.0	399.0	33.1	107,359
CD-05.1A-03E	0.438	71.0	73.0	71.0	73.0	0.407	GW	107,359	367.0	407.0	33.1	107,359
CD-05.1A-06P	0.438	58.9	100.0	58.9	100.0	0.375	MT	202,797	379.1	375.0	3.0	202,797
CD-05.1A-07E	0.438	99.0	75.0	99.0	75.0	0.475	MT	202,797	339.0	475.0	5.1	202,797
====>Grouped by Line: CD-05.1B FWH 35B to HDR												
CD-05.1B-02E	0.438	75.0	75.0	75.0	75.0	0.462	GW	121,025	363.0	462.0	29.1	121,025
CD-05.1B-03E	0.438	75.0	78.0	75.0	78.0	0.520	GW	121,025	363.0	520.0	29.1	121,025
CD-05.1B-04P	0.438	77.1	73.0	77.1	73.0	0.372	MT	170,123	360.9	372.0	12.9	170,123
CD-05.1B-06P	0.438	58.9	68.0	58.9	68.0	0.386	MT	202,797	379.1	386.0	3.0	202,797
CD-05.1B-07E	0.575	101.7	90.0	101.7	90.0	0.471	MT	202,797	473.3	471.0	5.2	202,797
====>Grouped by Line: CD-05.1C FWH 35C to HDR												
CD-05.1C-08E	0.438	64.6	60.0	64.6	60.0	0.477	GW	92,205	373.4	477.0	39.5	92,205

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tmit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Terit.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: CD: S/G BLWDN HX IN
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.754

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.
====>Grouped by Line: CD-02.9 FWH HDR to SGBD HX3													
CD-02.10-04E	0.322	54.9	53.0	54.9	53.0	0.302	GW	92,205	267.1	302.0	35.6	92,205	
CD-02.10-08E	0.322	48.3	35.0	48.3	35.0	0.328	GW	78,649	273.7	328.0	42.2	78,649	
CD-02.10-09P	0.322	32.6	59.0	32.6	59.0	0.319	GW	78,649	289.4	319.0	28.5	78,649	
CD-02.10-10E	0.322	48.3	50.0	48.3	50.0	0.310	GW	78,649	273.7	310.0	42.2	78,649	

Sorted By: Flow Order

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Terri.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: CD: S/G BLWDN HX OUT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.247

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.
====>Grouped by Line: CD-02.11 SGBD HX3 to FWH HDR													
CD-02.11-03E	0.322	150.7	73.5	150.7	73.5	0.296	MT	186,592	171.3	296.0	16.8	186,592	
CD-02.11-04P	0.322	68.7	87.0	68.7	87.0	0.295	MT	186,592	220.2	295.0	11.4	92,205	
CD-02.11-05E	0.322	90.7	62.0	90.7	62.0	0.328	GW	92,205	231.3	328.0	58.7	92,205	
CD-02.11-06P	0.322	78.8	81.0	78.8	81.0	0.307	GW	152,760	243.2	307.0	20.8	152,760	
CD-02.11-07E	0.322	132.6	45.0	132.6	45.0	0.320	GW	152,760	189.4	320.0	35.0	152,760	
CD-02.11-08P	0.322	89.6	82.0	89.6	82.0	0.301	GW	152,760	232.4	301.0	23.6	152,760	
CD-02.11-10E	0.322	125.1	64.0	125.1	64.0	0.319	GW	137,201	196.9	319.0	42.4	137,201	
CD-02.11-11P	0.322	84.6	94.0	84.6	94.0	0.313	GW	137,201	237.4	313.0	28.7	137,201	
CD-02.11-13T (D/S)	0.000	42.0	42.0	42.0	42.0	0.552	GW	137,201	520.0	552.0	14.2	137,201	
CD-02.12-05P	0.562	15.0	44.0	15.0	44.0	0.547	GW	92,205	547.0	547.0	9.7	92,205	
CD-02.12-06E	0.562	25.3	74.0	25.3	74.0	0.696	GW	92,205	536.7	696.0	16.4	92,205	

Sorted By: Flow Order

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tmit - predicted wear.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tmit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Terit.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Wear Report

Company: Report Date/Time: 29-Jul-2011 4:10 pm
 Plant: AnalysisDate/Time: 29-Jul-2011 4:11 pm
 Unit:
 DB Name: IPEC 3 (v4).DB

Run Name: CHECWORKS SFA Version:
 Ending Period: Duty Factor (Global) :
 Total Plant Operating Hours:
 WRA Data Option:
 Line Correction Factor:

Component Name	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
	Tinit	Prd. [1] Meas.	Prd. [1] Meas.	Prd. [1] Meas.	(in) [3] [2] (hrs) [3]	(in) [3] [2] (hrs) [3]	TP	Tm	PRWEAR	Last	Inspected	

====>Grouped by Line:

Sorted By: Flow Order

- Notes:
- [1] Predictions are for the time of last inspection (last known meas. wear).
 - [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
 - [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
 - [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
 - [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: ES: HDR TO 35 HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.988

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime		In-Service Component		In-Service Component		In-Service Component		Incremental	Time (hrs)	
		Wear (mils)	Prd. [1]	Wear(mils)	Meas.	Tmeas, Method, Time	(in) [3]	[2]	Thickmess (mils) [4]		Wear (mils) [5]	Last

====>Grouped by Line: EX-02.16 HDR 35 to FWH 35A

EX-02.16-01R	0.000	115.4	284.0	0.0	0.0	0.603	MT	186,592	374.3	603.0	0.2	0
EX-02.16-01R (D/S)	0.000	137.0	126.0	0.0	0.0	0.513	MT	186,592	311.1	513.0	0.3	0
EX-02.16-02P	0.284	169.0	102.0	0.0	0.0	0.284	ER	121,025	284.0	284.0	0.8	0
EX-02.16-03E	0.455	210.8	274.0	0.0	0.0	0.455	ER	121,025	455.0	455.0	1.0	0
EX-02.16-06E	0.000	208.0	249.0	0.0	0.0	0.375	ER	121,025	375.0	375.0	1.0	0
EX-02.16-08E	0.924	374.3	165.0	374.3	165.0	0.743	MT	186,592	549.7	743.0	101.8	186,592

Sorted By: Flow Order

====>Grouped by Line: EX-02.17 HDR 35 to FWH 35B

EX-02.17-03E	0.375	211.7	313.0	0.0	0.0	0.466	MT	202,797	374.2	466.0	0.2	0
EX-02.17-04P	0.378	159.0	178.0	0.0	0.0	0.393	MT	202,797	377.1	393.0	0.2	0
EX-02.17-05E	0.968	153.3	247.0	153.3	247.0	0.435	MT	107,911	814.7	435.0	325.3	107,911
EX-02.17-06N	0.293	192.7	130.0	192.7	130.0	0.779	GW	92,205	100.3	779.0	336.9	92,205

Sorted By: Flow Order

====>Grouped by Line: EX-02.18 HDR 35 to FWH 35C

EX-02.18-03E	0.375	154.0	154.0	0.0	0.0	0.558	MT	186,592	374.0	558.0	0.4	0
EX-02.18-04P	0.375	158.6	129.0	0.0	0.0	0.383	MT	186,592	374.1	383.0	0.3	0
EX-02.18-05E	0.312	350.0	188.5	350.0	188.5	0.770	MT	186,592	-38.0	770.0	95.0	186,592

Sorted By: Flow Order

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and Time = current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 T_p = Predicted thickness at T_{meas} .
 T_m = Last measured thickness (T_{meas}).
- [5] $PRWEAR$ = Incremental wear from last T_{meas} time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: ES: HDR TO 36 HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.686

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime		In-Service Component		In-Service Component		In-Service Component		Incremental	Time (hrs)	
		Wear (mils)	Prd. [1]	Wear(mils)	Meas.	Tmeas, Method, Time	(in) [3]	[2]	Thickness (mils) [4]		Wear (mils) [5]	Last

====>Grouped by Line: EX-01.5A HP EX HDR to FWH 36A

EX-01.5A-02P	0.374	87.7	57.0	0.0	0.0	0.374	ER	92,205	374.0	374.0	0.1	0
EX-01.5A-12P	0.387	51.1	166.0	0.0	0.0	0.387	ER	92,205	387.0	387.0	0.0	0
EX-01.5A-13E	0.426	108.7	106.0	0.0	0.0	0.426	ER	92,205	426.0	426.0	0.1	0
EX-01.5A-17P	0.335	72.5	90.0	0.0	0.0	0.335	ER	92,205	335.0	335.0	0.0	0
EX-01.5A-14E	0.470	118.0	170.0	0.0	0.0	0.470	ER	92,205	470.0	470.0	0.1	0

Sorted By: Flow Order

====>Grouped by Line: EX-01.5B HP EX HDR to FWH 36B

EX-01.5B-10P	0.374	50.9	123.0	0.0	0.0	0.374	ER	92,205	374.0	374.0	0.0	0
EX-01.5B-11E	0.452	109.3	107.0	0.0	0.0	0.452	ER	92,205	452.0	452.0	0.1	0
EX-01.5B-15P	0.386	73.2	127.0	0.0	0.0	0.386	ER	92,205	386.0	386.0	0.0	0

Sorted By: Flow Order

====>Grouped by Line: EX-01.5C HP EX HDR to FWH 36C

EX-01.5C-02E	0.423	108.7	53.0	0.0	0.0	0.423	ER	92,205	423.0	423.0	0.1	0
EX-01.5C-14L	0.373	191.6	67.0	0.0	0.0	0.373	ER	92,205	373.0	373.0	0.1	0
EX-01.5C-04L	0.364	191.2	109.0	0.0	0.0	0.364	ER	92,205	364.0	364.0	0.1	0
EX-01.5C-05P	0.373	35.1	84.0	0.0	0.0	0.373	ER	92,205	373.0	373.0	0.0	0
EX-01.5C-06E	0.431	93.2	146.0	0.0	0.0	0.431	ER	92,205	431.0	431.0	0.1	0
EX-01.5C-07E	0.416	108.5	104.0	0.0	0.0	0.416	ER	92,205	416.0	416.0	0.1	0
EX-01.5C-08P	0.356	110.7	101.0	0.0	0.0	0.356	ER	92,205	356.0	356.0	0.1	0
EX-01.5C-10P	0.358	50.8	70.0	0.0	0.0	0.358	ER	92,205	358.0	358.0	0.0	0
EX-01.5C-11E	0.448	109.2	107.0	0.0	0.0	0.448	ER	92,205	448.0	448.0	0.1	0
EX-01.5C-15P	0.337	72.5	74.0	0.0	0.0	0.337	ER	92,205	337.0	337.0	0.0	0

Sorted By: Flow Order

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and Time = current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 T_p = Predicted thickness at T_{meas} .
 T_m = Last measured thickness (T_{meas}).
- [5] $PRWEAR$ = Incremental wear from last T_{meas} time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Pass 2 Analysis Include Measured Wear

Run Name: ES: HTR 36 HEADER
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.751

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime		In-Service Component		In-Service Component	In-Service Component	Incremental	Time (hrs)			
		Wear (mils)	Prd. [1]	Wear(mils)	Meas.				Thickness (mils) [4]	Wear (mils) [5]	Last	Inspected
====>Grouped by Line: EX-01.1 HP EXT to FWH 36 HDR												
EX-01.1-02E	0.446	148.1	133.0	0.0	0.0	0.446	ER	92,205	446.0	446.0	0	0
EX-01.1-04E	0.450	148.3	127.0	0.0	0.0	0.450	ER	92,205	450.0	450.0	0	0
EX-01.1-05P	0.368	118.4	37.0	0.0	0.0	0.368	ER	92,205	368.0	368.0	0	0
EX-01.1-08R	0.000	96.9	161.0	0.0	0.0	0.330	ER	92,205	330.0	330.0	0	0
EX-01.1-08R (D/S)	0.000	69.8	218.0	0.0	0.0	0.438	ER	92,205	438.0	438.0	0	0
EX-01.6-01P	0.378	52.5	99.0	0.0	0.0	0.378	ER	92,205	378.0	378.0	0	0
====>Grouped by Line: EX-01.2 HP EXT to FWH 36 HDR												
EX-01.2-02E	0.000	155.7	285.0	0.0	0.0	0.330	ER	92,205	330.0	330.0	0	0
EX-01.2-04E	0.330	131.5	80.0	0.0	0.0	0.330	ER	92,205	330.0	330.0	0	0
====>Grouped by Line: EX-01.3 HP EXT FWH 36 HEADER												
EX-01.2-10L	0.482	174.2	132.0	0.0	0.0	0.543	MT	202,797	481.9	543.0	0	0
EX-01.2-10L (BR/SE)	0.391	173.1	226.0	0.0	0.0	0.422	MT	202,797	390.9	422.0	0	0
EX-01.2-10L (D/S)	0.482	248.3	202.0	0.0	0.0	0.543	MT	202,797	481.8	543.0	0	0
EX-01.3-01P	0.456	45.3	152.0	0.0	0.0	0.456	ER	92,205	456.0	456.0	0	0
EX-01.3-04T	0.468	113.4	98.0	0.0	0.0	0.468	ER	92,205	468.0	468.0	0	0
EX-01.3-05P	0.464	111.8	94.0	0.0	0.0	0.464	ER	92,205	464.0	464.0	0	0
EX-01.3-17T	0.501	113.9	169.0	0.0	0.0	0.501	ER	92,205	501.0	501.0	0	0
EX-01.3-17T (D/S)	0.501	100.3	156.0	0.0	0.0	0.501	ER	92,205	501.0	501.0	0	0
EX-01.3-19E	0.000	149.2	277.0	0.0	0.0	0.438	ER	92,205	438.0	438.0	0	0
====>Grouped by Line: EX-01.4 HP EXT FWH 36 HEADER												
EX-01.4-02T	0.439	235.0	235.0	0.0	0.0	0.551	MT	202,797	438.9	551.0	0	0
EX-01.4-02T (BR/SE)	0.363	89.4	82.0	0.0	0.0	0.421	MT	202,797	362.9	421.0	0	0

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and Time = current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 T_p = Predicted thickness at T_{meas} .
 T_m = Last measured thickness (T_{meas}).
- [5] $PRWEAR$ = Incremental wear from last T_{meas} time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Pass 2 Analysis Include Measured Wear

Run Name: ES: LP TO 31 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.811

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]	(hrs) [3]	TP	Wear	PRWEAR	Last	Inspected
====>Grouped by Line: EX-06.2A LP EXT 17 to FWH 31A													
EX-06.2A-04N	0.375	97.0	89.0	97.0	89.0	0.322	MT	202,797	278.0	322.0	7.2	202,797	
====>Grouped by Line: EX-06.3A LP EXT 20 to FWH 31A													
EX-06.3A-05N	0.375	97.0	105.0	97.0	105.0	0.316	MT	202,797	278.0	316.0	7.2	202,797	

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: ES: LP TO 32 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.318

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]	(hrs) [3]	TP	Tm	Wear (mils) [5]	PRWEAR	Last
====>Grouped by Line: EX-05.1B LP EXT 16 to FWH 32B													
EX-05.1B-03E	0.250	93.0	61.0	93.0	61.0	0.269	MT	153,469	157.0	269.0	18.3	153,469	153,469
EX-05.1B-04N	0.375	109.1	72.0	109.1	72.0	0.345	GW	153,469	265.9	345.0	21.1	153,469	153,469
====>Grouped by Line: EX-05.1C LP EXT 16 to FWH 32C													
EX-05.1C-04N	0.375	114.3	86.0	114.3	86.0	0.289	MT	170,123	260.7	289.0	15.9	170,123	170,123
====>Grouped by Line: EX-05.2B LP EXT 15 to FWH 32B													
EX-05.2B-01N	0.400	162.9	104.0	162.9	104.0	0.310	GW	153,469	237.1	310.0	31.5	153,469	153,469
EX-05.2B-02E	0.250	102.4	111.0	102.4	111.0	0.276	MT	153,469	147.6	276.0	20.1	153,469	153,469
EX-05.2B-03E	0.250	93.0	93.0	93.0	93.0	0.259	MT	153,469	157.0	259.0	18.3	153,469	153,469
EX-05.2B-04P	0.250	83.4	134.0	83.4	134.0	0.260	GW	153,469	166.6	260.0	16.4	153,469	153,469
EX-05.2B-05E	0.250	87.7	163.0	87.7	163.0	0.264	GW	153,469	162.3	264.0	17.2	153,469	153,469
EX-05.2B-06N	0.375	109.1	133.0	109.1	133.0	0.261	MT	202,797	250.3	261.0	5.5	153,469	153,469

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: ES: LP TO 33 HEATERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.383

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]	(hrs) [3]	TP	Wear	PRWEAR	Last	Inspected
====>Grouped by Line: EX-04.11 LPEX FWH 33B IN HDR													
EX-04.11-08E	0.313	108.2	87.0	108.2	87.0	0.409	MT	170,123	204.3	409.0	39.3	170,123	
EX-04.11-19T (BR/SE)	0.259	44.8	47.0	44.8	47.0	0.209	GW	121,025	214.2	209.0	46.4	121,025	
====>Grouped by Line: EX-04.13 LP EXT 32 to FWH 33B													
EX-04.13-02P	0.255	88.3	72.0	88.3	72.0	0.182	MT	202,797	166.7	182.0	9.4	202,797	
====>Grouped by Line: EX-04.14 LP EXT 32 to FWH 33B													
EX-04.14-01P	0.276	25.4	46.0	25.4	46.0	0.230	GW	121,025	250.6	230.0	26.1	121,025	
EX-04.14-02E	0.250	54.2	73.0	54.2	73.0	0.433	GW	92,205	195.8	433.0	75.0	92,205	
====>Grouped by Line: EX-04.21 LP EXT 31 to FWH 33C													
EX-04.21-01R	0.000	62.0	82.0	62.0	82.0	0.342	MT	186,592	250.5	342.0	11.9	186,592	
EX-04.21-02P	0.267	79.5	110.0	79.5	110.0	0.156	MT	186,592	187.5	156.0	18.1	186,592	
EX-04.21-07T	0.250	45.0	73.0	45.0	73.0	0.213	GW	107,407	205.0	213.0	52.7	107,407	
EX-04.21-07T (D/S)	0.000	39.6	37.0	39.6	37.0	0.228	GW	107,407	210.4	228.0	46.4	107,407	
EX-04.21-03E	0.250	59.5	118.0	59.5	118.0	0.310	GW	107,407	190.5	310.0	69.6	107,407	
EX-04.21-04P	0.250	50.0	50.0	50.0	50.0	0.200	GW	152,050	200.0	200.0	30.6	152,050	
EX-04.21-05E	0.250	54.2	70.0	54.2	70.0	0.420	GW	92,205	195.8	420.0	75.0	92,205	
====>Grouped by Line: EX-04.22 LP EXT 31 to FWH 33C													
EX-04.22-01P	0.271	19.1	37.0	19.1	37.0	0.271	ER	0	219.5	271.0	51.5	78,649	
====>Grouped by Line: EX-04.4 LPEX FWH 33A IN HDR													
EX-04.2-09T (BR/SE)	0.250	102.2	75.0	102.2	75.0	0.311	MT	170,123	147.8	311.0	39.6	170,123	
EX-04.4-08E	0.313	108.2	94.0	108.2	94.0	0.433	MT	170,123	204.3	433.0	39.3	170,123	
====>Grouped by Line: EX-04.6 LP EXT to FWH 33A													

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4]		Incremental Wear (mils) [5] PRWEAR	Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]	(hrs) [3]	Tp			Tm
====>Grouped by Line: EX-04.6 LP EXT to FWH 33A												
EX-04.6-01R	0.000	62.0	95.0	62.0	95.0	0.326	MT	186,592	250.5	326.0	11.9	186,592
EX-04.6-02P	0.264	79.5	70.0	79.5	70.0	0.195	MT	186,592	184.5	195.0	18.1	186,592
EX-04.6-07T	0.262	36.2	36.0	36.2	36.0	0.235	GW	107,383	217.0	235.0	52.7	78,649
EX-04.6-03E	0.461	58.6	152.0	58.6	152.0	0.308	GW	107,383	402.4	308.0	67.9	107,383
EX-04.6-04P	0.279	72.7	41.0	72.7	41.0	0.209	MT	202,797	206.3	209.0	7.7	202,797
EX-04.6-05E	0.250	116.7	80.5	116.7	80.5	0.305	MT	202,797	133.3	305.0	12.5	202,797
EX-04.6-06N	0.250	93.9	77.0	93.9	77.0	0.449	MT	170,123	156.1	449.0	36.4	170,123
====>Grouped by Line: EX-04.7 LP EXT to FWH 33A												
EX-04.7-01P	0.264	46.6	35.0	46.6	35.0	0.229	MT	202,797	217.4	229.0	5.0	202,797

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
MT = Tmeas is component minimum thickness.
PW = Tmeas is Tmit - predicted wear.
US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tmit and Time = current component installation time.
Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
These two values are used for thickness plot.
- [4] Tp = Predicted thickness at Tmeas.
Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: ES: PRESEP TO 35 HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.229

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	[2]	(hrs) [3]	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]
====>Grouped by Line: EX-02.1 PSEP 2A 10" to 35 HDR													
EX-02.1-02P	0.378	54.8	67.0	0.0	0.0	0.378	ER	153,469	378.0	378.0	0.1	0	0
EX-02.1-03E	0.425	121.7	164.0	0.0	0.0	0.425	ER	153,469	425.0	425.0	0.1	0	0
EX-02.1-06T (BR/SE)	0.365	131.0	94.0	0.0	0.0	0.365	ER	153,469	365.0	365.0	0.1	0	0
EX-02.1-06T (D/S)	0.500	138.0	204.0	0.0	0.0	0.500	ER	153,469	500.0	500.0	0.1	0	0
====>Grouped by Line: EX-02.13 PSEP 1B&2B to 35 HDR													
EX-02.13-02B	0.500	125.2	127.0	0.0	0.0	0.500	ER	153,469	500.0	500.0	0.1	0	0
EX-02.13-03E	0.375	155.0	156.0	0.0	0.0	0.375	ER	153,469	375.0	375.0	0.1	0	0
EX-02.13-03P	0.000	120.0	71.0	0.0	0.0	0.500	ER	153,469	500.0	500.0	0.1	0	0
EX-02.13-04E	0.375	140.5	120.0	0.0	0.0	0.375	ER	153,469	375.0	375.0	0.1	0	0
EX-02.13-05P	0.375	117.4	62.0	0.0	0.0	0.375	ER	153,469	375.0	375.0	0.1	0	0
====>Grouped by Line: EX-02.14 FWH 35 HEADER													
EX-02.14-12P	0.375	70.2	185.0	70.2	185.0	0.413	GW	92,205	304.8	413.0	92.4	92,205	92,205
EX-02.14-14E	0.375	133.4	153.0	133.4	153.0	0.607	GW	92,205	241.6	607.0	175.7	92,205	92,205
EX-02.14-16E	0.375	158.0	157.0	158.0	157.0	0.393	GW	92,205	217.0	393.0	208.1	92,205	92,205
EX-02.14-18E	0.375	217.0	146.0	217.0	146.0	0.409	MT	137,201	158.0	409.0	149.0	137,201	137,201
EX-02.14-20E	0.375	217.0	186.5	217.0	186.5	0.398	MT	186,592	67.3	398.0	58.4	137,201	137,201
EX-02.14-24E	0.375	307.7	197.0	307.7	197.0	0.339	MT	186,592	67.3	339.0	58.4	186,592	186,592
EX-02.14-25E	0.000	123.1	99.0	0.0	0.0	0.375	ER	202,797	375.0	375.0	30.3	0	0
EX-02.14-27E	0.000	307.7	271.0	307.7	271.0	0.297	MT	186,592	67.3	297.0	58.4	186,592	186,592
====>Grouped by Line: EX-02.15 FWH 35 HEADER													
EX-02.15-02T	0.656	237.9	389.0	0.0	0.0	0.656	ER	78,649	656.0	656.0	1.4	0	0
====>Grouped by Line: EX-02.2 PSEP 1A 10" to 35 HDR													
EX-02.2-03E	0.365	102.3	202.0	0.0	0.0	0.365	ER	153,469	365.0	365.0	0.1	0	0

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4]		Incremental Wear (mils) [5] PRWEAR	Time (hrs) Last Inspected
		Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]	(hrs) [3]	Tp		
====>Grouped by Line: EX-02.2 PSEP 1A 10" to 35 HDR											
EX-02.2-04P	0.365	51.0	127.0	0.0	0.0	0.365	ER	153,469	365.0	365.0	0
====>Grouped by Line: EX-02.6 PSEP 1A&2A to 35 HDR											
EX-02.2-07T	0.500	181.0	162.0	0.0	0.0	0.500	ER	153,469	500.0	500.0	0
EX-02.2-07T (D/S)	0.500	260.5	166.0	0.0	0.0	0.500	ER	153,469	500.0	500.0	0
====>Grouped by Line: EX-02.9 PSEP 1B 10" to 35 HDR											
EX-02.9-03E	0.365	120.6	253.0	0.0	0.0	0.365	ER	153,469	365.0	365.0	0
EX-02.9-05E	0.365	120.6	115.0	0.0	0.0	0.365	ER	153,469	365.0	365.0	0
EX-02.9-07E	0.365	120.6	191.0	0.0	0.0	0.365	ER	153,469	365.0	365.0	0
EX-02.9-08P	0.365	81.9	83.0	0.0	0.0	0.365	ER	153,469	365.0	365.0	0
EX-02.9-09E	0.365	120.6	190.0	0.0	0.0	0.365	ER	153,469	365.0	365.0	0
EX-02.9-10P	0.000	125.1	33.0	0.0	0.0	0.365	ER	153,469	365.0	365.0	0

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
MT = Tmeas is component minimum thickness.
PW = Tmeas is Tmit - predicted wear.
US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tmit and Time = current component installation time.
Tmeas is used to determine Predicted Thickness and Component Predicted Time to Terit.
- [4] These two values are used for thickness plot.
Tp = Predicted thickness at Tmeas.
Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Pass 2 Analysis Include Measured Wear

Run Name: FW:36 HTR TO SG HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.451

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	[2]	(hrs) [3]	TP	Time	Wear	PRWEAR	Last

====>Grouped by Line: FW-02.1A FWH 36A to SG HDR

FW-02.1A-02E	0.938	170.3	115.0	170.3	115.0	1.007	MT	170,123	767.7	1,007.0	27.6	170,123
FW-02.1A-03P	0.938	147.3	64.0	147.3	64.0	0.916	MT	170,123	790.7	916.0	23.9	170,123
FW-02.1A-04E	0.938	170.3	183.0	170.3	183.0	0.968	MT	170,123	767.7	968.0	27.6	170,123
FW-02.1A-09E	0.938	179.8	189.0	179.8	189.0	0.858	MT	186,592	758.2	858.0	18.1	186,592
FW-02.1A-10P	0.938	121.5	203.0	121.5	203.0	0.885	MT	186,592	816.5	885.0	12.2	186,592
FW-02.1A-11E	0.938	179.8	122.0	179.8	122.0	0.893	MT	186,592	758.2	893.0	18.1	186,592
FW-02.1A-12P	0.938	121.5	46.0	121.5	46.0	0.913	MT	186,592	816.5	913.0	12.2	186,592
FW-02.1A-13R	0.000	104.9	108.0	104.9	108.0	0.911	MT	107,911	833.1	911.0	44.9	107,911

Sorted By: Flow Order

====>Grouped by Line: FW-02.1B FWH 36B to SG HDR

FW-02.1B-02E	0.938	152.6	283.0	152.6	283.0	1.002	GW	137,201	785.4	1,002.0	45.3	137,201
FW-02.1B-03P	0.938	132.0	61.0	132.0	61.0	0.925	GW	137,201	806.0	925.0	39.2	137,201
FW-02.1B-04E	0.938	152.6	249.0	152.6	249.0	0.991	GW	137,201	785.4	991.0	45.3	137,201
FW-02.1B-06P	0.938	90.8	112.0	90.8	112.0	0.887	GW	137,201	847.2	887.0	26.9	137,201
FW-02.1B-10P	0.965	122.0	122.0	122.0	122.0	0.867	MT	186,592	843.0	867.0	12.3	186,592

Sorted By: Flow Order

====>Grouped by Line: FW-02.1C FWH 36C to SG HDR

FW-02.1C-01N	0.938	217.3	156.0	217.3	156.0	1.181	GW	153,469	720.7	1,181.0	50.1	153,469
FW-02.1C-02E	0.938	160.8	280.0	160.8	280.0	0.903	GW	153,469	777.2	903.0	37.1	153,469
FW-02.1C-03P	0.938	139.1	50.0	139.1	50.0	0.915	GW	153,469	798.9	915.0	32.1	153,469
FW-02.1C-10P	0.998	128.6	58.0	128.6	58.0	0.931	MT	202,797	869.4	931.0	6.4	202,797

Sorted By: Flow Order

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and Time = current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 T_p = Predicted thickness at T_{meas} .
 T_m = Last measured thickness (T_{meas}).
- [5] $PRWEAR$ = Incremental wear from last T_{meas} time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Pass 2 Analysis Include Measured Wear

Run Name: FW: BFP TO 36 HTR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.893

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]	In-Service Component Thickness (mils) [4]		Incremental Wear (mils) [5] PRWEAR	Time (hrs)		
		Prd. [1]	Meas.	Prd. [1]	Meas.		Thm	Time Last Inspected				
====>Grouped by Line: FW-01.1A BFP 31 to RCIRC T												
FW-01.1A-02P	1.075	122.1	85.0	122.1	85.0	0.990	GW	153,469	952.9	990.0	26.7	153,469
FW-01.1A-03R	1.095	127.1	86.0	127.1	86.0	1.065	GW	153,469	967.9	1,065.0	27.8	153,469
FW-01.1A-03R (D/S)	1.095	98.9	65.0	98.9	65.0	0.978	GW	153,469	996.1	978.0	21.7	153,469
FW-01.2A-01E	1.031	134.4	283.0	134.4	283.0	0.983	MT	186,592	896.6	983.0	12.9	186,592
FW-01.2A-02P	1.043	72.0	58.0	72.0	58.0	1.025	GW	78,649	971.0	1,025.0	55.6	78,649
FW-01.2A-03T (D/S)	1.039	114.1	61.0	114.1	61.0	1.005	MT	202,797	924.9	1,005.0	5.4	202,797
====>Grouped by Line: FW-01.1B BFP 32 to RCIRC T												
FW-01.1B-03R	1.095	114.1	92.0	114.1	92.0	1.020	MT	186,592	953.7	1,020.0	13.6	121,025
FW-01.1B-03R (D/S)	1.095	88.8	94.0	88.8	94.0	1.033	MT	186,592	985.0	1,033.0	10.6	121,025
FW-01.2B-01E	1.031	83.1	208.0	83.1	208.0	0.970	GW	78,649	947.9	970.0	64.2	78,649
FW-01.2B-03E	1.251	123.7	148.0	123.7	148.0	1.045	MT	186,592	1,127.3	1,045.0	11.9	186,592
FW-01.2B-04P	1.032	79.9	65.0	79.9	65.0	0.989	MT	186,592	952.1	989.0	7.7	186,592
====>Grouped by Line: FW-01.2A BFP31 RCIRC T to HDR												
FW-01.2A-04P	1.039	72.7	44.0	72.7	44.0	1.002	MT	186,592	966.3	1,002.0	7.0	186,592
FW-01.2A-10E	1.031	140.6	149.0	140.6	149.0	1.026	MT	202,797	890.4	1,026.0	6.7	202,797
FW-01.2A-23P	1.053	95.3	70.0	95.3	70.0	0.983	MT	202,797	957.7	983.0	4.5	202,797
====>Grouped by Line: FW-01.2B BFP32 RCIRC T to HDR												
FW-01.2B-27R	0.000	106.4	117.0	106.4	117.0	1.543	MT	202,797	924.6	1,543.0	5.1	202,797
FW-01.2B-27R (D/S)	0.000	66.7	130.0	66.7	130.0	1.288	MT	202,797	1,193.3	1,288.0	3.2	202,797
====>Grouped by Line: FW-01.3 BFP DISCHARGE HDR												
FW-01.3-01T (BR/SE)	1.042	95.0	95.0	95.0	95.0	0.990	GW	107,911	947.0	990.0	40.6	107,911
FW-01.3-01T (D/S)	1.375	80.2	69.0	80.2	69.0	1.386	GW	107,911	1,275.4	1,386.0	42.5	78,649
FW-01.3-02P	1.371	39.1	61.0	39.1	61.0	1.381	GW	107,911	1,322.4	1,381.0	20.7	78,649

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4]		Incremental Wear (mils) [5] PRWEAR	Time (hrs)	
		Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]	(hrs) [3]	TP		Tm	Last Inspected
====>Grouped by Line: FW-01.3 BFP DISCHARGE HDR												
FW-01.3-03E	1.514	118.5	238.0	118.5	238.0	1.365	MT	186,592	1,395.5	1,365.0	11.4	186,592
FW-01.3-04E	1.638	119.9	230.0	119.9	230.0	1.395	MT	186,592	1,518.1	1,395.0	11.5	186,592
FW-01.3-05P	1.260	100.1	43.0	100.1	43.0	1.365	MT	186,592	1,159.9	1,365.0	9.6	186,592
FW-01.3-06E	1.260	115.8	213.5	115.8	213.5	1.359	MT	186,592	1,144.2	1,359.0	11.1	186,592
FW-01.3-07P	1.260	54.6	68.0	54.6	68.0	1.369	GW	92,205	1,205.4	1,369.0	31.1	92,205
FW-01.3-08E	1.260	115.8	189.0	115.8	189.0	1.382	MT	186,592	1,144.2	1,382.0	11.1	186,592
FW-01.3-09P	1.260	100.1	58.0	100.1	58.0	1.364	MT	186,592	1,159.9	1,364.0	9.6	186,592
FW-01.3-10E	1.260	98.7	210.0	98.7	210.0	1.341	MT	137,201	1,161.3	1,341.0	28.2	137,201
FW-01.3-12E	1.260	104.1	227.0	104.1	227.0	1.319	GW	153,469	1,155.9	1,319.0	22.8	153,469
FW-01.3-14E	1.260	109.9	196.0	109.9	196.0	1.375	MT	170,123	1,150.1	1,375.0	17.0	170,123
FW-01.3-15E	1.260	32.2	121.0	32.2	121.0	1.334	MT	202,797	1,138.9	1,334.0	5.8	202,797
FW-01.3-16P	1.260	80.9	64.0	80.9	64.0	1.333	GW	121,025	1,179.1	1,333.0	28.9	121,025
FW-01.3-17T	1.260	84.4	44.0	84.4	44.0	1.351	GW	153,469	1,175.6	1,351.0	18.5	153,469
FW-01.3-17T (D/S)	1.260	84.4	47.0	84.4	47.0	1.345	GW	153,469	1,175.6	1,345.0	18.5	153,469
FW-01.3-18P	1.348	56.7	30.0	56.7	30.0	1.351	GW	153,469	1,291.3	1,351.0	12.4	153,469
FW-01.4-01T (BR/SE)	1.019	117.3	204.0	117.3	204.0	0.845	MT	186,592	901.7	845.0	11.3	186,592
====>Grouped by Line: FW-01.4 BFP DISCHARGE HDR												
FW-01.5-01T (D/S)	1.385	86.5	49.0	86.5	49.0	1.351	MT	186,592	1,298.5	1,351.0	8.5	186,592
FW-01.5-01T (BR/SE)	1.015	117.2	167.0	117.2	167.0	0.849	MT	186,592	897.8	849.0	11.3	186,592
====>Grouped by Line: FW-01.6A BFP HDR to FWH 36A												
FW-01.6A-02P	1.009	67.6	59.0	67.6	59.0	0.898	GW	121,025	941.4	898.0	24.1	121,025
FW-01.6A-12N	0.938	125.7	101.0	125.7	101.0	2.618	MT	170,123	812.3	2,618.0	19.4	170,123
====>Grouped by Line: FW-01.6B BFP HDR to FWH 36B												
FW-01.6B-02P	0.930	53.4	75.0	53.4	75.0	0.895	GW	121,025	876.6	895.0	19.1	121,025
FW-01.6B-06E	0.938	104.4	155.0	104.4	155.0	1.080	GW	137,201	833.6	1,080.0	29.8	137,201
FW-01.6B-07P	0.938	90.3	85.0	90.3	85.0	0.853	GW	137,201	847.7	853.0	25.8	137,201
FW-01.6B-08E	0.938	98.7	100.0	98.7	100.0	0.986	GW	137,201	839.3	986.0	28.2	137,201
FW-01.6B-10N	0.938	112.8	87.0	112.8	87.0	2.741	MT	137,201	825.2	2,741.0	32.3	137,201
====>Grouped by Line: FW-01.6C BFP HDR to FWH 36C												
FW-01.6C-02P	0.938	66.2	54.0	66.2	54.0	0.884	MT	186,592	871.8	884.0	6.4	186,592

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and Time = current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 T_p = Predicted thickness at T_{meas} .
 T_m = Last measured thickness (T_{meas}).
- [5] $PRWEAR$ = Incremental wear from last T_{meas} time to analysis ending period.

Wear Report

Company: Report Date/Time: 29-Jul-2011 4:10 pm
 Plant: AnalysisDate/Time: 29-Jul-2011 4:11 pm
 Unit:
 DB Name: IPEC 3 (v4).DB

Run Name: CHECWORKS SFA Version:
 Ending Period: Duty Factor (Global) :
 Total Plant Operating Hours:
 WRA Data Option:
 Line Correction Factor:

Component Name	Tinit		Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]	(hrs) [3]	Tp	Tm	PRWEAR	Last	Inspected

====>Grouped by Line:

Sorted By: Flow Order

- Notes:
- [1] Predictions are for the time of last inspection (last known meas. wear).
 - [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
 - [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
 - [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
 - [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: FW: SG HEADERS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.162

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Tinit	Total Lifetime		In-Service Component		In-Service Component		In-Service Component		Incremental Wear (mils) [5] PRWEAR	Time (hrs)	
		Wear (mils) Prd. [1]	Meas. Meas.	Wear(mils) Prd. [1]	Meas. Meas.	Tmeas, Method, Time (in) [3] [2] (hrs) [3]	Thickness (mils) [4] Tm	Wear (mils) [5] PRWEAR	Last Inspected			
====>Grouped by Line: FW-02.3 SG INLET HEADER												
FW-02.1B-11T	1.398	55.7	71.0	55.7	71.0	1.376	GW	107,911	1,330.1	1,376.0	29.4	78,649
FW-02.1B-11T (BR/SE)	0.974	117.4	71.0	117.4	71.0	0.925	GW	107,911	856.6	925.0	50.2	107,911
====>Grouped by Line: FW-02.4 SG INLET HEADER												
FW-02.4-02T	1.260	113.0	53.0	113.0	53.0	1.346	GW	153,469	1,147.0	1,346.0	26.1	153,469
FW-02.4-02T (D/S)	0.000	113.0	43.0	113.0	43.0	1.358	GW	153,469	1,147.0	1,358.0	26.1	153,469
FW-02.4-04E	1.260	110.3	91.0	110.3	91.0	1.470	GW	92,205	1,149.7	1,470.0	61.2	92,205
FW-02.4-05E	1.260	63.1	64.0	63.1	64.0	1.358	MT	202,797	1,096.7	1,358.0	8.2	202,797
FW-02.4-06P	1.260	141.3	94.0	141.3	94.0	1.392	MT	202,797	1,118.7	1,392.0	7.1	202,797
FW-02.4-07E	1.260	163.3	158.0	163.3	158.0	1.407	MT	202,797	1,096.7	1,407.0	8.2	202,797
FW-02.4-09E	1.260	155.8	192.0	155.8	192.0	1.347	MT	186,592	1,104.2	1,347.0	15.7	186,592
FW-02.4-10P	1.260	105.3	35.0	105.3	35.0	1.345	MT	186,592	1,154.7	1,345.0	10.6	186,592
FW-02.4-11E	1.260	147.6	206.0	147.6	206.0	1.357	MT	170,123	1,112.4	1,357.0	23.9	170,123
FW-02.4-15E	1.260	132.3	212.0	132.3	212.0	1.330	GW	137,201	1,127.7	1,330.0	39.2	137,201
FW-02.4-17E	1.260	139.4	145.0	139.4	145.0	1.305	GW	153,469	1,120.6	1,305.0	32.1	153,469
FW-02.4-18P	1.365	95.1	40.0	95.1	40.0	1.362	GW	153,469	1,269.9	1,362.0	21.9	153,469
FW-02.4-19T (BR/SE)	0.974	140.0	140.0	140.0	140.0	0.864	MT	202,797	834.0	864.0	7.0	202,797
====>Grouped by Line: FW-02.5 SG INLET HEADER												
FW-02.5-04T (BR/SE)	1.002	113.9	86.0	113.9	86.0	0.936	GW	137,201	888.1	936.0	33.8	137,201
====>Grouped by Line: FW-02.6 SG INLET HEADER												
FW-02.6-03T (BR/SE)	1.006	134.2	166.0	134.2	166.0	0.860	MT	186,592	871.8	860.0	13.5	186,592
FW-02.6-03T (D/S)	1.361	92.0	38.0	92.0	38.0	1.343	MT	186,592	1,269.0	1,343.0	9.4	186,592
====>Grouped by Line: FW-02.8A SG HDR to SG 31												
FW-02.8A-01P	0.968	48.3	97.0	48.3	97.0	0.968	ER	0	884.1	968.0	83.9	78,649

Component Name	Tinit		Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4]		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]	(hrs) [3]	Tp	Tm	PRWEAR	Last	Inspected

====>Grouped by Line: **FW-02.8A SG HDR to SG 31**

FW-02.8A-02E	0.938	119.2	129.0	119.2	129.0	0.956	GW	137,201	818.8	956.0	35.4	137,201
FW-02.8A-03T	0.938	96.6	75.0	96.6	75.0	0.863	GW	137,201	841.4	863.0	28.7	137,201
FW-02.8A-03T (D/S)	0.000	96.6	56.0	96.6	56.0	0.896	GW	137,201	841.4	896.0	28.7	137,201
FW-02.8A-25R (D/S)	0.000	218.0	184.0	0.0	0.0	0.844	ER	186,592	844.0	844.0	19.6	0
FW-02.8A-26R	0.000	170.6	212.0	170.6	212.0	0.651	MT	202,797	665.1	651.0	8.9	186,592
FW-02.8A-26R (D/S)	0.000	119.3	157.0	119.3	157.0	1.340	MT	202,797	818.7	1,340.0	6.0	202,797
FW-02.8A-06E	0.938	119.2	158.0	119.2	158.0	0.912	GW	137,201	818.8	912.0	35.4	137,201
FW-02.8A-07P	0.938	103.1	58.0	103.1	58.0	0.903	GW	137,201	834.9	903.0	30.6	137,201
FW-02.8A-13P	0.938	43.4	125.0	43.4	125.0	0.905	MT	186,592	894.6	905.0	4.4	186,592
FW-03.1A-08B	0.750	48.6	140.0	48.6	140.0	0.980	MT	186,592	613.6	980.0	13.7	186,592

====>Grouped by Line: **FW-02.8B SG HDR to SG 32**

FW-02.8B-01P	0.938	79.6	55.0	79.6	55.0	0.904	MT	202,797	858.4	904.0	4.0	202,797
FW-02.8B-07E	0.938	140.4	221.0	140.4	221.0	0.828	MT	186,592	797.6	828.0	14.1	186,592
FW-02.8B-08P	0.938	86.0	69.0	86.0	69.0	0.885	GW	92,205	852.0	885.0	47.7	92,205
FW-02.8B-09T	0.938	96.6	60.0	96.6	60.0	0.884	GW	137,201	841.4	884.0	28.7	137,201
FW-02.8B-09T (D/S)	0.000	96.6	41.0	96.6	41.0	0.897	GW	137,201	841.4	897.0	28.7	137,201
FW-02.8B-13F	0.938	205.3	154.0	205.3	154.0	0.808	MT	170,123	732.7	808.0	33.3	170,123
FW-02.8B-14P	0.990	41.1	75.0	41.1	75.0	0.866	MT	170,123	948.9	866.0	6.7	170,123
FW-02.8B-22T	0.000	70.0	39.0	70.0	39.0	0.753	GW	78,649	680.0	753.0	51.7	78,649
FW-02.8B-22T (D/S)	0.000	70.0	59.0	70.0	59.0	0.706	GW	78,649	680.0	706.0	51.7	78,649
FW-02.8B-23E	0.924	140.1	281.5	140.1	281.5	0.693	MT	186,592	783.9	693.0	14.1	186,592
FW-03.1B-08E	0.750	122.0	99.0	122.0	99.0	0.672	GW	153,469	628.0	672.0	28.1	153,469
FW-03.1B-09P	0.750	82.4	68.0	82.4	68.0	0.876	GW	153,469	667.6	876.0	19.0	153,469

====>Grouped by Line: **FW-02.8C SG HDR to SG 34**

FW-02.8C-01P	0.946	48.1	71.0	48.1	71.0	0.946	ER	0	862.4	946.0	83.6	78,649
FW-02.8C-24R (D/S)	0.000	157.4	148.0	157.4	148.0	0.877	GW	121,025	686.6	877.0	57.2	121,025
FW-02.8C-07E	0.938	113.3	121.0	113.3	121.0	0.962	GW	121,025	824.7	962.0	41.2	121,025
FW-02.8C-08P	0.938	98.0	53.0	98.0	53.0	0.898	GW	121,025	840.0	898.0	35.6	121,025
FW-02.8C-14P	0.938	43.4	123.0	43.4	123.0	0.903	MT	186,592	894.6	903.0	4.4	186,592
FW-03.1C-10E	0.750	115.8	215.0	115.8	215.0	0.787	GW	137,201	634.2	787.0	34.3	137,201
FW-03.1C-11P	0.750	100.1	41.0	100.1	41.0	0.707	MT	137,201	649.9	707.0	29.7	137,201
FW-03.1C-12E	0.750	121.6	149.0	121.6	149.0	0.778	MT	186,592	628.4	778.0	12.3	186,592
FW-03.1C-13P	0.750	76.8	129.0	76.8	129.0	0.639	MT	170,123	673.2	639.0	12.5	170,123

====>Grouped by Line: **FW-02.8D SG HDR to SG 33**

FW-02.7-04T (BR/SE)	1.013	140.9	168.0	140.9	168.0	0.874	MT	202,797	872.1	874.0	7.0	202,797
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Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4]		Incremental Wear (mils) [5] PRWEAR	Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]	(hrs) [3]	Tp			Tm
====>Grouped by Line: FW-02.8D SG HDR to SG 33												
FW-02.8D-01P	0.964	48.2	52.0	48.2	52.0	0.964	ER	0	880.1	964.0	83.9	78,649
FW-02.8D-25R	1.312	190.7	132.0	190.7	132.0	0.712	MT	186,592	1,121.3	712.0	19.2	186,592
FW-02.8D-25R (D/S)	0.000	113.8	156.0	113.8	156.0	0.865	MT	186,592	824.2	865.0	11.5	186,592
FW-02.8D-07E	0.938	147.2	191.5	147.2	191.5	0.898	MT	202,797	790.8	898.0	7.3	202,797
FW-02.8D-08P	0.938	127.3	69.0	127.3	69.0	0.876	MT	202,797	810.7	876.0	6.4	202,797
FW-02.8D-14P	0.938	43.4	125.0	43.4	125.0	0.905	MT	186,592	894.6	905.0	4.4	186,592
FW-02.8D-19P	0.750	130.3	73.0	130.3	73.0	0.706	MT	202,797	619.7	706.0	6.5	202,797
FW-03.1D-08B	0.750	129.0	176.5	129.0	176.5	0.722	MT	186,592	621.0	722.0	13.0	186,592

Sorted By: Flow Order

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
MT = Tmeas is component minimum thickness.
PW = Tmeas is Tmit - predicted wear.
US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tmit and Time = current component installation time.
Tmeas is used to determine Predicted Thickness and Component Predicted Time to Torit.
- [4] These two values are used for thickness plot.
Tp = Predicted thickness at Tmeas.
Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: HD: HD PMP TO BFP HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.733

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime		In-Service Component		In-Service Component		In-Service Component Thickness (mils) [4]	Incremental Wear (mils) [5] PRWEAR	Time (hrs)	
		Wear (mils) Prd. [1]	Meas. Meas.	Wear(mils) Prd. [1]	Meas. Meas.	Tmeas, Method, Time (in) [3]	[2]			Time Last Inspected	

====>>>Grouped by Line: HD-11.1A HD PMP 31 to HDR

HD-11.2A-01R	0.000	79.5	80.0	79.5	80.0	0.516	MT	202,797	420.5	516.0	4.3	202,797
HD-12.1A-02R	0.000	98.3	86.0	98.3	86.0	0.268	MT	186,592	223.7	268.0	10.8	186,592
HD-12.1A-02R (D/S)	0.000	64.7	92.0	64.7	92.0	0.471	MT	186,592	435.3	471.0	7.1	186,592
HD-12.2A-03E	0.500	84.0	83.5	84.0	83.5	0.457	MT	202,797	416.0	457.0	4.6	202,797
HD-12.2A-07P	0.569	30.5	73.0	30.5	73.0	0.459	GW	121,025	538.5	459.0	12.4	121,025

Sorted By: Flow Order

====>>>Grouped by Line: HD-11.1B HD PMP 32 to HDR

HD-11.2B-01R	0.000	37.6	44.0	37.6	44.0	0.509	MT	202,797	420.5	509.0	4.3	202,797
HD-11.2B-01R (D/S)	0.000	56.0	38.0	56.0	38.0	0.320	MT	202,797	203.8	320.0	6.4	202,797
HD-12.1B-02R (D/S)	0.000	57.3	56.0	57.3	56.0	0.481	GW	153,469	442.7	481.0	14.5	153,469
HD-12.2B-02P	0.539	29.6	42.0	29.6	42.0	0.493	GW	78,649	509.4	493.0	23.6	78,649
HD-12.2B-03E	0.535	35.8	45.0	35.8	45.0	0.447	MT	186,592	454.6	447.0	8.8	186,592
HD-12.2B-05P	0.516	43.3	39.0	43.3	39.0	0.477	MT	186,592	472.7	477.0	4.8	186,592
HD-12.2B-07P	0.527	40.6	71.0	40.6	71.0	0.453	MT	202,797	486.4	453.0	2.2	202,797
HD-12.2B-08T (BR/SE)	0.000	90.8	60.0	90.8	60.0	0.449	MT	202,797	409.2	449.0	4.9	202,797
HD-12.2B-08T (D/S)	0.000	78.7	43.0	78.7	43.0	0.639	MT	202,797	577.3	639.0	4.7	202,797
HD-12.3-01P	0.654	47.2	65.0	47.2	65.0	0.631	MT	202,797	606.8	631.0	2.8	202,797

Sorted By: Flow Order

====>>>Grouped by Line: HD-12.2A HD PMP HDR to CD SYS

HD-12.2A-08T (BR/SE)	0.000	69.1	64.0	69.1	64.0	0.469	MT	170,123	430.9	469.0	12.3	170,123
HD-12.2A-08T	0.700	57.8	56.0	57.8	56.0	0.628	MT	170,123	642.2	628.0	11.3	170,123
HD-12.4-01E	0.789	112.2	132.0	112.2	132.0	0.620	MT	186,592	676.8	620.0	10.0	186,592

Sorted By: Flow Order

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and Time = current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 T_p = Predicted thickness at T_{meas} .
 T_m = Last measured thickness (T_{meas}).
- [5] $PRWEAR$ = Incremental wear from last T_{meas} time to analysis ending period.

Wear Report

Company: Report Date/Time: 29-Jul-2011 4:10 pm
 Plant: AnalysisDate/Time: 29-Jul-2011 4:11 pm
 Unit:
 DB Name: IPEC 3 (v4).DB

Run Name:
 Ending Period:
 Total Plant Operating Hours:
 WRA Data Option:
 Line Correction Factor:

CHECWORKS SFA Version:
 Duty Factor (Global) :

Component Name	Tinit	Total Lifetime Wear (mils) Prd. [1] Meas.	In-Service Component Wear(mils) Prd. [1] Meas.	In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]	In-Service Component Thickness (mils) [4] Tm	Incremental Wear (mils) [5] PRWEAR	Time (hrs) Last Inspected
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====>Grouped by Line:

Sorted By: Flow Order

- Notes:
- [1] Predictions are for the time of last inspection (last known meas. wear).
 - [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
 - [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
 - [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
 - [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: HD: HTR 32 TO HTR 31
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.863

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR	Time (hrs)	
		Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	GW	GW		TP	Last Inspected
====>Grouped by Line: HD-08.1A FWH 32A to FWH 31A												
HD-09.1A-02R (D/S)	0.000	59.6	69.0	59.6	69.0	0.277	GW	78,649	190.4	277.0	31.7	78,649
====>Grouped by Line: HD-08.1B FWH 32B to FWH 31B												
HD-09.1B-02R	0.000	78.0	78.0	78.0	78.0	0.261	GW	78,649	172.0	261.0	41.4	78,649
HD-09.1B-02R (D/S)	0.000	59.6	50.0	59.6	50.0	0.346	GW	78,649	190.4	346.0	31.7	78,649

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: HD: HTR 33 TO HTR 32
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.045

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm	Incremental Wear (mils) [5] PRWEAR	Time (hrs)	
		Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]			(hrs) [3]	Last Inspected

====>Grouped by Line: HD-06.1A FWH 33A to FWH 32A

HD-6.1A-41E	0.250	94.2	56.0	94.2	56.0	0.269	GW	137,201	155.8	269.0	12.5	137,201
HD-6.1A-42P	0.250	85.1	47.0	85.1	47.0	0.243	GW	137,201	164.9	243.0	10.8	137,201
HD-6.2A-01E	0.000	63.7	61.0	63.7	61.0	0.431	GW	137,201	186.3	431.0	8.5	137,201
HD-6.2A-01E (D/S)	0.000	135.4	164.0	135.4	164.0	0.348	GW	137,201	144.6	348.0	17.7	137,201
HD-07.1A 02R	0.000	122.3	89.0	122.3	89.0	0.354	GW	137,201	157.7	354.0	16.0	137,201
HD-07.1A 02R (D/S)	0.000	76.4	107.0	76.4	107.0	0.267	GW	137,201	173.6	267.0	10.2	137,201
HD-07.2A-02P	0.250	56.0	67.0	56.0	67.0	0.215	GW	137,201	194.0	215.0	7.5	137,201
HD-07.2A-03T	0.250	104.0	81.0	104.0	81.0	0.510	GW	92,205	146.0	510.0	40.3	92,205
HD-07.2A-03T (BR/SE)	0.000	104.0	170.0	104.0	170.0	0.415	GW	92,205	146.0	415.0	40.3	92,205

Sorted By: Flow Order

====>Grouped by Line: HD-06.1B FWH 33B to FWH 32B

HD-07.1B-02R	0.000	125.2	88.0	125.2	88.0	0.274	MT	153,280	154.8	274.0	13.1	153,280
HD-07.1B-02R (D/S)	0.000	78.2	110.0	78.2	110.0	0.246	GW	153,280	171.8	246.0	8.3	153,280
HD-07.2B-03T	0.250	104.0	204.0	104.0	204.0	0.485	GW	92,205	146.0	485.0	40.3	92,205
HD-07.2B-03T (BR/SE)	0.000	104.0	153.0	104.0	153.0	0.394	GW	92,205	146.0	394.0	40.3	92,205

Sorted By: Flow Order

====>Grouped by Line: HD-06.1C FWH 33C to FWH 32C

HD-6.2C-01E	0.000	60.5	63.0	60.5	63.0	0.403	GW	121,025	189.5	403.0	11.7	121,025
HD-6.2C-01E (D/S)	0.000	128.6	117.0	128.6	117.0	0.430	GW	121,025	151.4	430.0	24.5	121,025
HD-07.1C-02R	0.000	116.2	83.0	116.2	83.0	0.304	GW	121,025	163.8	304.0	22.1	121,025
HD-07.1C-02R (D/S)	0.000	72.6	66.0	72.6	66.0	0.250	MT	121,025	177.4	250.0	14.0	121,025
HD-07.2C-02P	0.250	53.2	39.0	53.2	39.0	0.229	GW	121,025	196.8	229.0	10.3	121,025
HD-07.2C-03T	0.250	104.0	171.0	104.0	171.0	0.317	GW	92,205	146.0	317.0	40.3	92,205
HD-07.2C-03T (BR/SE)	0.000	104.0	159.0	104.0	159.0	0.470	GW	92,205	146.0	470.0	40.3	92,205

Sorted By: Flow Order

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and $Time =$ current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 $T_p =$ Predicted thickness at T_{meas} .
 $T_m =$ Last measured thickness (T_{meas}).
- [5] $PRWEAR =$ Incremental wear from last T_{meas} time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: HD: HTR 34 TO HTR 33
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 0.911

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime		In-Service Component		In-Service Component		In-Service Component Thickness (mils) [4]	Incremental Wear (mils) [5] PRWEAR	Time (hrs)		
		Wear (mils) Prd. [1]	Meas. Prd. [1]	Wear(mils) Prd. [1]	Meas. Prd. [1]	Tmeas, Method, Time (in) [3]	[2]			Time Last Inspected		
====>Grouped by Line: HD-04.1A FWH 34A to FWH 33A												
HD-05.1A-02R	0.000	125.8	124.0	125.8	124.0	0.062	137,201	61.6	61.6	35.3	92,205	
HD-05.1A-02R (D/S)	0.000	54.9	74.0	54.9	74.0	0.275	137,201	222.0	275.0	13.7	121,025	
HD-05.2A-01T	0.280	110.4	86.0	110.4	86.0	0.232	186,592	169.6	232.0	9.1	186,592	
HD-05.2A-01T (BR/SE)	0.000	110.4	139.0	110.4	139.0	0.256	186,592	169.6	256.0	9.1	186,592	
HD-05.2A-02P	0.280	40.0	39.0	40.0	39.0	0.241	121,025	240.0	241.0	11.3	121,025	
====>Grouped by Line: HD-04.1B FWH 34B to FWH 33B												
HD-4.2B-01E	0.000	48.3	53.0	48.3	53.0	0.242	137,201	231.7	242.0	11.4	137,201	
HD-4.2B-01E (D/S)	0.000	121.2	102.0	121.2	102.0	0.278	137,201	115.8	278.0	27.7	137,201	
HD-4.3B-01R	0.000	136.9	132.0	136.9	132.0	0.234	137,201	100.1	234.0	31.3	137,201	
HD-05.2B-01T	0.280	96.6	74.0	96.6	74.0	0.299	137,201	183.4	299.0	22.8	137,201	
HD-05.2B-01T (BR/SE)	0.000	96.6	98.0	96.6	98.0	0.331	137,201	183.4	331.0	22.8	137,201	
====>Grouped by Line: HD-04.1C FWH 34C to FWH 33C												
HD-4.2C-01E	0.000	48.3	104.0	48.3	104.0	0.246	92,205	240.7	246.0	20.4	137,201	
HD-4.2C-01E (D/S)	0.000	121.2	175.0	121.2	175.0	0.270	92,205	138.2	270.0	50.2	137,201	
HD-05.2C-01T	0.280	96.6	63.0	96.6	63.0	0.332	107,359	193.3	332.0	32.8	137,201	
HD-05.2C-01T (BR/SE)	0.000	96.6	141.0	96.6	141.0	0.361	107,359	193.3	361.0	32.8	137,201	

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and $Time =$ current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 $T_p =$ Predicted thickness at T_{meas} .
 $T_m =$ Last measured thickness (T_{meas}).
- [5] $PRWEAR =$ Incremental wear from last T_{meas} time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: HD: HTR 35 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.487

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	[2]	[3]	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]
====>Grouped by Line: HD-03.1A FWH 35A to HD TK													
HD-03.1A-11E	0.250	37.0	40.0	37.0	40.0	0.244	GW	78,649	213.0	244.0	29.8	78,649	78,649
HD-03.1A-12E	0.250	37.0	43.0	37.0	43.0	0.276	GW	78,649	213.0	276.0	29.8	78,649	78,649
HD-03.1A-13P	0.250	32.0	32.0	32.0	32.0	0.242	GW	78,649	218.0	242.0	25.8	78,649	78,649
HD-03.1A-14E	0.250	37.0	32.0	37.0	32.0	0.257	GW	78,649	213.0	257.0	29.8	78,649	78,649
====>Grouped by Line: HD-03.1B FWH 35B to HD TK													
HD-03.1B-09E	0.250	57.2	48.0	57.2	48.0	0.242	MT	170,123	192.8	242.0	9.6	170,123	170,123
====>Grouped by Line: HD-03.1C FWH 35C to HD TK													
HD-03.1C-13E	0.250	53.9	59.0	53.9	59.0	0.254	GW	153,469	196.1	254.0	12.9	153,469	153,469
HD-03.1C-14E	0.250	53.9	84.0	53.9	84.0	0.234	GW	153,469	196.1	234.0	12.9	153,469	153,469
HD-03.1C-15P	0.250	46.6	38.0	46.6	38.0	0.236	GW	153,469	203.4	236.0	11.1	153,469	153,469
HD-03.1C-16E	0.250	53.9	31.0	53.9	31.0	0.257	GW	153,469	196.1	257.0	12.9	153,469	153,469

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Pass 2 Analysis Include Measured Wear

Run Name: HD: HTR 36 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.405

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm	Incremental Wear (mils) [5] PRWEAR	Time (hrs)	
		Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]			(hrs) [3]	Last Inspected

====>Grouped by Line: HD-01.1A FWH 36A to HD TK

HD-01.1A-09E	0.307	70.6	82.0	70.6	82.0	0.342	GW	137,201	236.4	342.0	20.6	137,201
HD-01.2A-01R	0.000	66.8	66.0	66.8	66.0	0.332	GW	137,201	240.2	332.0	19.5	137,201
HD-01.2A-01R (D/S)	0.000	133.8	122.0	133.8	122.0	0.325	GW	137,201	146.2	325.0	37.4	137,201
HD-02.1A-02R	0.000	117.0	73.0	117.0	73.0	0.312	MT	137,201	163.0	312.0	32.8	137,201
HD-02.1A-02R (D/S)	0.000	58.5	86.0	58.5	86.0	0.365	GW	137,201	306.5	365.0	17.1	137,201
HD-02.2A-02N	0.365	78.0	110.0	78.0	110.0	0.364	GW	137,201	287.0	364.0	22.8	137,201

====>Grouped by Line: HD-01.1B FWH 36B to HD TK

HD-01.1B-07E	0.307	58.0	61.0	58.0	61.0	0.350	GW	92,205	249.0	350.0	33.2	92,205
HD-01.2B-01R	0.000	54.9	46.0	54.9	46.0	0.364	GW	92,205	252.1	364.0	31.4	92,205
HD-01.2B-01R (D/S)	0.000	109.9	62.0	109.9	62.0	0.297	GW	92,205	170.1	297.0	61.3	92,205
HD-02.1B-02R	0.000	137.1	94.0	137.1	94.0	0.301	MT	186,592	142.9	301.0	12.7	186,592
HD-02.1B-02R (D/S)	0.000	68.9	57.0	68.9	57.0	0.326	MT	186,592	296.1	326.0	6.6	186,592

====>Grouped by Line: HD-01.1C FWH 36C to HD TK

HD-01.1C-11E	0.421	69.8	131.0	69.8	131.0	0.288	GW	121,025	351.2	288.0	25.4	121,025
HD-01.2C-01R	0.000	63.3	64.0	63.3	64.0	0.327	GW	121,025	243.7	327.0	23.0	121,025
HD-01.2C-01R (D/S)	0.000	126.7	71.0	126.7	71.0	0.295	GW	121,025	153.3	295.0	44.5	121,025
HD-02.1C-02R (D/S)	0.000	55.4	60.0	55.4	60.0	0.305	GW	121,025	309.6	305.0	20.2	121,025
HD-02.2C-02N	0.000	73.9	89.0	73.9	89.0	0.397	MT	121,025	291.1	397.0	26.9	121,025

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and Time = current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 T_p = Predicted thickness at T_{meas} .
 T_m = Last measured thickness (T_{meas}).
- [5] $PRWEAR$ = Incremental wear from last T_{meas} time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: HD: HTR DN TO PUMPS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 1.912

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected
		Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	
====>Grouped by Line: HD-10.1A HD TK to HD PMP 31												
HD-10.2A-01E	0.000	28.5	45.0	28.5	45.0	0.363	GW	153,469	346.5	363.0	9.8	153,469
HD-10.2A-01E (D/S)	0.000	60.7	41.0	60.7	41.0	0.368	GW	153,469	251.3	368.0	20.9	153,469
HD-10.2A-02E	0.312	68.5	67.0	68.5	67.0	0.386	GW	153,469	243.5	386.0	23.6	153,469
HD-10.2A-03P	0.312	48.9	50.0	48.9	50.0	0.307	GW	153,469	263.1	307.0	16.8	153,469

Sorted By: Flow Order

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tmit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: MSD: MS 31 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 12.299

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	Meas.
====>Grouped by Line: MSD-01.1A_1 MSEP 31A to HDR													
MSD-01.1A-03P	0.250	37.3	73.0	37.3	73.0	0.226	MT	186,592	212.7	226.0	2.9	186,592	
====>Grouped by Line: MSD-01.3A HDR to MSEP TK 31A													
MSD-01.3A-02P	0.250	79.1	60.0	79.1	60.0	0.224	GW	153,469	170.9	224.0	13.5	153,469	
MSD-01.3A-03E	0.250	108.4	55.0	108.4	55.0	0.366	GW	153,469	141.6	366.0	18.5	153,469	
====>Grouped by Line: MSD-01.3B HDR to MSEP TK 31B													
MSD-01.3B-03E	0.250	113.0	113.0	113.0	113.0	0.320	MT	170,123	137.0	320.0	13.9	170,123	
MSD-01.3B-08N	0.250	132.0	181.0	132.0	181.0	0.233	MT	202,797	118.0	233.0	5.2	202,797	

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Terit.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: MSD: MS 32 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 12.801

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime		In-Service Component		In-Service Component		In-Service Component Thickness (mils) [4]	Incremental Wear (mils) [5] PRWEAR	Time (hrs)	
		Wear (mils) Prd. [1]	Meas. Prd. [1]	Wear(mils) Prd. [1]	Meas. Prd. [1]	Time (hrs) Last	Time (hrs) Inspected				

====>Grouped by Line: **MSD-01.6B_3 MSEP 32B to HDR**

MSD-01.6B-07P	0.264	29.0	62.0	29.0	62.0	0.264	ER	0	222.0	264.0	42.0	78,649
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====>Grouped by Line: **MSD-01.7A MSEP 32A DR HDR**

MSD-01.7A-01T (D/S)	0.000	88.0	88.0	88.0	88.0	0.445	GW	153,469	162.0	445.0	15.0	153,469
MSD-01.7A-02P	0.250	42.9	67.0	42.9	67.0	0.220	MT	153,469	207.1	220.0	7.3	153,469

====>Grouped by Line: **MSD-01.7B MSEP 32B DR HDR**

MSD-01.7B-01T	0.250	48.9	43.0	48.9	43.0	0.329	MT	153,469	201.1	329.0	8.3	153,469
MSD-01.7B-01T (D/S)	0.000	88.0	88.0	88.0	88.0	0.353	MT	153,469	162.0	353.0	15.0	153,469

====>Grouped by Line: **MSD-01.8A HDR to MSEP TK 32A**

MSD-01.8A-01T (D/S)	0.000	57.4	86.0	57.4	86.0	0.287	MT	137,201	192.6	287.0	12.3	137,201
MSD-01.8A-01T	0.250	103.4	143.0	103.4	143.0	0.213	MT	137,201	146.6	213.0	22.2	137,201
MSD-01.8A-02P	0.250	79.3	68.0	79.3	68.0	0.236	GW	137,201	170.7	236.0	17.0	137,201
MSD-01.8A-03E	0.250	108.7	90.0	108.7	90.0	0.390	GW	137,201	141.3	390.0	23.3	137,201
MSD-01.8A-05P	0.250	64.7	61.0	64.7	61.0	0.225	GW	137,201	185.3	225.0	13.9	137,201
MSD-01.8A-08N	0.250	132.5	102.0	132.5	102.0	0.181	MT	186,592	117.5	181.0	10.3	186,592

====>Grouped by Line: **MSD-01.8B HDR to MSEP TK 32B**

MSD-01.8B-01T (D/S)	0.000	55.7	104.0	55.7	104.0	0.339	MT	121,025	194.3	339.0	14.0	121,025
MSD-01.8B-01T	0.250	100.4	73.0	100.4	73.0	0.327	MT	121,025	149.6	327.0	25.3	121,025
MSD-01.8B-02P	0.285	77.8	61.0	77.8	61.0	0.232	GW	121,025	207.2	232.0	19.6	121,025
MSD-01.8B-03E	0.250	122.5	178.0	122.5	178.0	0.250	MT	186,592	127.5	250.0	9.5	186,592
MSD-01.8B-07P	0.250	58.2	69.0	58.2	69.0	0.258	GW	92,205	191.8	258.0	20.4	92,205
MSD-01.8B-08N	0.250	137.4	86.0	137.4	86.0	0.275	MT	202,797	112.6	275.0	5.4	202,797

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and Time = current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 T_p = Predicted thickness at T_{meas} .
 T_m = Last measured thickness (T_{meas}).
- [5] $PRWEAR$ = Incremental wear from last T_{meas} time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: MSD: MS 33 TO MSDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 8.046

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR	Time (hrs)	
		Prd. [1]	Meas.	Prd. [1]	Meas.	In (in)	Method	Time (hrs)	TP		Tm	Last Inspected

====>Grouped by Line: MSD-01.13A HDR to MSEP TK 33A

MSD-01.13A-02P	0.250	44.9	46.0	44.9	46.0	0.224	GW	92,205	205.1	224.0	15.7	92,205
MSD-01.13A-03E	0.250	61.5	89.0	61.5	89.0	0.364	GW	92,205	188.5	364.0	21.5	92,205
MSD-01.13A-07P	0.268	34.3	32.0	34.3	32.0	0.268	ER	0	218.4	268.0	49.6	78,649
MSD-01.13A-08E	0.437	81.6	127.0	81.6	127.0	0.238	MT	186,592	355.4	238.0	6.4	186,592
MSD-01.13A-09P	0.382	54.2	36.0	54.2	36.0	0.231	MT	186,592	327.8	231.0	4.2	186,592

Sorted By: Flow Order

====>Grouped by Line: MSD-01.13B HDR to MSEP TK 33B

MSD-01.13B-01T	0.250	65.0	65.0	65.0	65.0	0.529	MT	137,201	185.0	529.0	14.0	137,201
MSD-01.13B-02P	0.250	49.9	48.0	49.9	48.0	0.227	GW	137,201	200.1	227.0	10.7	137,201
MSD-01.13B-03E	0.250	68.3	111.0	68.3	111.0	0.332	GW	137,201	181.7	332.0	14.7	137,201
MSD-01.13B-10N	0.250	86.4	63.0	86.4	63.0	0.239	MT	202,797	163.6	239.0	3.4	202,797

Sorted By: Flow Order

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: MSD: MSDT 31 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.466

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	Prd. [1]	[2]	(hrs) [3]	TP	Tm	Wear	PRWEAR	Last
====>Grouped by Line: MSD-01.4A TK 31A to HD TK													
MSD-01.5A-01E	0.000	26.4	64.0	0.0	0.0	0.322	ER	107,911	322.0	322.0	0.1	0	0
MSD-01.5A-01E (D/S)	0.000	54.5	94.0	0.0	0.0	0.280	ER	107,911	280.0	280.0	0.1	0	0
MSD-01.5A-05E	0.319	66.6	86.0	0.0	0.0	0.319	ER	107,911	319.0	319.0	0.2	0	0
MSD-01.5A-07P	0.289	38.9	44.0	0.0	0.0	0.289	ER	107,911	289.0	289.0	0.1	0	0
MSD-01.5A-08E	0.319	66.6	38.0	0.0	0.0	0.319	ER	107,911	319.0	319.0	0.2	0	0
MSD-01.5A-24E	0.302	65.9	64.0	0.0	0.0	0.302	ER	107,911	302.0	302.0	0.2	0	0
MSD-01.5A-26E	0.280	65.0	65.0	0.0	0.0	0.280	ER	107,911	280.0	280.0	0.2	0	0
MSD-01.5A-27N	0.280	70.3	77.0	70.3	77.0	0.307	GW	78,649	209.7	307.0	31.4	78,649	78,649
====>Grouped by Line: MSD-01.4B TK 31B to HD TK													
MSD-01.5B-06E	0.303	65.9	55.0	0.0	0.0	0.303	ER	107,911	303.0	303.0	0.2	0	0
MSD-01.5B-11P_2	0.280	78.3	46.0	78.3	46.0	0.259	MT	202,797	201.7	259.0	3.1	202,797	202,797
MSD-01.5B-12E	0.280	75.1	65.0	75.1	65.0	0.287	GW	121,025	204.9	287.0	18.9	121,025	121,025
MSD-01.5B-13P	0.280	50.8	45.0	50.8	45.0	0.267	GW	121,025	229.2	267.0	12.8	121,025	121,025
MSD-01.5B-26E	0.280	68.1	149.0	0.0	0.0	0.280	ER	107,911	280.0	280.0	0.2	0	0

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Torrit.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: MSD: MSDT 32 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 4.384

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime		In-Service Component		In-Service Component		In-Service Component		Incremental		Time (hrs)	
		Wear (mils) Prd. [1]	Meas. Prd. [1]	Wear(mils) Prd. [1]	Meas. Prd. [1]	Tmeas, Method, Time (in) [3]	[2]	Tm (hrs) [3]	Thickness (mils) [4]	Wear (mils) [5]	PRWEAR	Last Inspected	
====>Grouped by Line: MSD-01.9A TK 32A to HD TK													
MSD-01.10A-03E	0.309	117.7	103.0	0.0	0.0	0.309	ER	107,911	309.0	309.0	0.3	309.0	0
MSD-01.10A-07P	0.293	69.3	48.0	0.0	0.0	0.293	ER	107,911	293.0	293.0	0.2	293.0	0
MSD-01.10A-08E	0.307	117.5	166.0	0.0	0.0	0.307	ER	107,911	307.0	307.0	0.3	307.0	0
MSD-01.10A-22E	0.317	126.8	158.0	0.0	0.0	0.317	ER	107,911	317.0	317.0	0.3	317.0	0
MSD-01.10A-24E	0.280	117.8	224.0	0.0	0.0	0.280	ER	107,911	280.0	280.0	0.3	280.0	0
====>Grouped by Line: MSD-01.9B TK 32B to HD TK													
MSD-01.10B-01E	0.000	50.2	86.0	0.0	0.0	0.322	ER	107,911	322.0	322.0	0.1	322.0	0
MSD-01.10B-01E (D/S)	0.000	103.8	119.0	0.0	0.0	0.280	ER	107,911	280.0	280.0	0.3	280.0	0
MSD-01.10B-02E	0.280	123.9	102.0	0.0	0.0	0.252	MT	202,797	279.7	252.0	0.1	252.0	0
MSD-01.10B-03P	0.280	107.2	135.0	0.0	0.0	0.280	ER	107,911	280.0	280.0	0.3	280.0	0
MSD-01.10B-04E	0.280	123.9	82.0	0.0	0.0	0.280	ER	107,911	280.0	280.0	0.3	280.0	0
MSD-01.10B-06P	0.299	69.5	70.0	0.0	0.0	0.299	ER	107,911	299.0	299.0	0.2	299.0	0
MSD-01.10B-07E	0.328	119.1	83.0	0.0	0.0	0.251	MT	202,797	327.7	251.0	0.1	251.0	0
MSD-01.10B-08P	0.289	78.5	78.0	0.0	0.0	0.289	ER	107,911	289.0	289.0	0.2	289.0	0
MSD-01.10B-11E	0.280	133.6	93.0	133.6	93.0	0.216	GW	121,025	146.4	216.0	33.6	121,025	
MSD-01.10B-12P	0.280	90.3	70.0	90.3	70.0	0.228	GW	121,025	189.7	228.0	22.7	121,025	
MSD-01.10B-25E	0.316	118.2	136.0	0.0	0.0	0.316	ER	107,911	316.0	316.0	0.3	316.0	0

Sorted By: Flow Order

Sorted By: Flow Order

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and Time = current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 T_p = Predicted thickness at T_{meas} .
 T_m = Last measured thickness (T_{meas}).
- [5] $PRWEAR$ = Incremental wear from last T_{meas} time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: MSD: MSDT 33 TO HDT
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.770

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime		In-Service Component		In-Service Component		In-Service Component	Incremental	Time (hrs)		
		Wear (mils)	Prd. [1]	Wear(mils)	Meas.	Tmeas, Method, Time (in) [3]	[2]				Thickness (mils) [4]	Wear (mils) [5]
====>Grouped by Line: MSD-01.14A TK 33A to HD TK												
MSD-01.15A-01E	0.000	40.3	74.5	0.0	0.0	0.322	ER	107,911	322.0	322.0	0.1	0
MSD-01.15A-01E (D/S)	0.000	83.3	138.0	0.0	0.0	0.280	ER	107,911	280.0	280.0	0.2	0
MSD-01.15A-04E	0.341	103.2	157.0	0.0	0.0	0.341	ER	107,911	341.0	341.0	0.3	0
MSD-01.15A-05E	0.322	102.0	102.0	0.0	0.0	0.322	ER	107,911	322.0	322.0	0.3	0
MSD-01.15A-09E	0.302	100.7	75.0	0.0	0.0	0.302	ER	107,911	302.0	302.0	0.3	0
MSD-01.15A-11E	0.290	100.0	121.0	0.0	0.0	0.290	ER	107,911	290.0	290.0	0.3	0
MSD-01.15A-13E	0.334	110.2	151.0	0.0	0.0	0.334	ER	107,911	334.0	334.0	0.3	0
MSD-01.15A-15E	0.331	110.0	84.0	0.0	0.0	0.331	ER	107,911	331.0	331.0	0.3	0
MSD-01.15A-17E	0.280	99.4	61.0	0.0	0.0	0.280	ER	107,911	280.0	280.0	0.3	0
MSD-01.15A-18P	0.280	67.2	164.0	0.0	0.0	0.280	ER	107,911	280.0	280.0	0.2	0
MSD-01.15A-19E	0.280	102.6	227.0	0.0	0.0	0.280	ER	107,911	280.0	280.0	0.3	0
MSD-01.15A-20N	0.280	107.4	64.0	107.4	64.0	0.288	GW	78,649	172.6	288.0	48.0	78,649

====>Grouped by Line: MSD-01.14B TK 33B to HD TK

MSD-01.15B-01E	0.000	43.2	84.0	0.0	0.0	0.322	ER	107,911	322.0	322.0	0.1	0
MSD-01.15B-01E (D/S)	0.000	89.3	127.0	0.0	0.0	0.280	ER	107,911	280.0	280.0	0.2	0
MSD-01.15B-02E	0.280	106.5	49.0	0.0	0.0	0.280	ER	107,911	280.0	280.0	0.3	0
MSD-01.15B-06P	0.265	58.6	58.0	0.0	0.0	0.265	ER	107,911	265.0	265.0	0.2	0
MSD-01.15B-07E	0.309	101.2	94.0	0.0	0.0	0.309	ER	107,911	309.0	309.0	0.3	0
MSD-01.15B-13E	0.280	114.9	94.0	114.9	94.0	0.238	GW	121,025	165.1	238.0	28.9	121,025
MSD-01.15B-14P	0.280	77.6	71.0	77.6	71.0	0.223	GW	121,025	202.4	223.0	19.5	121,025
MSD-01.15B-15E	0.280	114.9	120.0	114.9	120.0	0.198	GW	121,025	165.1	198.0	28.9	121,025
MSD-01.15B-16P	0.280	77.6	49.0	77.6	49.0	0.274	GW	121,025	202.4	274.0	19.5	121,025
MSD-01.15B-27E	0.341	103.2	150.0	0.0	0.0	0.341	ER	107,911	341.0	341.0	0.3	0
MSD-01.15B-29N	0.280	107.4	79.0	107.4	79.0	0.291	GW	78,649	172.6	291.0	48.0	78,649

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and Time = current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 T_p = Predicted thickness at T_{meas} .
 T_m = Last measured thickness (T_{meas}).
- [5] $PRWEAR$ = Incremental wear from last T_{meas} time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: PD: PRESEPRTR DRAINS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.643

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]	(hrs) [3]	TP	Tm	Wear (mils) [5]	PRWEAR	Last
====>Grouped by Line: PD-01.3 PRESEP 1A DR to HDR													
PD-01.4-01R	0.000	32.5	40.0	32.5	40.0	0.368	GW	121,025	342.5	368.0	11.5	121,025	121,025
PD-01.4-01R (D/S)	0.000	50.0	50.0	50.0	50.0	0.421	GW	121,025	315.0	421.0	17.6	121,025	121,025
PD-01.4-02B	0.365	54.7	39.0	54.7	39.0	0.359	GW	121,025	310.3	359.0	19.3	121,025	121,025
PD-01.4-03P	0.365	39.1	47.0	39.1	47.0	0.343	GW	121,025	325.9	343.0	13.8	121,025	121,025
====>Grouped by Line: PD-01.5 PRESEP 2B DR to HDR													
PD-01.6-12E	0.365	55.7	53.0	55.7	53.0	0.340	GW	137,201	309.3	340.0	14.0	137,201	137,201
====>Grouped by Line: PD-02.4 PRESEP HDR to HD TK													
PD-02.4-02E	0.375	80.2	154.0	0.0	0.0	0.375	ER	137,201	375.0	375.0	23.7	0	0
PD-02.4-16E	0.375	80.2	44.0	80.2	44.0	0.384	GW	107,911	294.8	384.0	37.8	107,911	107,911
PD-02.4-17P	0.375	54.2	67.0	54.2	67.0	0.362	GW	107,911	320.8	362.0	25.5	107,911	107,911
PD-02.4-21N	0.899	107.6	84.0	107.6	84.0	0.815	GW	121,025	791.4	815.0	38.0	121,025	121,025

Sorted By: Flow Order

Sorted By: Flow Order

Sorted By: Flow Order

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: RHD: RH 31 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.091

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime		In-Service Component		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]	In-Service Component Thickness (mils) [4] Tm	Incremental Wear (mils) [5] PRWEAR	Time (hrs)			
		Wear (mils) Prd. [1] Meas.	Prd. [1] Meas.	Wear (mils) Prd. [1] Meas.	Last Inspected							
====>Grouped by Line: RHD-01.1A_1 RH 31A to TK 31A												
RHD01.1A-01N	0.432	102.7	127.0	102.7	127.0	0.555	GW	121,025	329.3	555.0	34.8	121,025
RHD01.1A-02P	0.432	55.5	88.0	55.5	88.0	0.375	GW	121,025	376.5	375.0	18.8	121,025
RHD01.1A-03N	0.432	82.2	70.0	82.2	70.0	0.387	GW	121,025	349.8	387.0	27.8	121,025
====>Grouped by Line: RHD-01.1A_2 TK 31A to A HDR												
RHD01.1A-05P	0.432	53.1	37.0	53.1	37.0	0.395	GW	107,911	378.9	395.0	21.1	107,911
RHD01.1A-36P	0.462	32.0	32.0	32.0	32.0	0.429	MT	202,797	430.0	429.0	1.4	202,797
RHD02.1A-02R	0.000	59.4	58.0	0.0	0.0	0.337	ER	186,592	337.0	337.0	12.5	0
RHD02.2A-01P	0.432	15.1	48.0	15.1	48.0	0.406	GW	121,025	416.9	406.0	17.4	121,025
RHD02.2A-02E	0.473	91.2	98.0	91.2	98.0	0.330	MT	170,123	381.8	330.0	13.3	170,123
RHD02.2A-03P	0.432	60.0	134.0	60.0	134.0	0.341	MT	170,123	372.0	341.0	8.8	170,123
RHD02.2A-04E	0.432	79.2	66.0	79.2	66.0	0.385	MT	170,123	352.8	385.0	11.6	170,123
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR												
RHD01.1B-15P	0.432	27.7	55.0	27.7	55.0	0.423	GW	153,469	404.3	423.0	5.7	153,469
RHD01.1B-16E	0.432	84.3	162.0	84.3	162.0	0.371	GW	153,469	347.7	371.0	17.4	153,469
RHD01.1B-17P	0.432	57.0	41.0	57.0	41.0	0.427	GW	153,469	375.0	427.0	11.8	153,469
RHD01.1B-30E	0.473	95.8	59.0	95.8	59.0	0.388	GW	78,649	411.4	388.0	42.9	186,592
RHD01.1B-31P	0.469	53.1	42.0	53.1	42.0	0.427	GW	78,649	415.9	427.0	37.0	78,649
RHD01.1B-39E	0.432	76.0	74.0	76.0	74.0	0.390	GW	121,025	356.0	390.0	25.7	121,025
RHD01.1B-40P	0.432	51.3	73.0	51.3	73.0	0.422	GW	121,025	380.7	422.0	17.4	121,025
RHD01.1B-41E	0.432	76.0	57.0	76.0	57.0	0.389	GW	121,025	356.0	389.0	25.7	121,025
RHD01.1B-42P_1	0.432	51.3	67.0	51.3	67.0	0.437	GW	121,025	380.7	437.0	17.4	121,025
RHD01.1B-51E	0.432	72.8	51.0	72.8	51.0	0.423	GW	107,911	359.2	423.0	28.9	107,911
RHD01.1B-52P	0.476	50.6	54.0	50.6	54.0	0.422	GW	107,911	425.4	422.0	20.1	107,911
RHD01.2B-01R	0.000	49.2	47.0	49.2	47.0	0.470	GW	107,911	382.8	470.0	19.5	107,911
RHD01.2B-01R (D/S)	0.401	74.3	52.0	74.3	52.0	0.362	GW	107,911	326.7	362.0	28.7	107,911
RHD02.2B-02E	0.432	76.0	83.0	76.0	83.0	0.383	GW	121,025	356.0	383.0	25.7	121,025

Component Name	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4]		Incremental Wear (mils) [5] PRWEAR	Time (hrs) Last Inspected
	Tinit	Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]	(hrs) [3]		
====>Grouped by Line: RHD-01.1B_2 TK 31B to B HDR										
RHD02.2B-03P	0.432	51.3	126.0	51.3	126.0	0.371	GW	121,025	380.7	371.0
									17.4	121,025

Sorted By: Flow Order

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
 MT = Tmeas is component minimum thickness.
 PW = Tmeas is Tinit - predicted wear.
 US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
 Tmeas is used to determine Predicted Thickness and Component Predicted Time to Tcrit.
- [4] These two values are used for thickness plot.
 Tp = Predicted thickness at Tmeas.
 Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: RHD: RH 32A TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 2.356

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime		In-Service Component		In-Service Component		In-Service Component Thickness (mils) [4]	Incremental Wear (mils) [5] PRWEAR	Time (hrs)		
		Wear (mils) Prd. [1]	Meas. Prd. [1]	Wear(mils) Prd. [1]	Meas. Prd. [1]	Tmeas, Method, Time (in) [3]	[2]			Time Last Inspected		
====>Grouped by Line: RHD-01.3A_1 RH 32A to TK 32A												
RHD01.3A-02P	0.432	73.0	60.0	73.0	60.0	0.379	MT	170,123	359.0	379.0	10.7	170,123
====>Grouped by Line: RHD-01.3A_2 TK 32A to A HDR												
RHD01.3A-05P	0.432	80.0	40.0	80.0	40.0	0.425	MT	202,797	352.0	425.0	3.6	202,797
RHD01.3A-06E	0.432	109.7	71.0	109.7	71.0	0.384	MT	202,797	322.3	384.0	5.0	202,797
RHD01.5A-02P	0.432	48.5	83.0	48.5	83.0	0.377	GW	137,201	383.5	377.0	13.4	137,201
RHD01.5A-04P	0.432	29.5	53.0	29.5	53.0	0.415	GW	137,201	402.5	415.0	8.2	137,201
RHD01.5A-05R	0.000	67.9	57.0	67.9	57.0	0.481	MT	137,201	364.1	481.0	18.8	137,201
RHD01.5A-05R (D/S)	0.000	43.2	67.0	43.2	67.0	0.484	MT	137,201	456.8	484.0	12.0	137,201
RHD01.6A-01P	0.500	36.0	65.0	36.0	65.0	0.469	GW	137,201	464.0	469.0	10.0	137,201
RHD01.7A-04E	0.458	83.4	60.0	83.4	60.0	0.398	GW	107,911	374.6	398.0	33.1	107,911
RHD01.8A-01R	0.000	77.6	133.0	77.6	133.0	0.410	MT	107,911	354.4	410.0	30.8	107,911
RHD01.8A-01R (D/S)	0.000	142.5	135.0	142.5	135.0	0.379	MT	107,911	194.5	379.0	55.1	107,911
RHD01.8A-02P	0.376	114.3	97.0	114.3	97.0	0.318	MT	107,911	261.7	318.0	44.2	107,911
RHD02.3A-02R	0.000	73.7	35.0	73.7	35.0	0.372	MT	202,797	263.3	372.0	7.3	202,797
RHD02.3A-02R (D/S)	0.000	39.9	42.0	39.9	42.0	0.400	MT	202,797	392.1	400.0	4.0	202,797
RHD02.4A-01P	0.432	26.7	57.0	26.7	57.0	0.389	MT	170,123	405.3	389.0	9.9	170,123
RHD02.4A-06L	0.594	52.7	65.0	52.7	65.0	0.561	MT	170,123	541.3	561.0	7.7	170,123

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and Time = current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 T_p = Predicted thickness at T_{meas} .
 T_m = Last measured thickness (T_{meas}).
- [5] $PRWEAR$ = Incremental wear from last T_{meas} time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: RHD: RH 32B TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.055

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime		In-Service Component		In-Service Component		In-Service Component		Incremental		Time (hrs)	
		Wear (mils)	Prd. [1]	Meas.	Wear(mils)	Prd. [1]	Meas.	Tmeas, Method, Time (in) [3]	[2]	[3]	Thickness (mils) [4]	Wear (mils) [5]	PRWEAR
====>Grouped by Line: RHD-01.3B_1 RH 32B to TK 32B													
RHD01.3B-01N	0.432	132.3	84.0	132.3	84.0	0.801	GW	92,205	299.7	801.0	68.5	92,205	92,205
RHD01.3B-02P	0.432	71.4	50.0	71.4	50.0	0.397	GW	92,205	360.6	397.0	37.0	92,205	92,205
RHD01.3B-03N	0.432	105.8	66.0	105.8	66.0	0.430	GW	92,205	326.2	430.0	54.8	92,205	92,205
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR													
RHD01.3B-04N	0.432	157.3	74.0	157.3	74.0	0.410	GW	137,201	274.7	410.0	43.5	137,201	137,201
RHD01.3B-05P	0.432	84.9	39.0	84.9	39.0	0.412	GW	137,201	347.1	412.0	23.5	137,201	137,201
RHD01.3B-06E	0.432	142.2	152.0	142.2	152.0	0.342	MT	202,797	289.8	342.0	6.4	202,797	202,797
RHD01.3B-07P	0.432	96.1	57.0	96.1	57.0	0.398	MT	202,797	335.9	398.0	4.3	202,797	202,797
RHD01.3B-08E	0.432	106.4	41.0	106.4	41.0	0.408	GW	107,911	325.6	408.0	42.2	107,911	107,911
RHD01.3B-09P	0.432	71.9	53.0	71.9	53.0	0.394	GW	107,911	360.1	394.0	28.5	107,911	107,911
RHD01.3B-10E	0.432	116.4	56.0	116.4	56.0	0.399	GW	137,201	315.6	399.0	32.2	137,201	137,201
RHD01.3B-11P	0.432	78.6	36.0	78.6	36.0	0.405	GW	137,201	353.4	405.0	21.8	137,201	137,201
RHD01.3B-12E	0.432	116.4	66.0	116.4	66.0	0.421	GW	137,201	315.6	421.0	32.2	137,201	137,201
RHD01.3B-13P	0.432	78.6	41.0	78.6	41.0	0.398	GW	137,201	353.4	398.0	21.8	137,201	137,201
RHD01.3B-14E	0.432	116.4	85.0	116.4	85.0	0.404	GW	137,201	315.6	404.0	32.2	137,201	137,201
RHD01.3B-15P	0.432	78.6	67.0	78.6	67.0	0.393	GW	137,201	363.4	393.0	21.8	137,201	137,201
RHD01.3B-16E	0.432	111.0	111.0	111.0	111.0	0.365	GW	121,025	321.0	365.0	37.6	121,025	121,025
RHD01.3B-17P	0.432	75.0	54.0	75.0	54.0	0.398	GW	121,025	357.0	398.0	25.4	121,025	121,025
RHD01.3B-18E	0.432	111.0	97.0	111.0	97.0	0.427	GW	121,025	321.0	427.0	37.6	121,025	121,025
RHD01.3B-19P	0.432	75.0	69.0	75.0	69.0	0.386	GW	121,025	357.0	386.0	25.4	121,025	121,025
RHD01.3B-20R	0.000	84.0	99.0	84.0	99.0	0.447	MT	121,025	348.0	447.0	28.4	121,025	121,025
RHD01.3B-20R (D/S)	0.000	35.1	104.0	35.1	104.0	0.733	GW	121,025	568.9	733.0	11.9	121,025	121,025
RHD01.4B-01P_1	0.594	29.2	59.0	29.2	59.0	0.556	GW	121,025	564.8	556.0	9.9	121,025	121,025
RHD01.5B-04P	0.475	46.7	51.0	46.7	51.0	0.406	MT	202,797	428.3	406.0	2.1	202,797	202,797
RHD01.5B-05R	0.000	93.2	111.0	93.2	111.0	0.855	GW	153,469	338.8	855.0	19.3	153,469	153,469
RHD01.5B-05R (D/S)	0.000	38.9	106.0	38.9	106.0	0.728	GW	153,469	555.1	728.0	8.0	153,469	153,469
RHD01.6B-01P	0.634	32.9	73.0	32.9	73.0	0.571	GW	153,469	601.1	571.0	6.8	153,469	153,469

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4]		Incremental Wear (mils) [5] PRWEAR	Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]	(hrs) [3]	Tp			Tm
====>Grouped by Line: RHD-01.3B_2 TK 32B to B HDR												
RHD01.6B-02E	0.594	48.0	86.0	48.0	86.0	0.577	GW	153,469	546.0	577.0	9.9	153,469
RHD01.6B-03P_1	0.594	32.4	132.0	32.4	132.0	0.537	GW	153,469	561.6	537.0	6.7	153,469
RHD01.7B-03R	0.000	107.6	301.0	107.6	301.0	0.526	MT	202,797	324.4	526.0	4.9	202,797
RHD01.7B-03R (D/S)	0.000	44.9	104.0	44.9	104.0	0.504	MT	202,797	549.1	504.0	2.0	202,797
RHD01.8B-01P_1	0.594	28.0	76.0	28.0	76.0	0.557	GW	107,911	566.0	557.0	11.1	107,911
RHD01.8B-06E	0.594	38.2	87.0	38.2	87.0	0.698	GW	92,205	555.8	698.0	19.8	92,205
RHD01.9B-01R	0.000	35.9	56.0	35.9	56.0	0.573	MT	186,592	558.1	573.0	3.3	186,592
RHD01.9B-01R (D/S)	0.000	132.4	81.0	132.4	81.0	0.329	MT	186,592	204.6	329.0	11.8	186,592
RHD02.3B-02R	0.000	57.7	72.0	0.0	0.0	0.452	MT	186,592	317.6	452.0	18.3	0
RHD02.4B-02E	0.000	53.1	146.0	53.1	146.0	0.629	MT	186,592	540.9	629.0	4.8	186,592
RHD02.4B-03P	0.594	29.2	56.0	29.2	56.0	0.568	GW	121,025	564.8	568.0	9.9	121,025

Sorted By: Flow Order

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] GW = Tmeas is minimum thickness from Band, Blanket or Area Method of greatest wear.
MT = Tmeas is component minimum thickness.
PW = Tmeas is Tinit - predicted wear.
US = Tmeas is user specified.
- [3] If no Tmeas has been determined from measured data, then Tmeas = Tinit and Time = current component installation time.
Tmeas is used to determine Predicted Thickness and Component Predicted Time to Terit.
- [4] These two values are used for thickness plot.
Tp = Predicted thickness at Tmeas.
Tm = Last measured thickness (Tmeas).
- [5] PRWEAR = Incremental wear from last Tmeas time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: RHD: RH 33 TO HDR
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.596

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global) : 1.000

Component Name	Tinit	Total Lifetime		In-Service Component		In-Service Component		In-Service Component		Incremental		Time (hrs)	
		Wear (mils)	Prd. [1]	Wear(mils)	Meas.	Tmeas, Method, Time (in) [3]	[2]	Thickness (mils) [4]	Tm	Wear (mils) [5]	PRWEAR	Last	Inspected

====>Grouped by Line: RHD-01.10A_2 TK 33A to A HDR

RHD01.10A-05P	0.432	122.1	62.0	122.1	62.0	0.395	MT	202,797	395.0	309.9	5.5	202,797
RHD01.10A-06E	0.432	149.3	84.5	149.3	84.5	0.373	MT	202,797	373.0	282.7	6.7	202,797
RHD01.10A-19P	0.432	47.7	62.0	47.7	62.0	0.400	MT	202,797	400.0	377.0	2.5	153,469
RHD01.11A-01E	0.500	18.0	34.0	18.0	34.0	0.445	MT	202,797	445.0	400.6	4.5	202,797
RHD01.11A-02P	0.500	85.9	112.0	85.9	112.0	0.466	MT	202,797	466.0	414.1	3.9	202,797
RHD01.12A-08E	0.432	125.2	110.0	125.2	110.0	0.396	GW	107,911	396.0	306.8	49.7	107,911
RHD02.5A-02R (D/S)	0.000	60.9	73.0	60.9	73.0	0.367	MT	202,797	367.0	371.1	6.1	202,797
RHD02.6A-01P	0.432	25.9	50.0	25.9	50.0	0.404	GW	121,025	404.0	406.1	29.9	121,025
RHD02.6A-02E	0.432	27.4	30.0	27.4	30.0	0.323	MT	170,123	323.0	279.4	22.3	170,123
RHD02.6A-03P	0.432	103.1	69.0	103.1	69.0	0.363	MT	170,123	363.0	328.9	15.1	170,123

Sorted By: Flow Order

====>Grouped by Line: RHD-01.10B_1 RH 33B to TK 33B

RHD01.10B-01N	0.432	169.2	142.0	169.2	142.0	0.402	MT	107,911	402.0	262.8	67.2	107,911
RHD01.10B-02P	0.432	91.4	84.0	91.4	84.0	0.394	GW	107,911	394.0	340.6	36.3	107,911

Sorted By: Flow Order

====>Grouped by Line: RHD-01.10B_2 TK 33B to B HDR

RHD01.10B-27P	0.432	55.0	55.0	55.0	55.0	0.439	MT	202,797	439.0	377.0	2.5	202,797
RHD01.10B-28E	0.432	145.0	180.0	145.0	180.0	0.473	MT	153,469	473.0	287.0	30.0	153,469
RHD01.10B-29P	0.432	97.9	98.0	97.9	98.0	0.409	GW	153,469	409.0	334.1	20.3	153,469
RHD01.10B-52T (D/S)	0.000	169.2	119.0	169.2	119.0	0.484	GW	107,911	484.0	262.8	67.2	107,911
RHD01.10B-53P	0.432	101.5	51.0	101.5	51.0	0.412	GW	107,911	412.0	330.5	40.3	107,911
RHD02.6B-01E	0.559	83.7	215.0	0.0	0.0	0.559	ER	153,469	559.0	559.0	18.3	0

Sorted By: Flow Order

Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and Time = current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 T_p = Predicted thickness at T_{meas} .
 T_m = Last measured thickness (T_{meas}).
- [5] $PRWEAR$ = Incremental wear from last T_{meas} time to analysis ending period.

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IPEC 3 (v4).DB

Wear Report

Pass 2 Analysis Include Measured Wear

Report Date/Time: 29-Jul-2011 4:10 pm
 AnalysisDate/Time: 29-Jul-2011 4:11 pm

Run Name: RHD: RHD HDR TO HTRS
 Ending Period: RO17
 Total Plant Operating Hours: 220,317
 WRA Data Option: NFA->ARD->HBD->COMP
 Line Correction Factor: 3.184

CHECWORKS SFA Version: 3.0 SP-2 (build 200)
 Duty Factor (Global): 1.000

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Tmeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4] Tm		Incremental Wear (mils) [5] PRWEAR		Time (hrs) Last Inspected	
		Prd. [1]	Meas.	Prd. [1]	Meas.	[3]	[2]	(hrs)	[4]	Tm	Wear (mils) [5]	PRWEAR	Last
====>Grouped by Line: RHD-02.10A TK A HDR to FWH 36													
RHD02.10A-11T	0.500	31.7	35.0	31.7	35.0	0.587	MT	202,797	263.2	587.0	10.7	202,797	
RHD02.10A-11T (D/S)	0.000	119.3	159.0	119.3	159.0	0.550	MT	202,797	369.2	550.0	5.9	170,123	
RHD02.10A-11T (BR/SE)	0.000	23.2	84.0	23.2	84.0	0.349	MT	202,797	258.4	349.0	7.8	202,797	
====>Grouped by Line: RHD-02.10B B HDR to FWH 36A													
RHD02.10B-14T	0.432	191.9	178.0	191.9	178.0	0.554	MT	186,592	240.1	554.0	17.4	186,592	
RHD02.10B-14T (BR/SE)	0.000	237.6	269.0	237.6	269.0	0.507	MT	186,592	194.4	507.0	21.6	186,592	
RHD02.10B-16T	0.432	191.9	184.0	191.9	184.0	0.560	MT	186,592	240.1	560.0	17.4	186,592	
RHD02.10B-16T (BR/SE)	0.000	237.6	221.0	237.6	221.0	0.498	MT	186,592	194.4	498.0	21.6	186,592	
RHD02.10B-17R	0.000	97.1	112.0	97.1	112.0	0.326	GW	153,469	334.9	326.0	20.1	153,469	
RHD02.10B-17R (D/S)	0.000	61.8	141.0	61.8	141.0	0.642	GW	153,469	438.2	642.0	12.8	153,469	
====>Grouped by Line: RHD-02.11A A HDR to FWH 36A													
RHD02.11A-17T	0.432	191.9	142.5	191.9	142.5	0.476	MT	186,592	240.1	476.0	17.4	186,592	
RHD02.11A-19T	0.432	191.9	131.5	191.9	131.5	0.485	MT	186,592	240.1	485.0	17.4	186,592	
RHD02.11A-19T (BR/SE)	0.000	237.6	189.0	237.6	189.0	0.423	MT	186,592	194.4	423.0	21.6	186,592	
====>Grouped by Line: RHD-02.12B B HDR to FWH 36B													
RHD02.12B-02E	0.432	135.1	122.0	135.1	122.0	0.310	MT	170,123	296.9	310.0	19.8	170,123	
RHD02.12B-11T	0.432	26.8	57.0	26.8	57.0	0.598	MT	202,797	231.7	598.0	9.1	202,797	
RHD02.12B-11T (BR/SE)	0.000	33.2	176.0	33.2	176.0	0.475	MT	202,797	184.1	475.0	11.2	202,797	
RHD02.12B-13T	0.432	191.9	149.0	191.9	149.0	0.521	MT	186,592	240.1	521.0	17.4	186,592	
RHD02.12B-13T (BR/SE)	0.000	237.6	207.0	237.6	207.0	0.363	MT	186,592	194.4	363.0	21.6	186,592	
====>Grouped by Line: RHD-02.13A A HDR to FWH 36B													
RHD02.13A-01P	0.432	73.0	83.0	73.0	83.0	0.349	MT	170,123	359.0	349.0	10.7	170,123	
RHD02.13A-02E	0.432	135.1	64.0	135.1	64.0	0.375	MT	170,123	296.9	375.0	19.8	170,123	

Component Name	Tinit	Total Lifetime Wear (mils)		In-Service Component Wear(mils)		In-Service Component Timeas, Method, Time (in) [3] [2] (hrs) [3]		In-Service Component Thickness (mils) [4]		Incremental Wear (mils) [5] PRWEAR	Time (hrs)	
		Prd. [1]	Meas.	Prd. [1]	Meas.	(in) [3]	[2]	(hrs) [3]	TP		Tm	Last Inspected
====>Grouped by Line: RHD-02.13A A HDR to FWH 36B												
RHD02.13A-04E	0.432	115.7	45.0	115.7	45.0	0.455	GW	121,025	316.3	455.0	39.2	121,025
RHD02.13A-05E	0.432	115.7	86.0	115.7	86.0	0.342	GW	121,025	316.3	342.0	39.2	121,025
RHD02.13A-06P_1	0.432	100.1	42.0	100.1	42.0	0.421	GW	121,025	331.9	421.0	33.9	121,025
RHD02.13A-14T	0.432	191.9	280.0	191.9	280.0	0.480	MT	186,592	240.1	480.0	17.4	186,592
RHD02.13A-14T (BR/SE)	0.000	237.6	373.0	237.6	373.0	0.441	MT	186,592	194.4	441.0	21.6	186,592
RHD02.13A-16T	0.432	200.3	190.0	200.3	190.0	0.434	MT	202,797	231.7	434.0	9.1	202,797
RHD02.13A-16T (BR/SE)	0.000	247.9	216.5	247.9	216.5	0.301	MT	202,797	184.1	301.0	11.2	202,797
RHD02.14A-01N	0.500	95.1	60.0	95.1	60.0	1.068	MT	202,797	404.9	1,068.0	4.3	202,797
====>Grouped by Line: RHD-02.14B B HDR to FWH 36C												
RHD02.14B-02E	0.000	135.1	282.0	0.0	0.0	0.432	ER	170,123	432.0	432.0	19.8	0
RHD02.14B-10T	0.000	191.9	166.0	0.0	0.0	0.432	ER	186,592	432.0	432.0	17.4	0
RHD02.14B-10T (BR/SE)	0.000	237.6	320.0	0.0	0.0	0.432	ER	186,592	432.0	432.0	21.6	0
RHD02.14B-12T	0.432	182.6	215.0	182.6	215.0	0.522	MT	170,123	249.4	522.0	26.7	170,123
RHD02.14B-12T (BR/SE)	0.000	226.1	304.0	226.1	304.0	0.403	MT	170,123	205.9	403.0	33.1	170,123
RHD02.15B-01N	0.432	83.9	60.0	83.9	60.0	1.098	MT	170,123	348.1	1,098.0	12.3	170,123
====>Grouped by Line: RHD-02.15A A HDR to FWH 36C												
RHD02.15A-02E	0.000	135.1	393.0	0.0	0.0	0.445	MT	170,123	432.0	445.0	19.8	0
RHD02.15A-03P	0.432	91.3	116.0	91.3	116.0	0.349	MT	170,123	340.7	349.0	13.4	170,123
RHD02.15A-09T	0.432	191.9	178.0	191.9	178.0	0.539	MT	186,592	240.1	539.0	17.4	186,592
RHD02.15A-09T (BR/SE)	0.000	237.6	237.0	237.6	237.0	0.456	MT	186,592	194.4	456.0	21.6	186,592
RHD02.16A-01N	0.500	86.7	52.0	86.7	52.0	1.075	MT	170,123	413.3	1,075.0	12.7	170,123
====>Grouped by Line: RHD-02.8A TK A HDR to FWH 36												
RHD02.6A-06L (BR/SE)	0.000	153.7	206.0	153.7	206.0	0.230	MT	170,123	278.3	230.0	22.5	170,123
RHD02.6A-06L	0.594	58.3	71.0	58.3	71.0	0.559	MT	170,123	535.7	559.0	8.5	170,123
====>Grouped by Line: RHD-02.8B TK B HDR to FWH 36												
RHD02.7B-08L	0.605	39.6	46.0	39.6	46.0	0.559	GW	78,649	565.4	559.0	27.6	78,649
RHD02.8B-06T (BR/SE)	0.000	158.3	95.0	158.3	95.0	0.591	MT	170,123	273.7	591.0	23.1	170,123
RHD02.7B-08L (D/S)	0.000	101.2	54.0	101.2	54.0	0.551	GW	78,649	492.8	551.0	70.6	78,649
RHD02.8B-01P	0.609	49.7	58.0	49.7	58.0	0.551	GW	78,649	559.4	551.0	34.6	78,649
RHD02.8B-06T	0.594	201.0	265.0	201.0	265.0	0.606	MT	170,123	393.0	606.0	29.4	170,123
====>Grouped by Line: RHD-02.9A TK A HDR to FWH 36												
RHD02.9A-11T (BR/SE)	0.000	158.3	296.0	158.3	296.0	0.503	MT	170,123	273.7	503.0	23.1	170,123
RHD02.9A-11T	0.594	201.0	201.0	201.0	201.0	0.650	MT	170,123	393.0	650.0	29.4	170,123

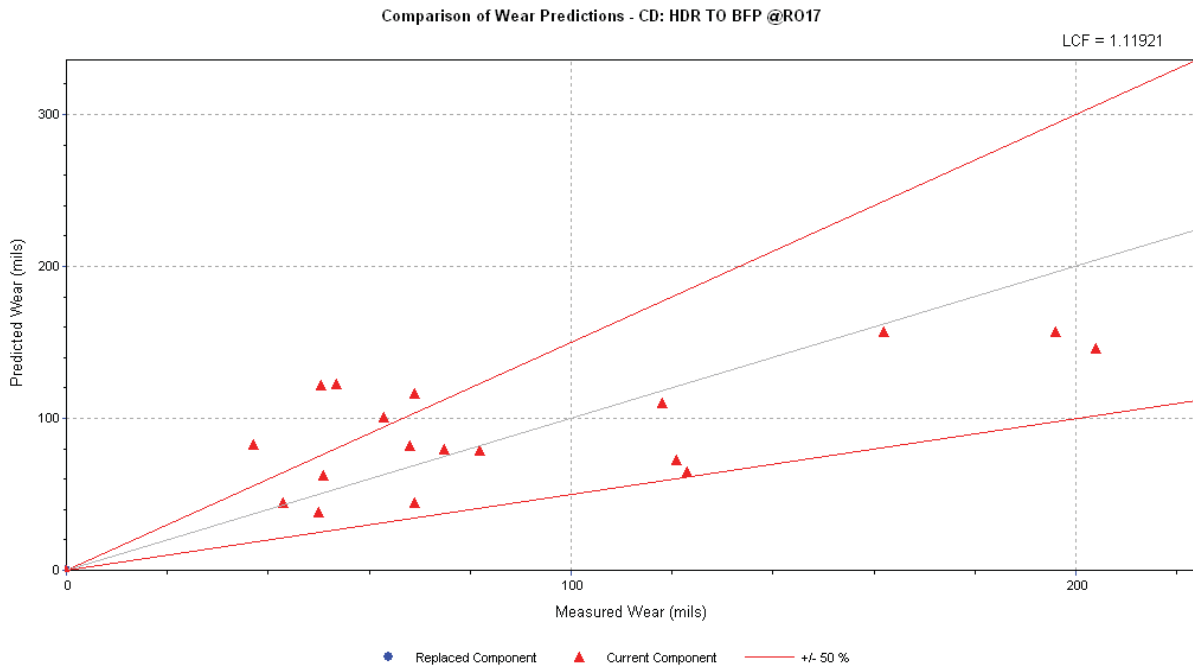
Notes:

- [1] Predictions are for the time of last inspection (last known meas. wear).
- [2] $GW = T_{meas}$ is minimum thickness from Band, Blanket or Area Method of greatest wear.
 $MT = T_{meas}$ is component minimum thickness.
 $PW = T_{meas}$ is T_{mit} - predicted wear.
 $US = T_{meas}$ is user specified.
- [3] If no T_{meas} has been determined from measured data, then $T_{meas} = T_{mit}$ and Time = current component installation time.
 T_{meas} is used to determine Predicted Thickness and Component Predicted Time to T_{crit} .
- [4] These two values are used for thickness plot.
 T_p = Predicted thickness at T_{meas} .
 T_m = Last measured thickness (T_{meas}).
- [5] $PRWEAR$ = Incremental wear from last T_{meas} time to analysis ending period.

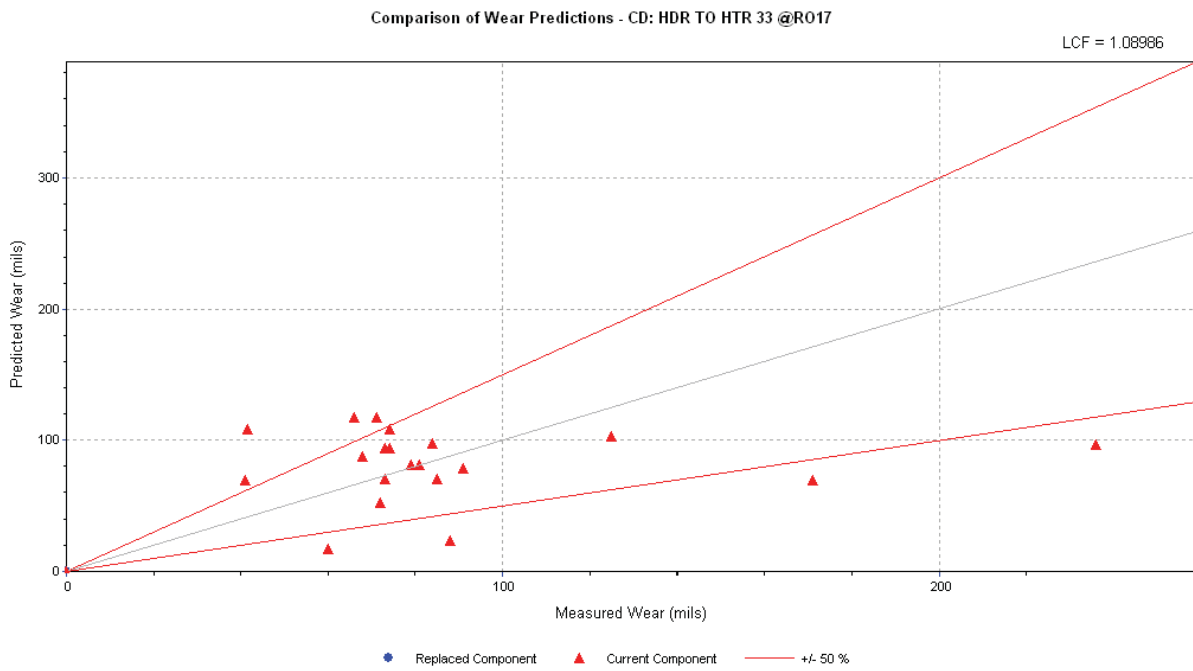
Appendix J

Pass 2 Wear Plots (with LCF values)

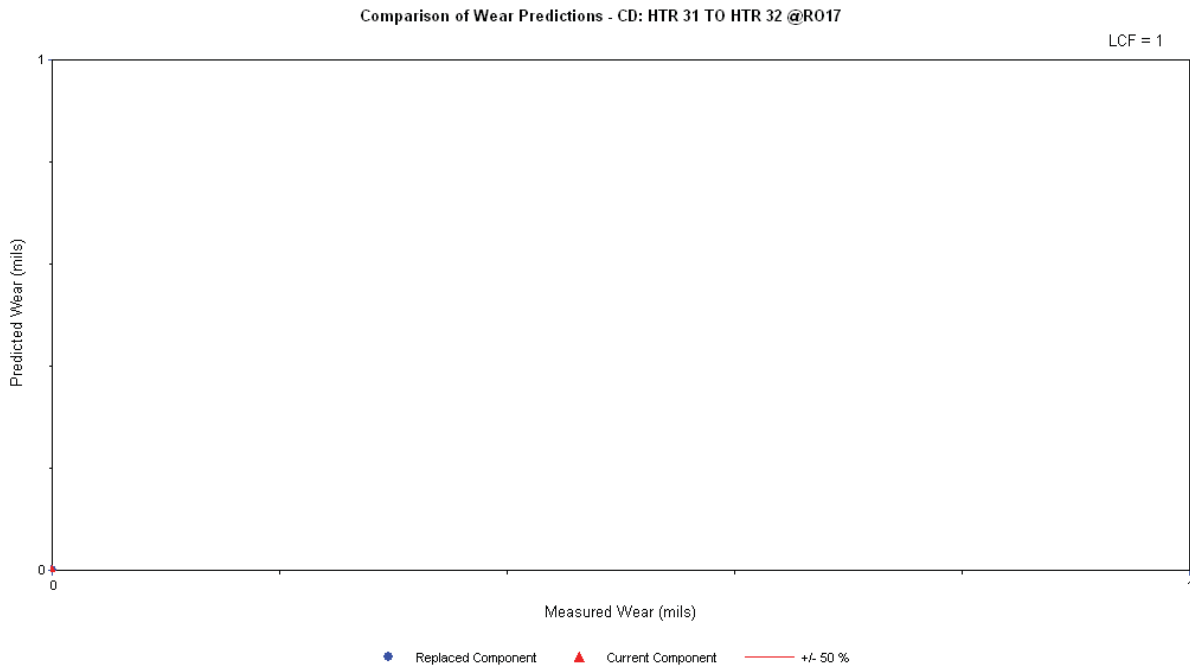
Plot J.1: CD: HDR TO BFP



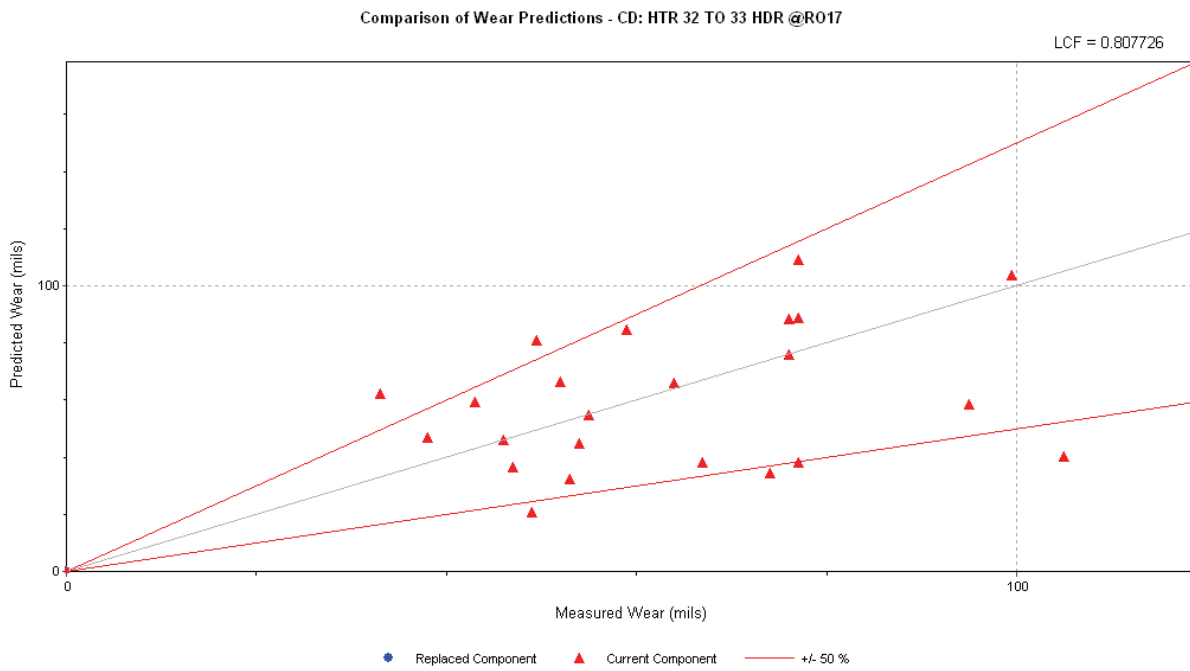
Plot J.2: CD: HDR TO HTR 33



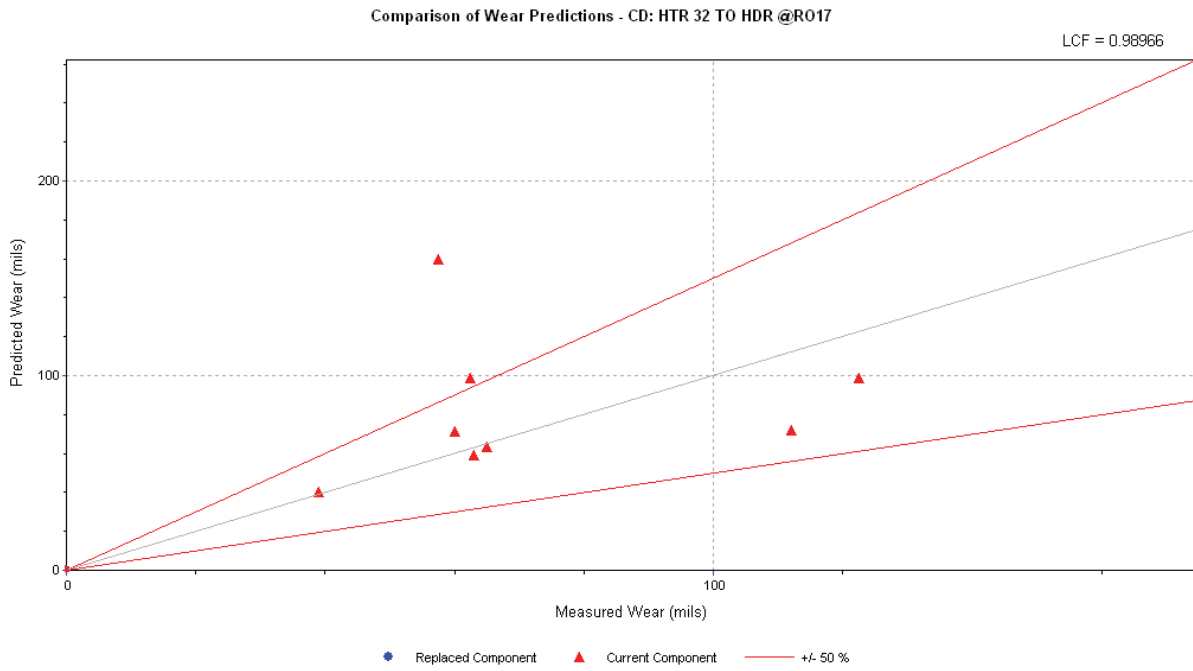
Plot J.3: CD: HTR 31 TO HTR 32



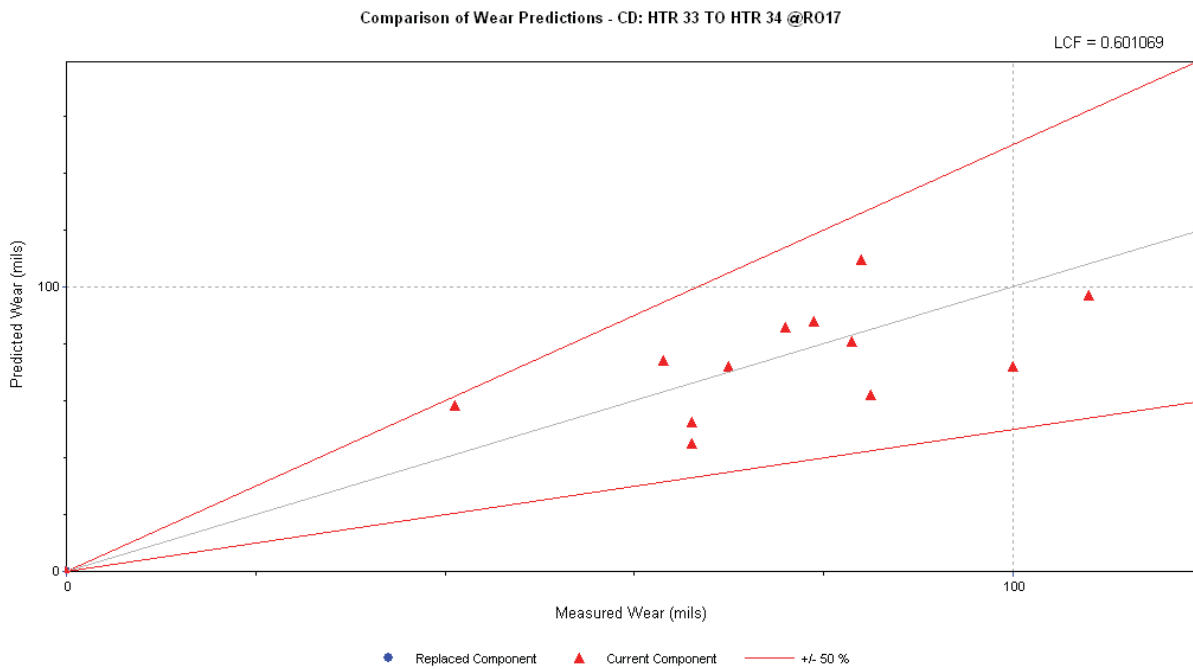
Plot J.4: CD: HTR 32 TO 33 HDR



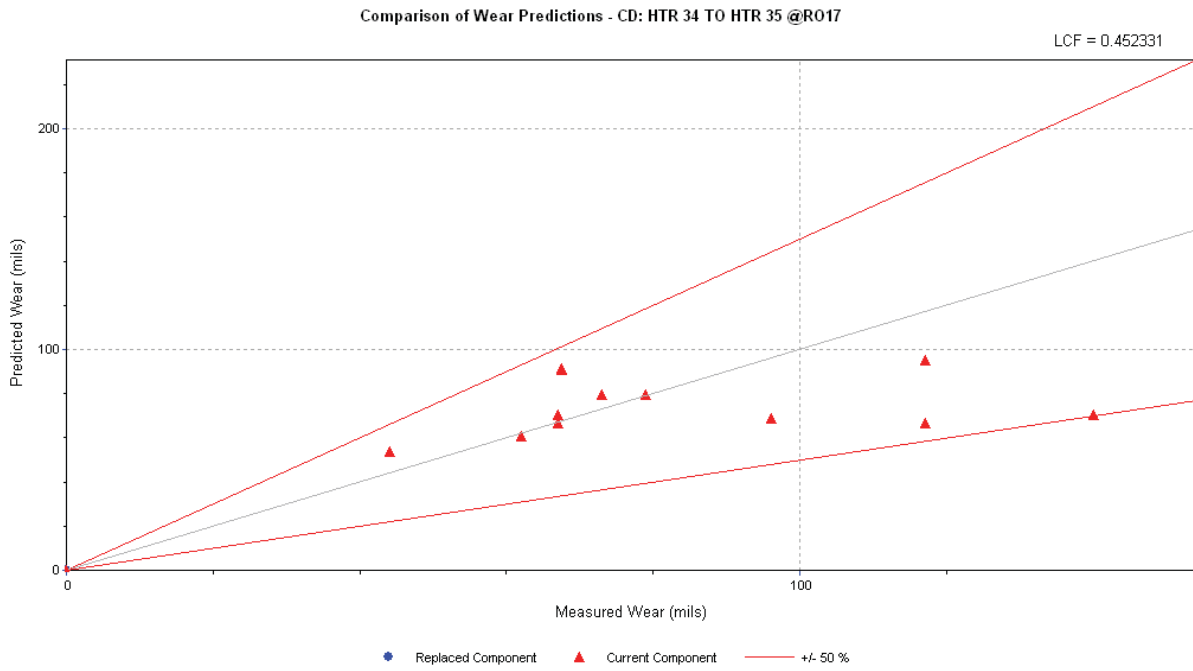
Plot J.5: CD: HTR 32 TO HDR



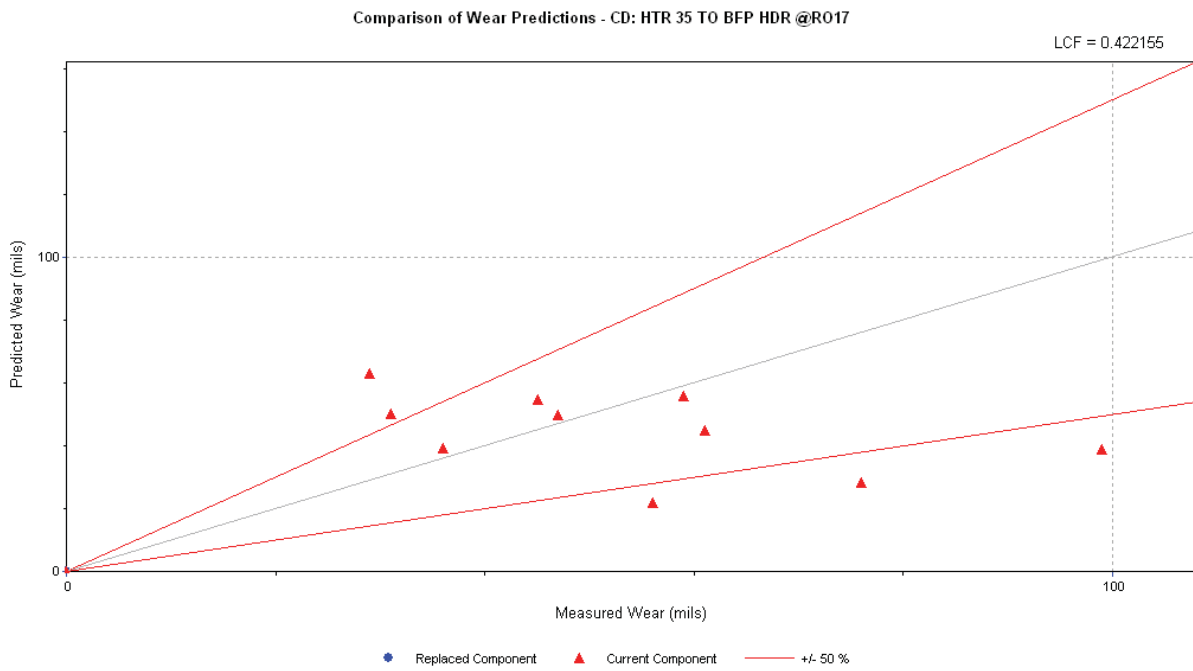
Plot J.6: CD: HTR 33 TO HTR 34



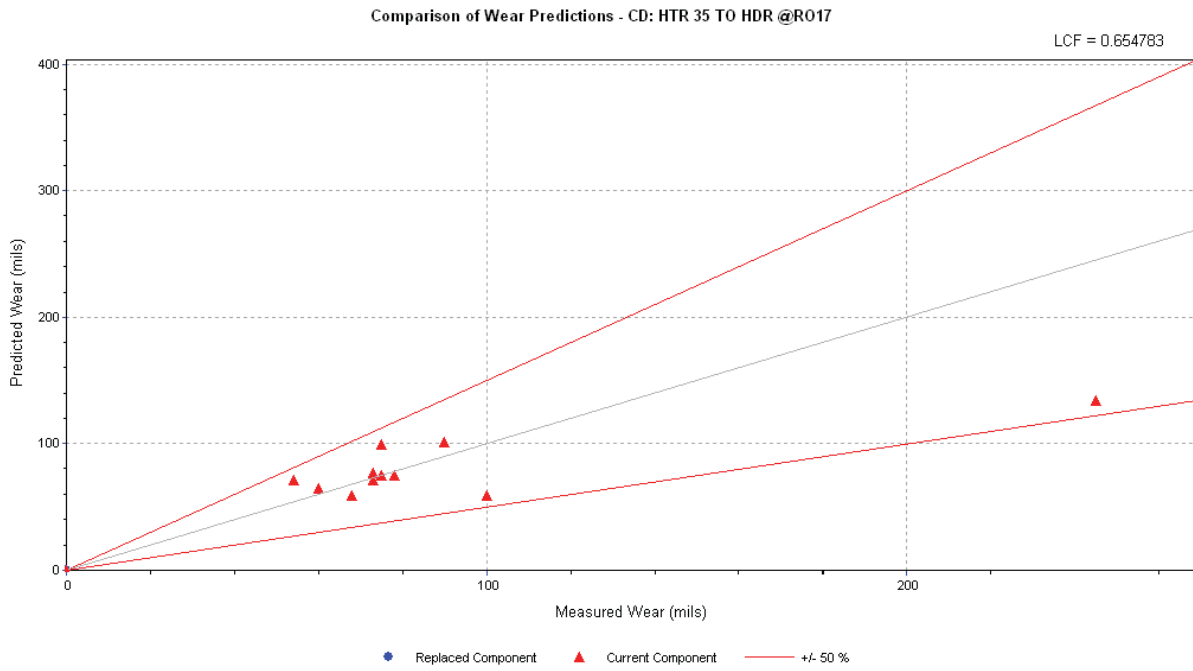
Plot J.7: CD: HTR 34 TO HTR 35



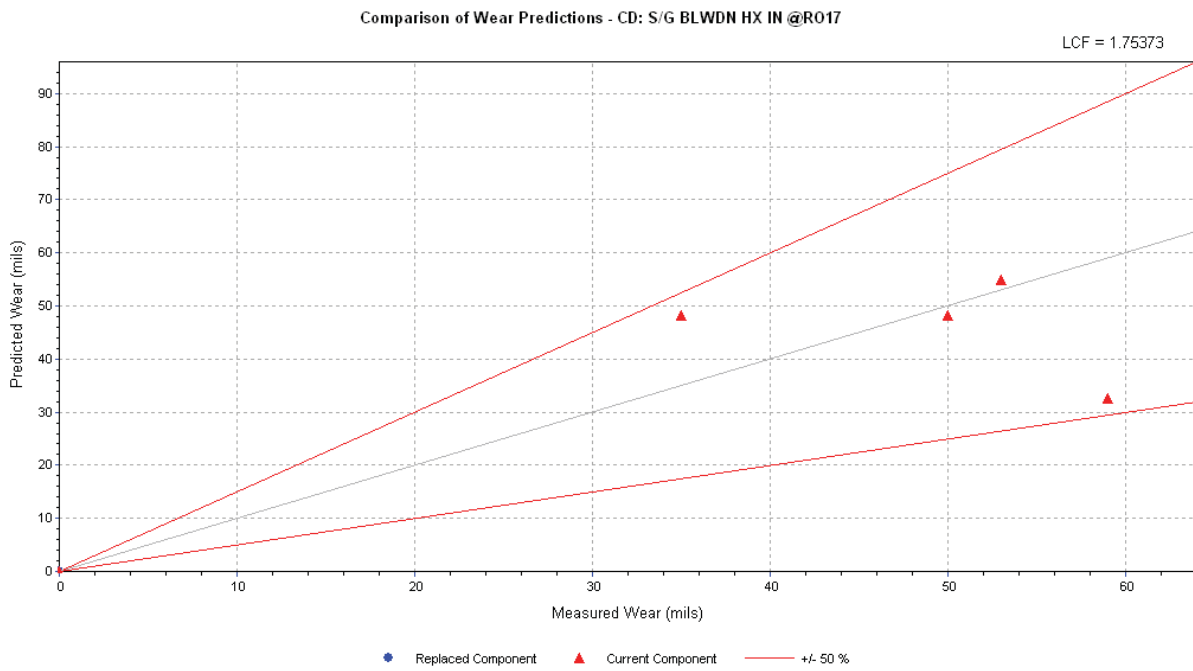
Plot J.8: CD: HTR 35 TO BFP HDR



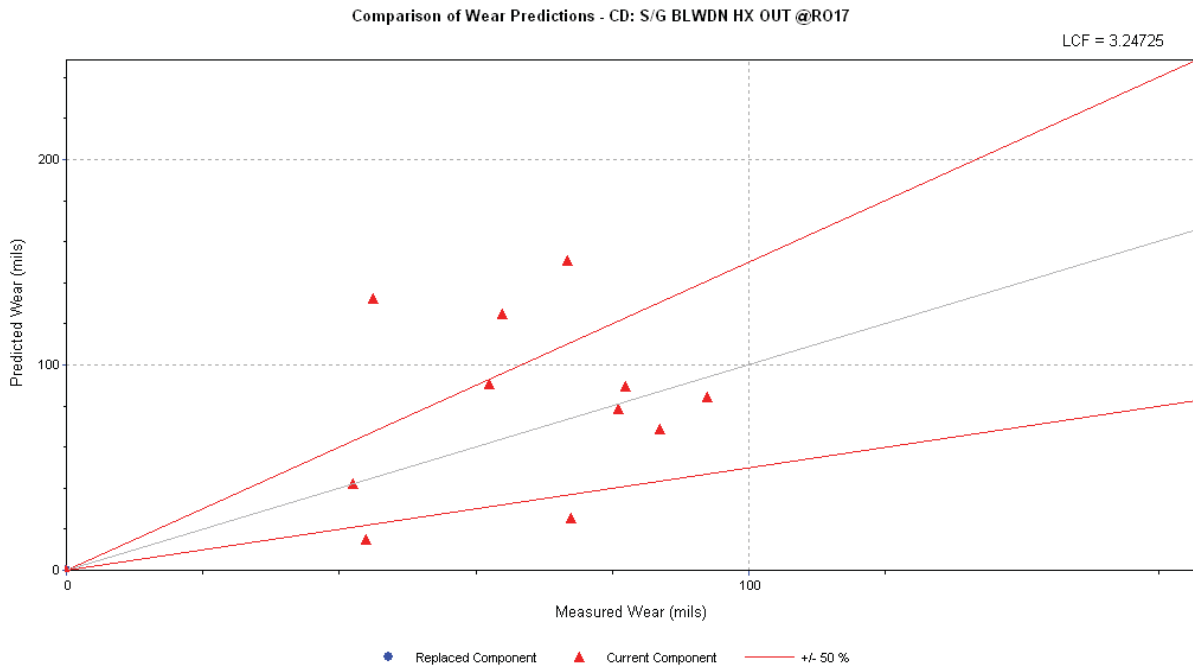
Plot J.9: CD: HTR 35 TO HDR



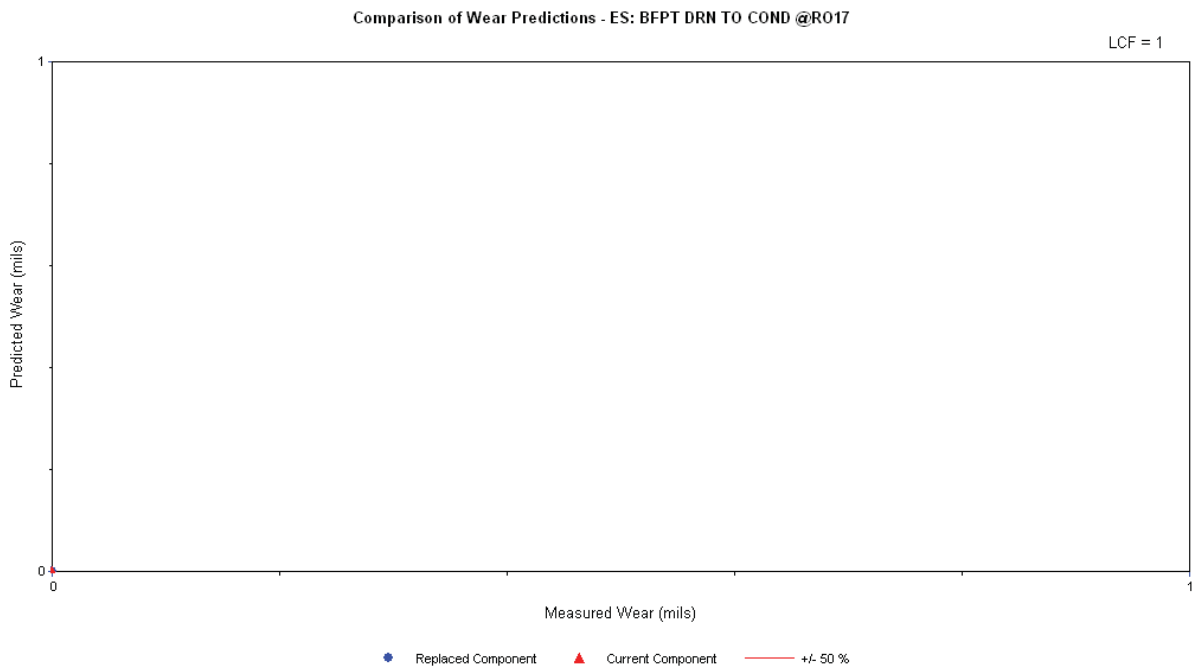
Plot J.10: CD: S/G BLWDN HX IN



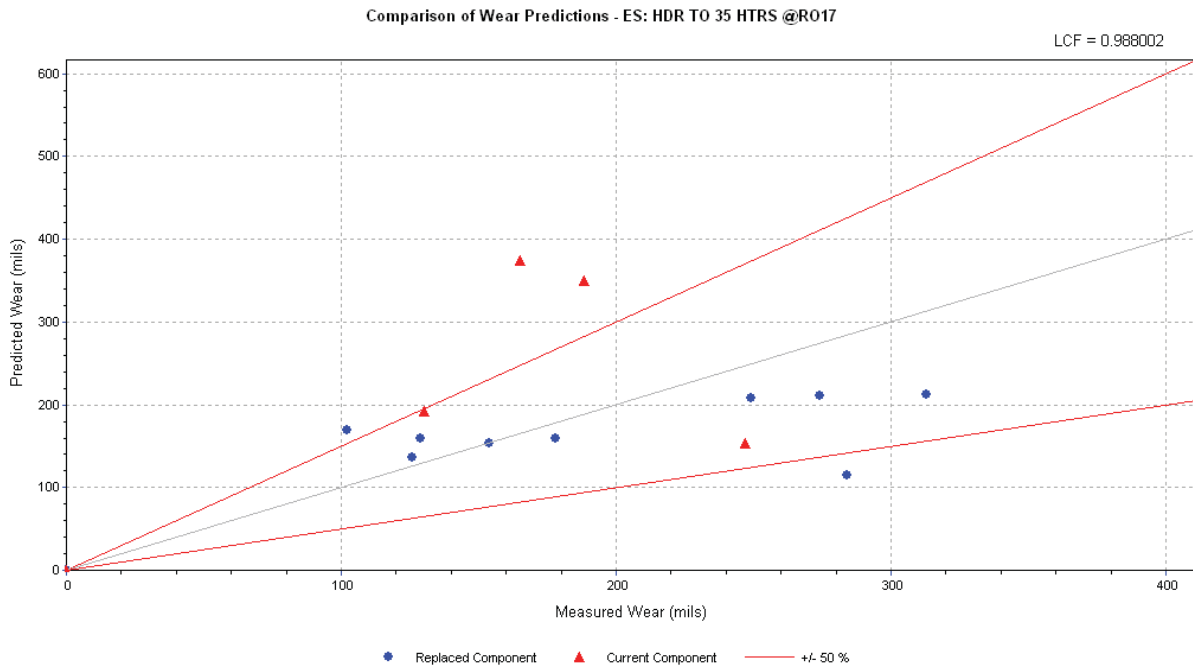
Plot J.11: CD: S/G BLWDN HX OUT



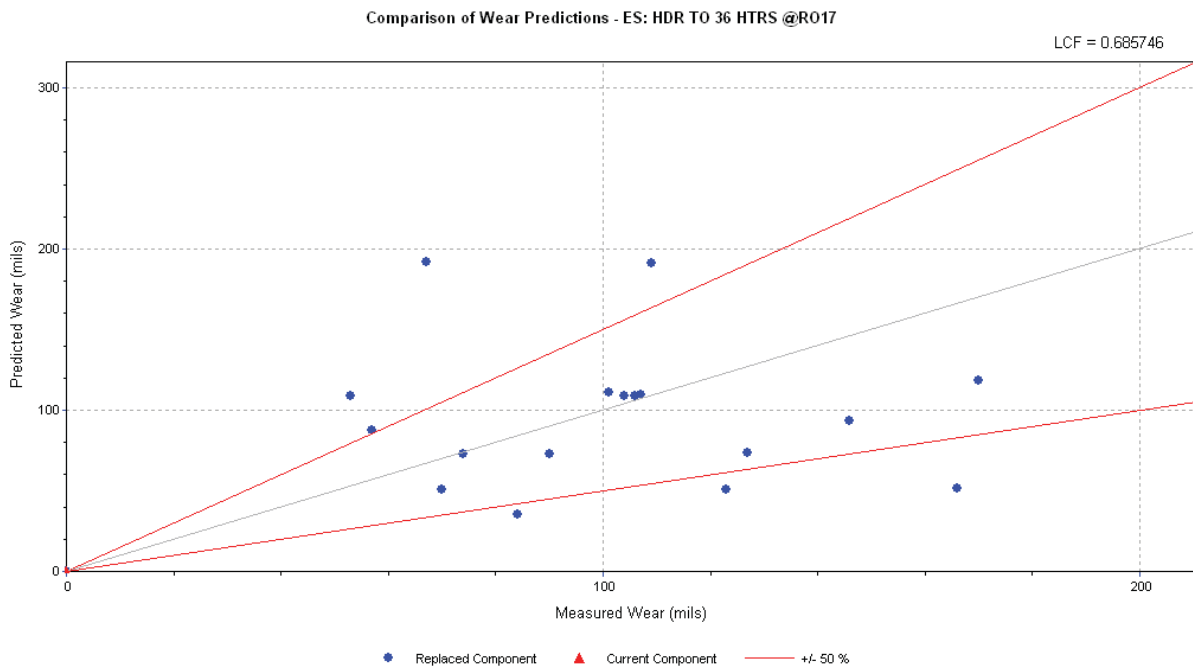
Plot J.12: ES: BFPT DRN TO COND



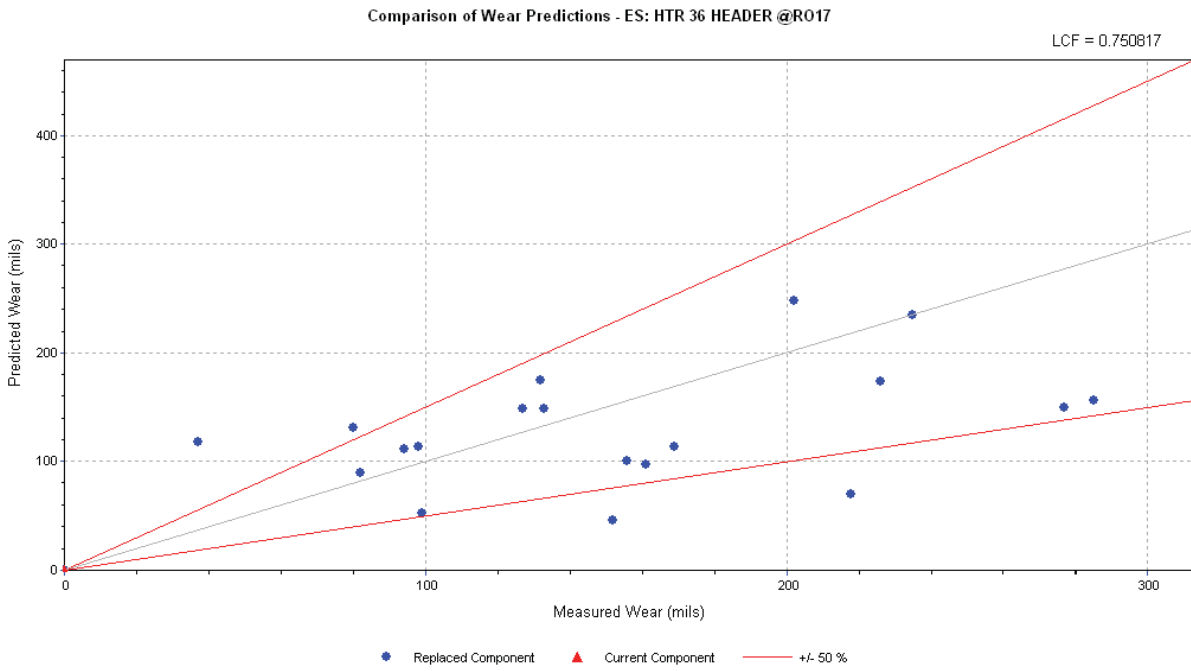
Plot J.13: ES: HDR TO 35 HTRS



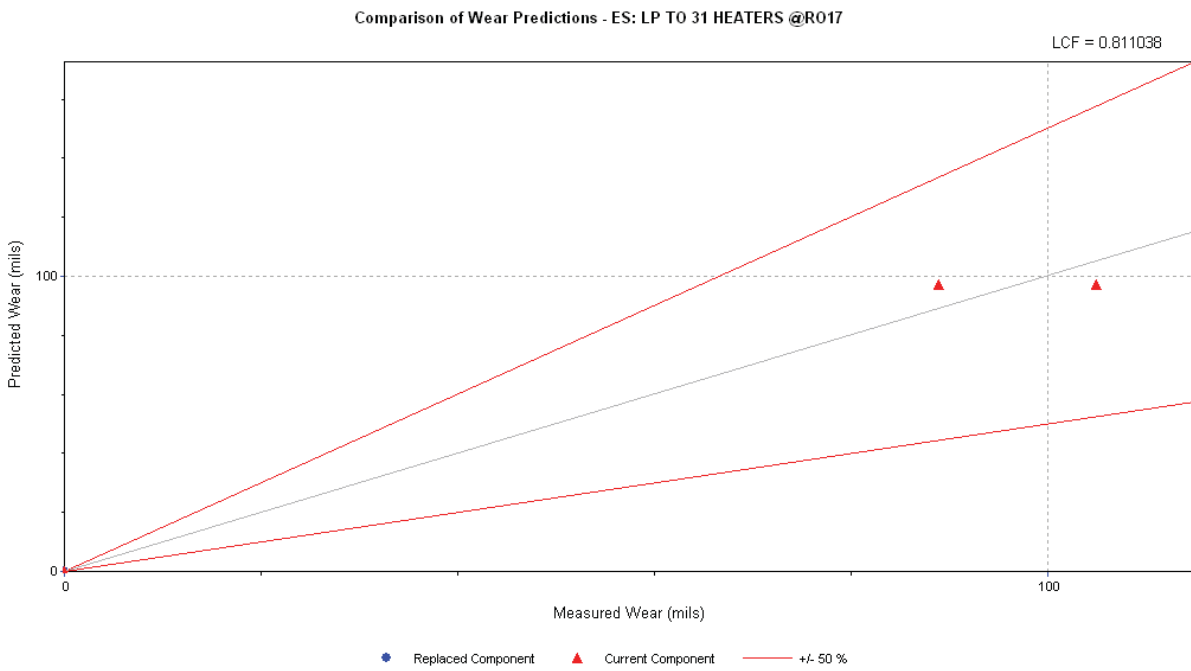
Plot J.14: ES: HDR TO 36 HTRS



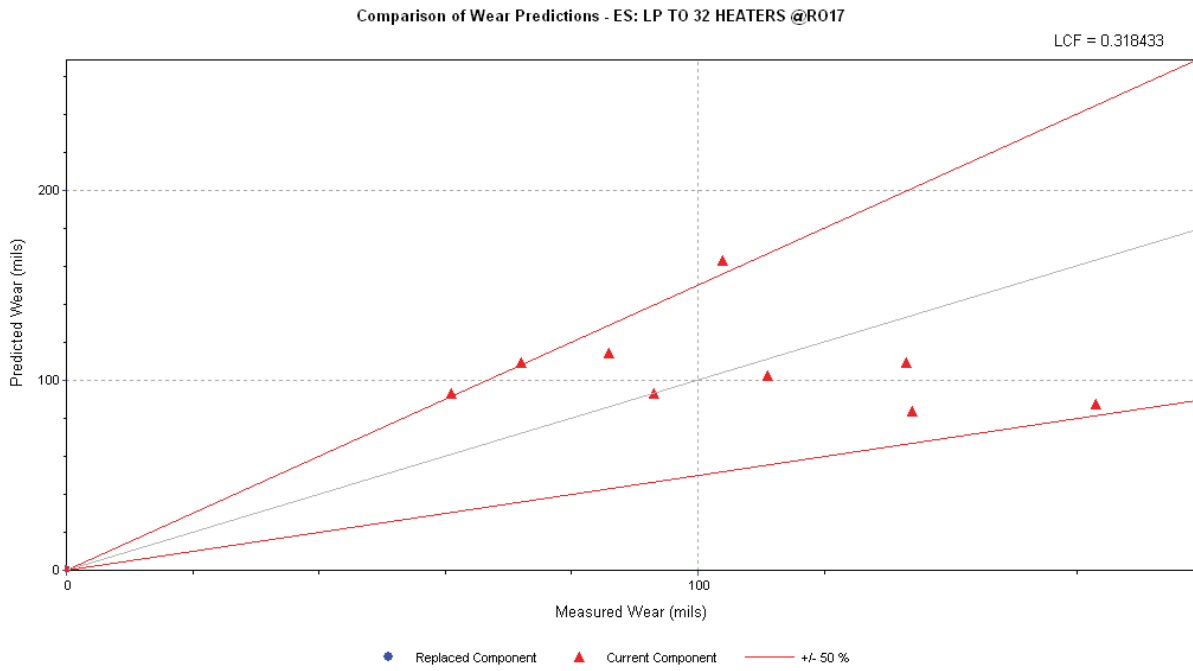
Plot J.15: ES: HTR 36 HEADER



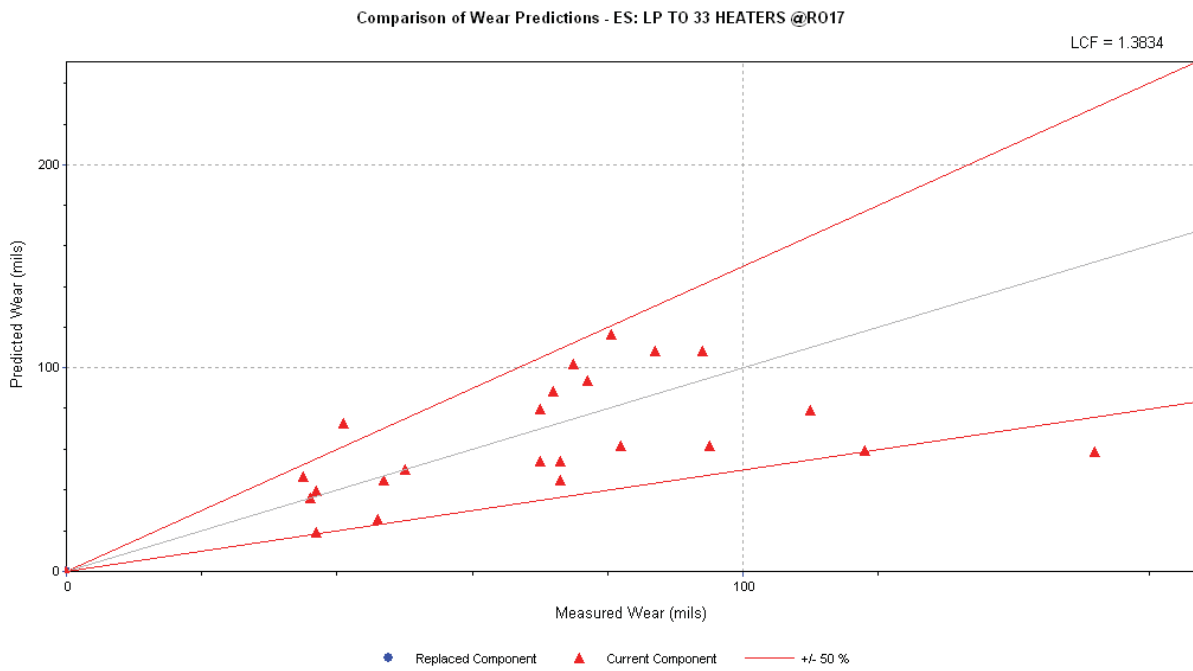
Plot J.16: ES: LP TO 31 HEATERS



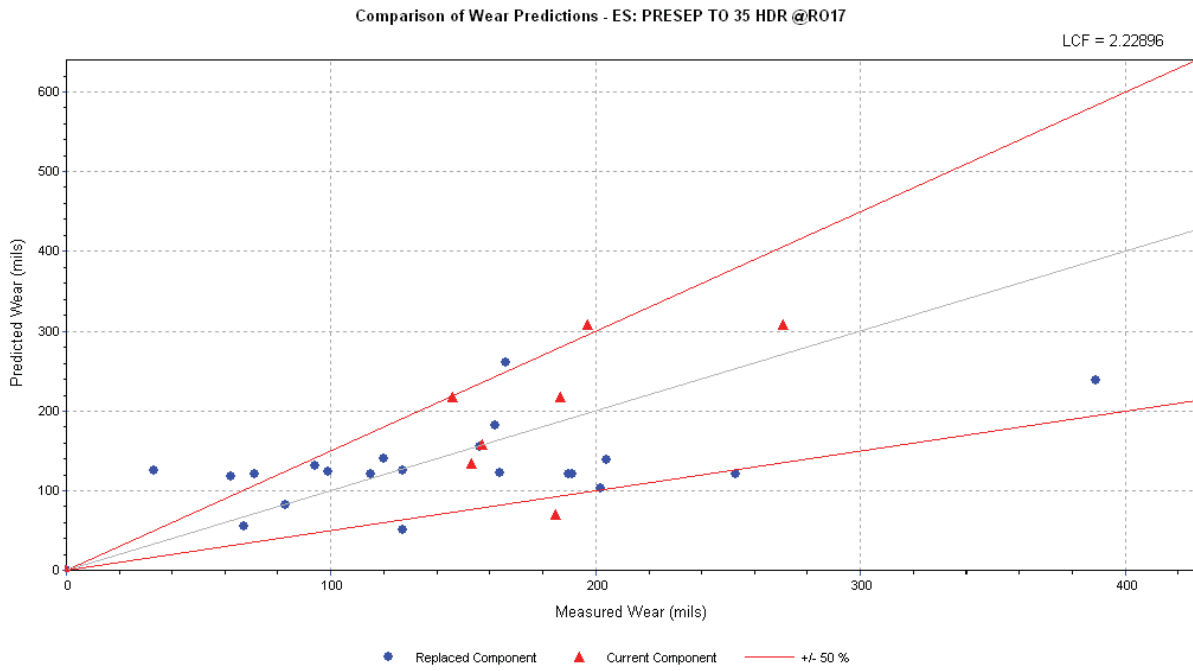
Plot J.17: ES: LP TO 32 HEATERS



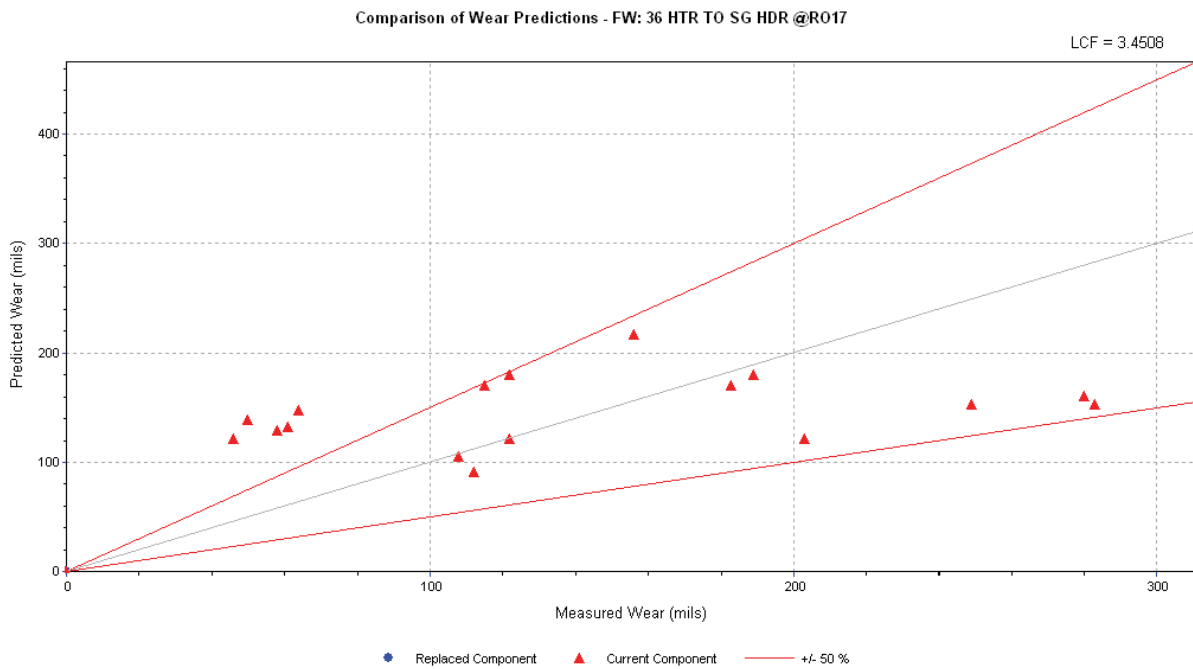
Plot J.18: ES: LP TO 33 HEATERS



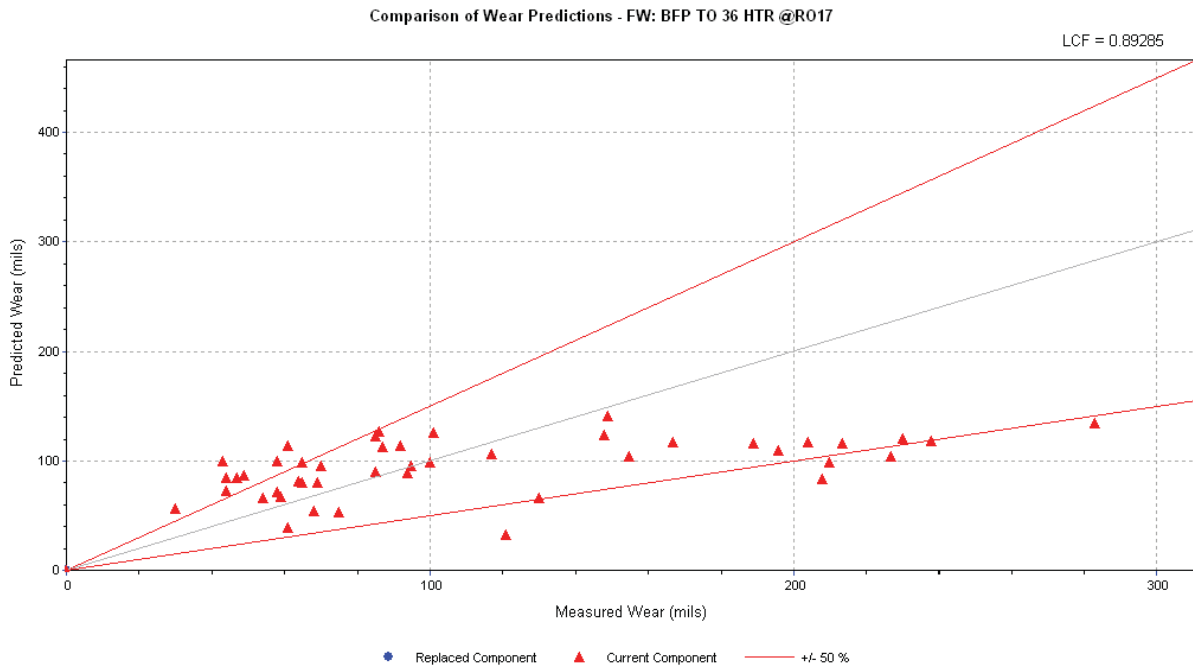
Plot J.19: ES: PRESEP TO 35 HDR



Plot J.20: FW: 36 HTR TO SG HDR



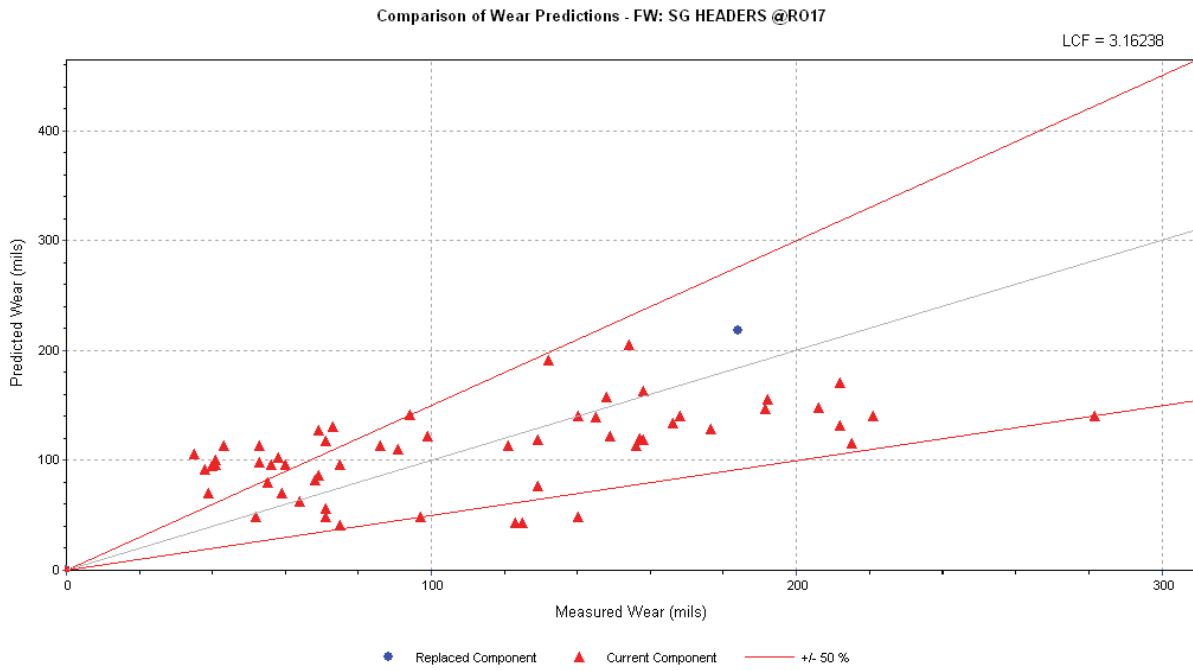
Plot J.21: FW: BFP TO 36 HTR



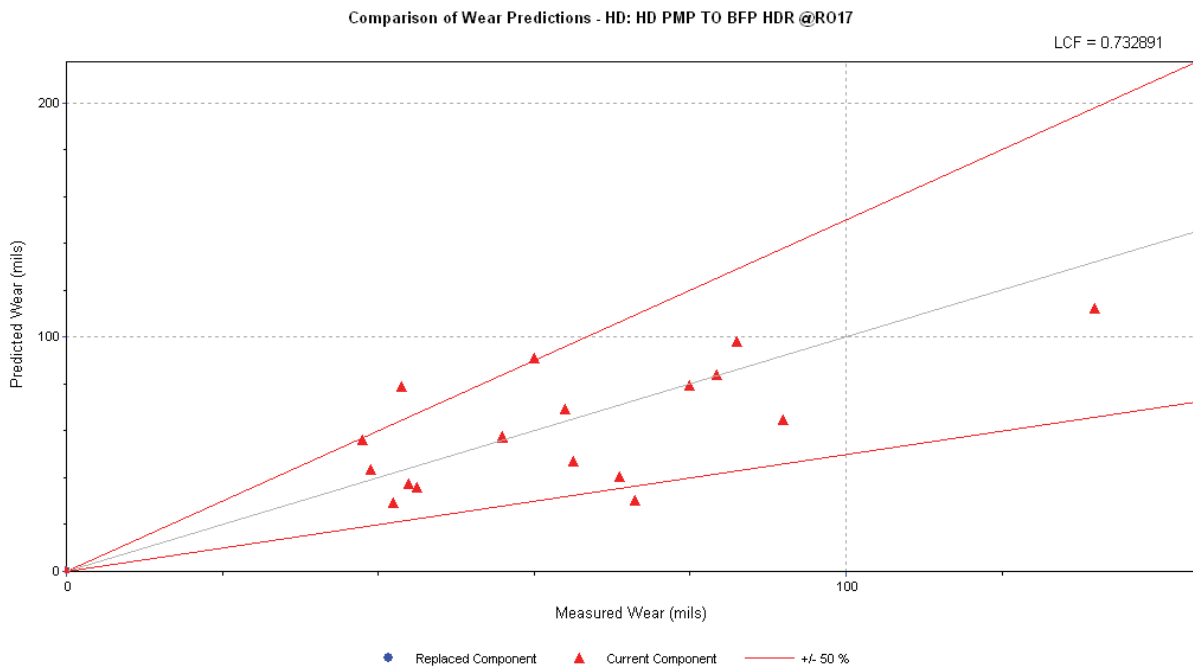
Plot J.22: FW: FW RECIRC



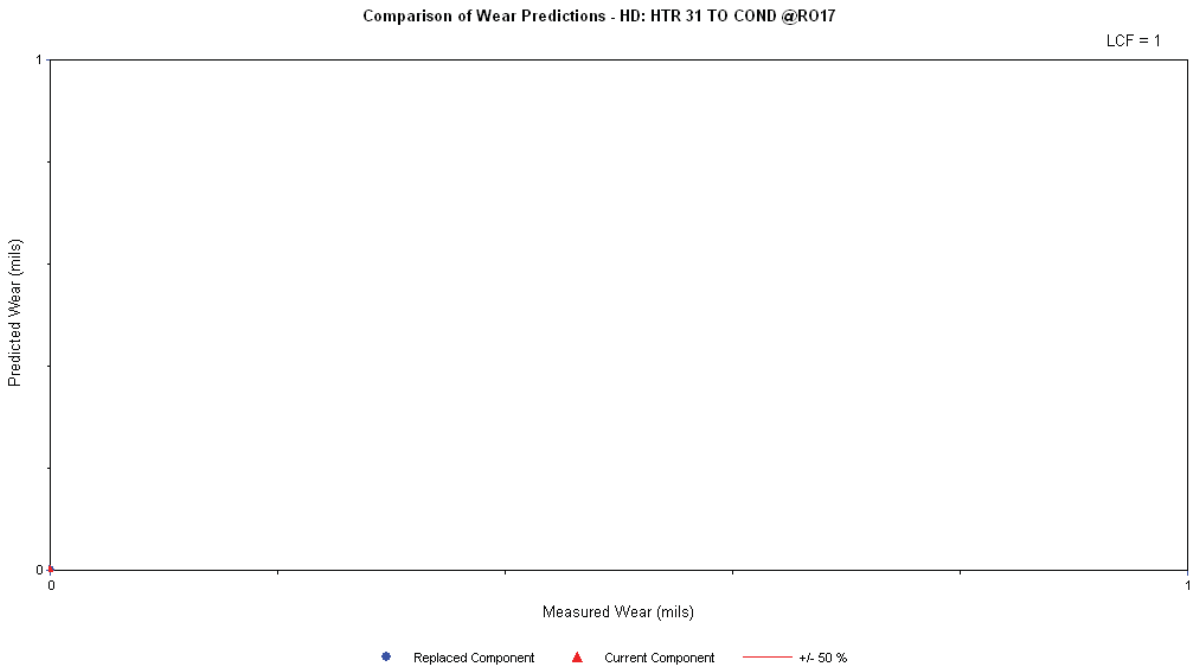
Plot J.23: FW: SG HEADERS



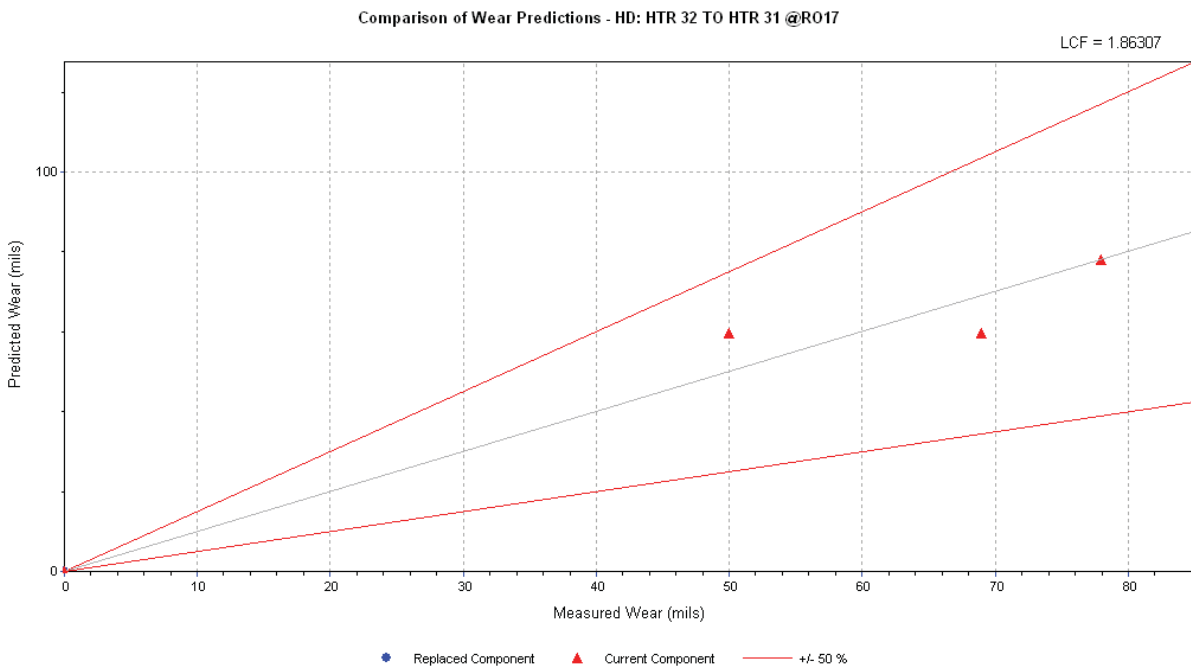
Plot J.24: HD: HD PMP TO BFP HDR



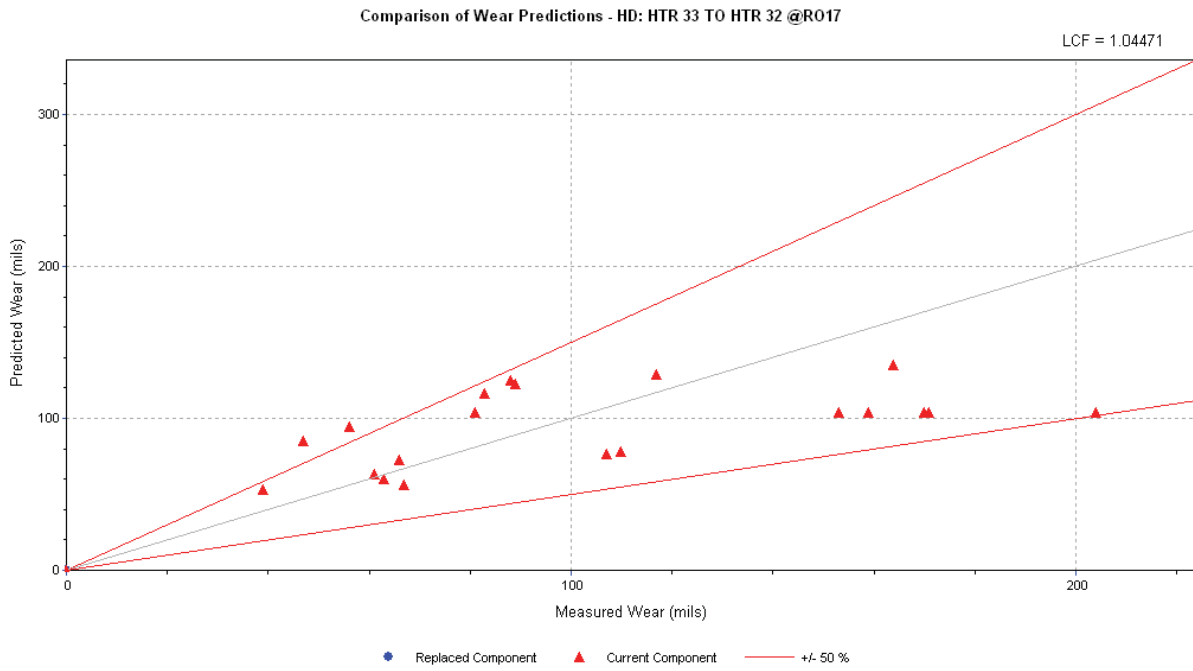
Plot J.25: HD: HTR 31 TO COND



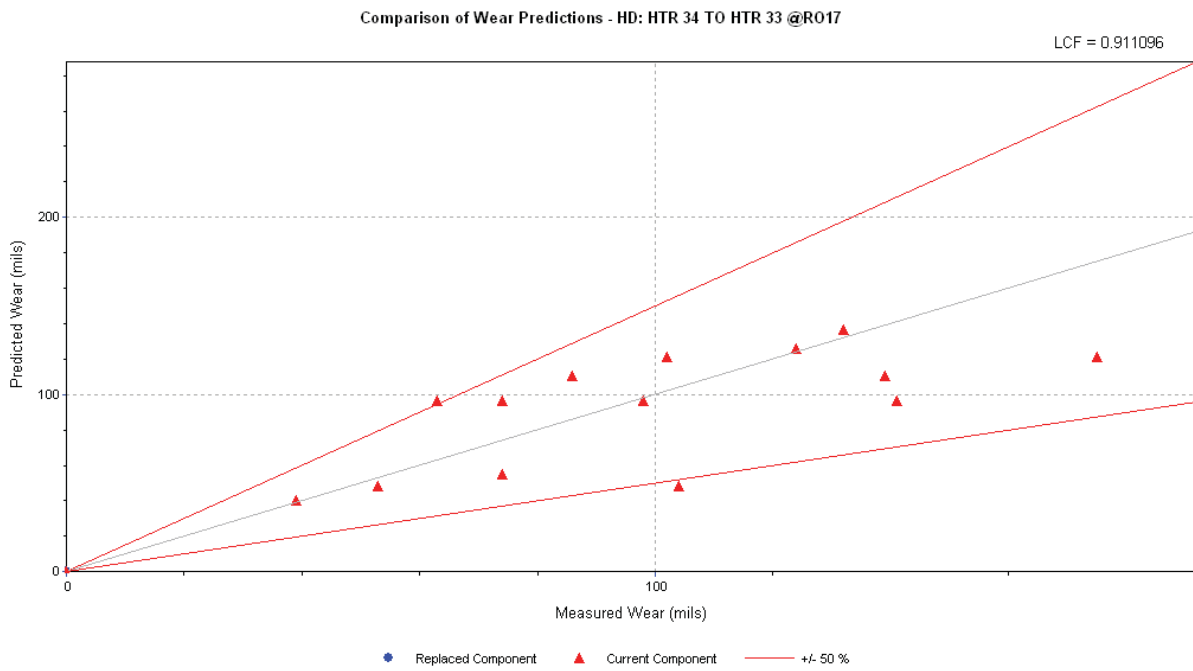
Plot J.26: HD: HTR 32 TO HTR 31



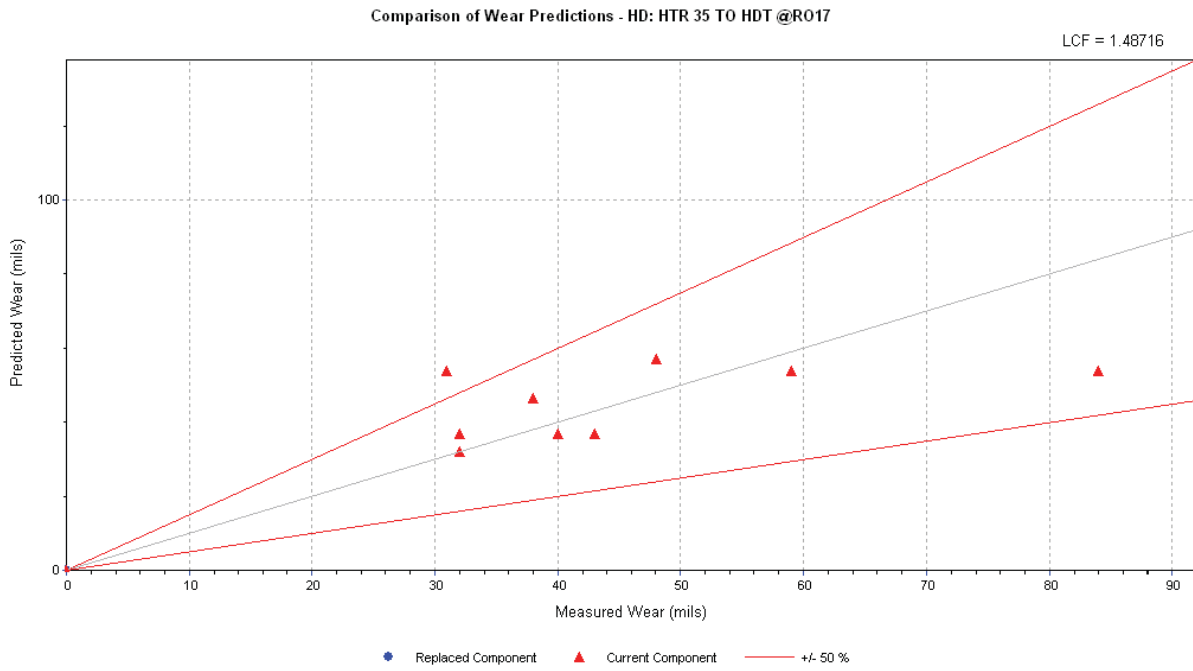
Plot J.27: HD: HTR 33 TO HTR 32



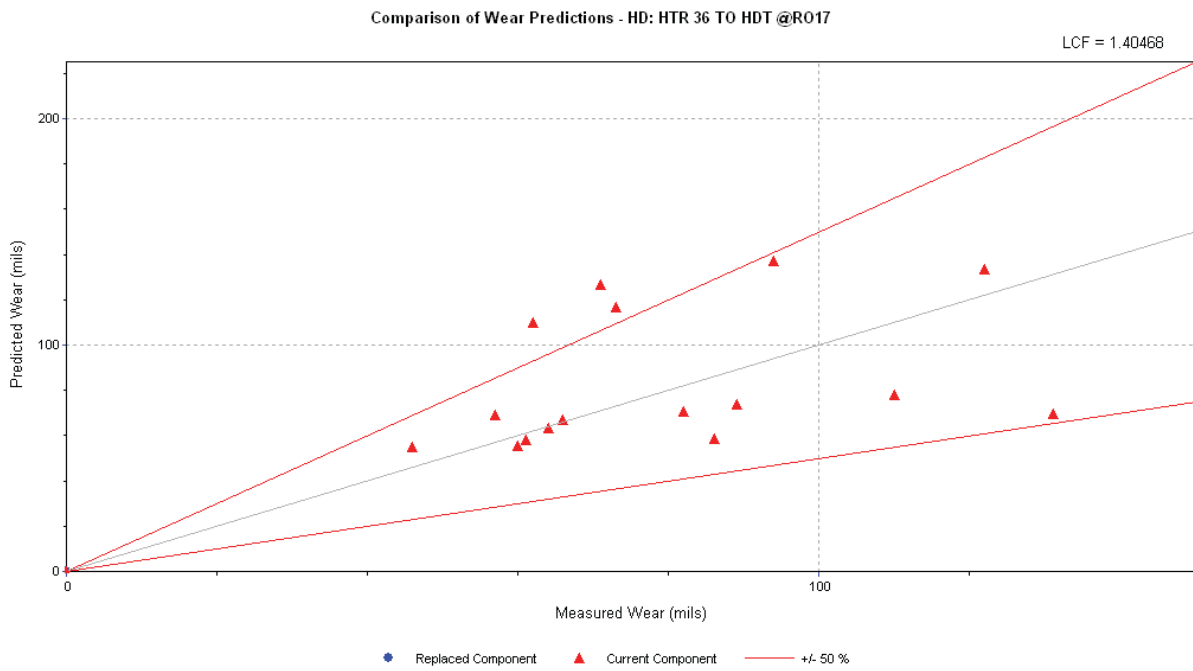
Plot J.28: HD: HTR 34 TO HTR 33



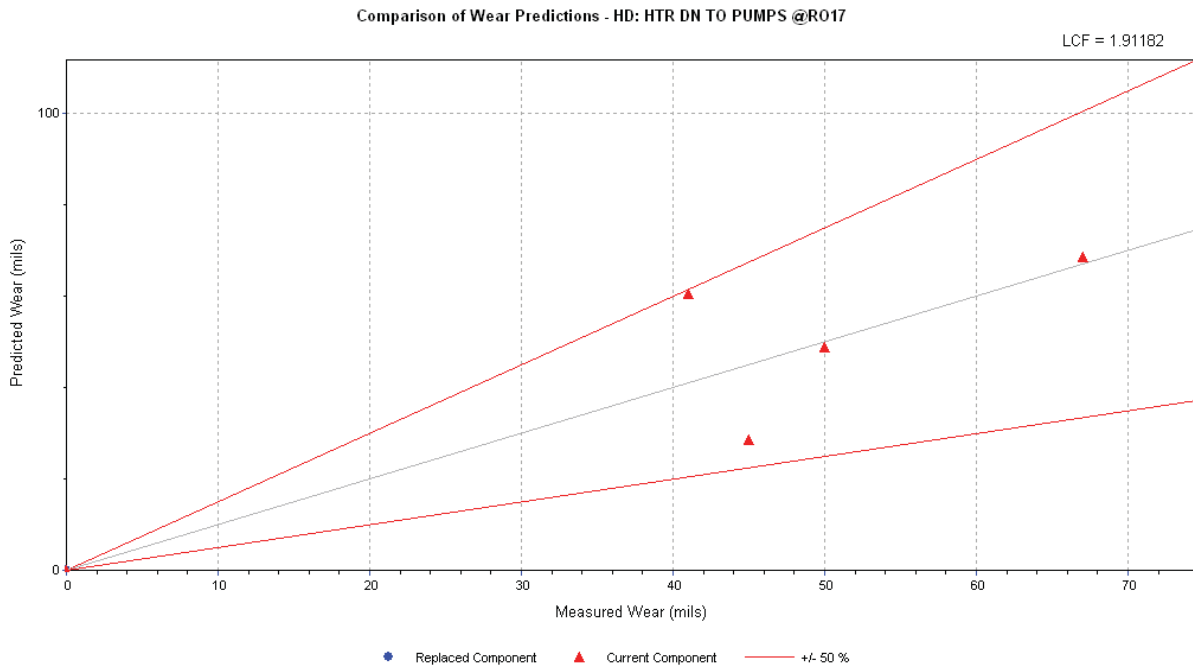
Plot J.29: HD: HTR 35 TO HDT



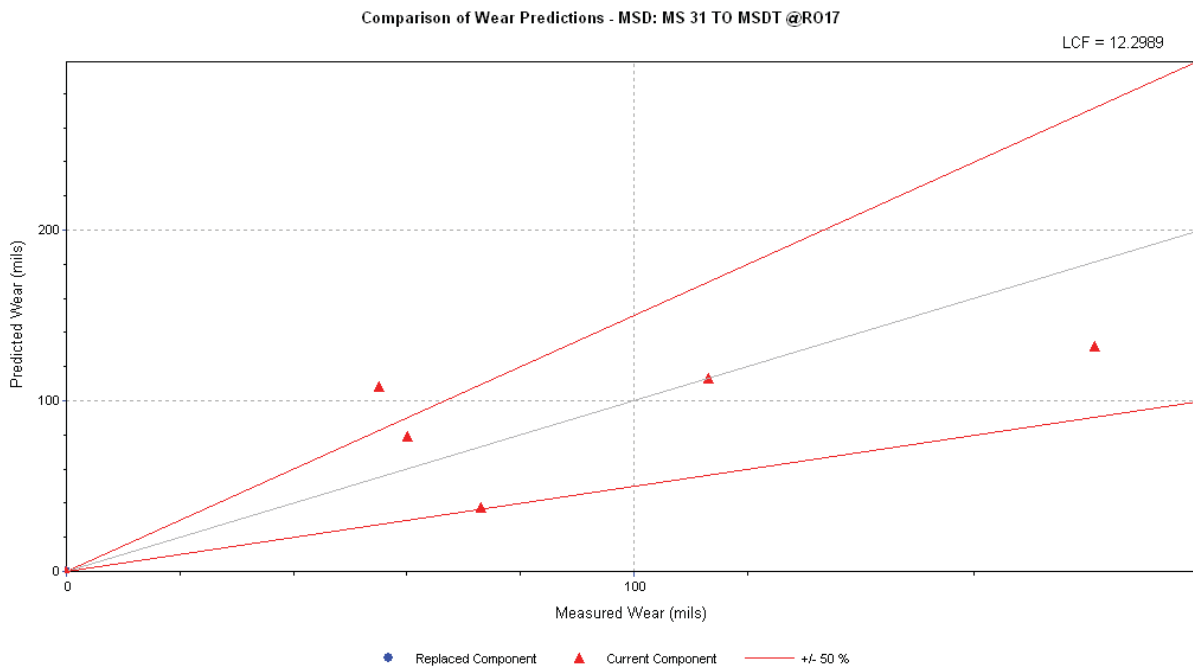
Plot J.30: HD: HTR 36 TO HDT



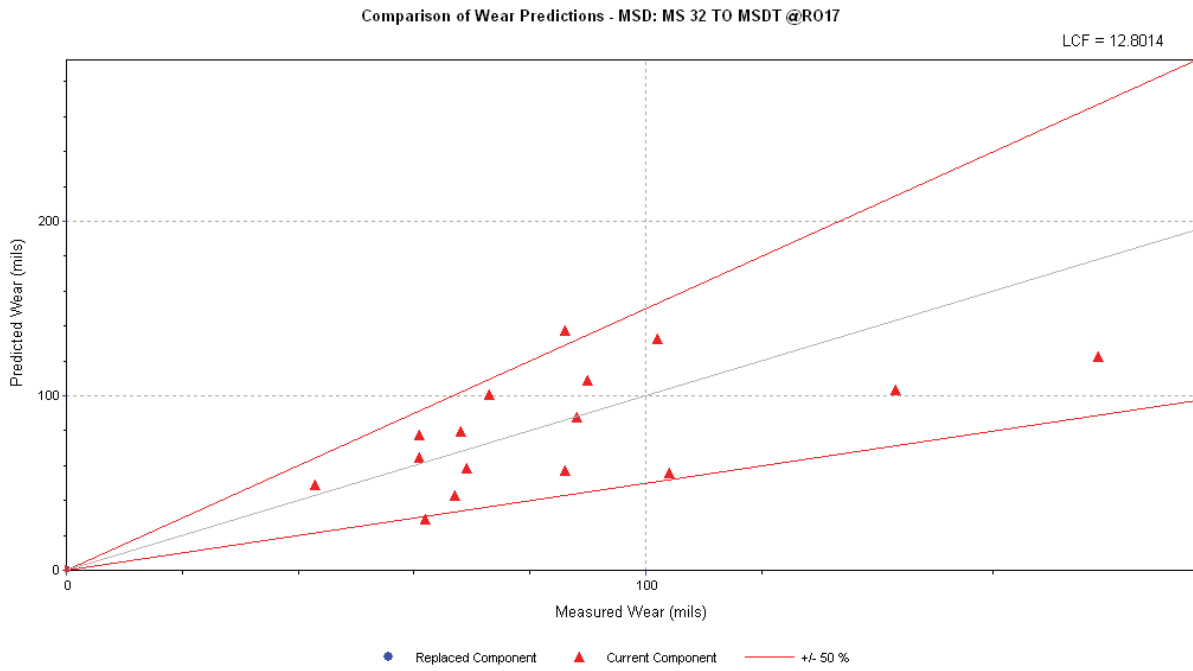
Plot J.31: HD: HTR DN TO PUMPS



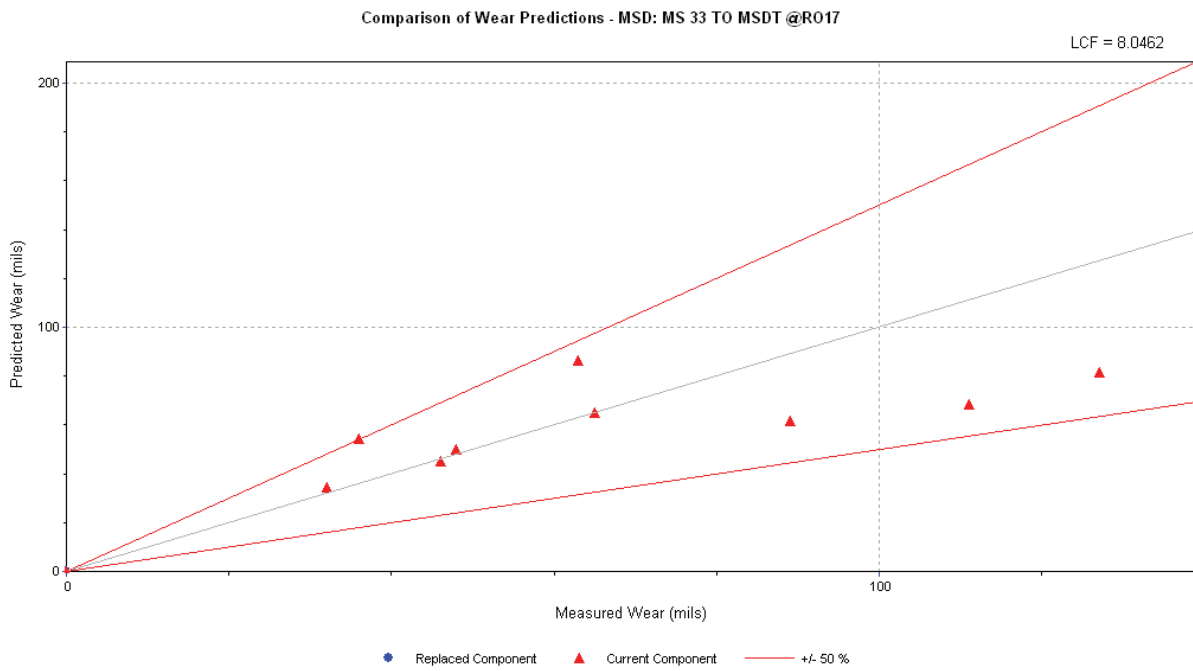
MSD: MS 31 TO MSDT



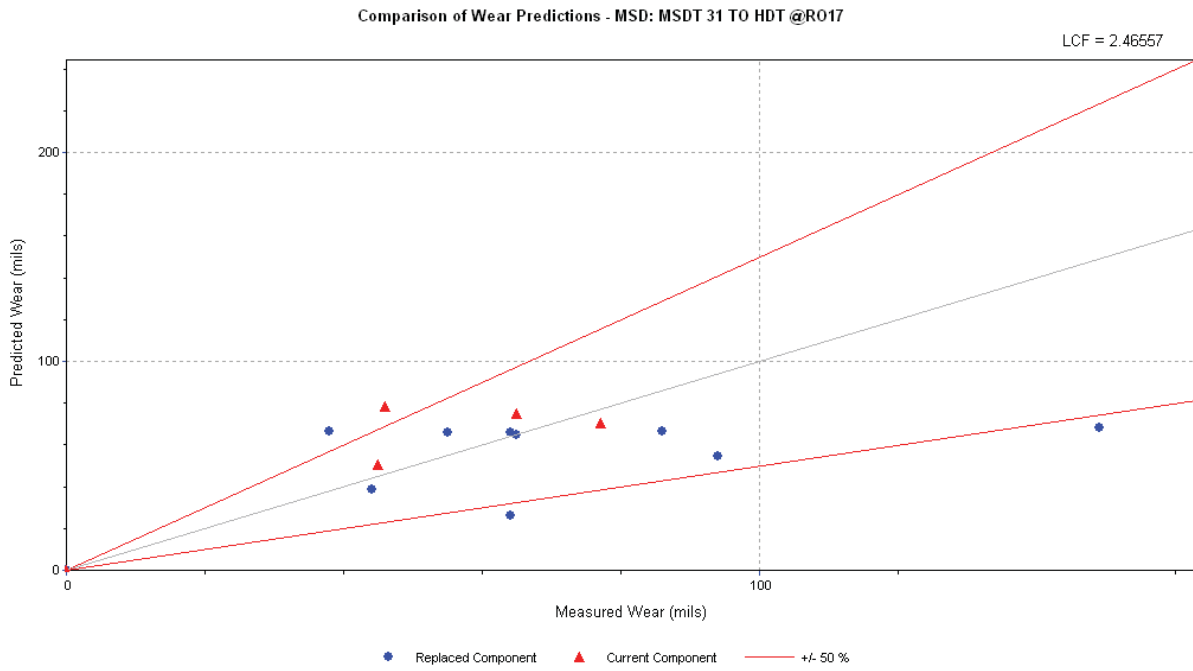
Plot J.32: MSD: MS 32 TO MSDT



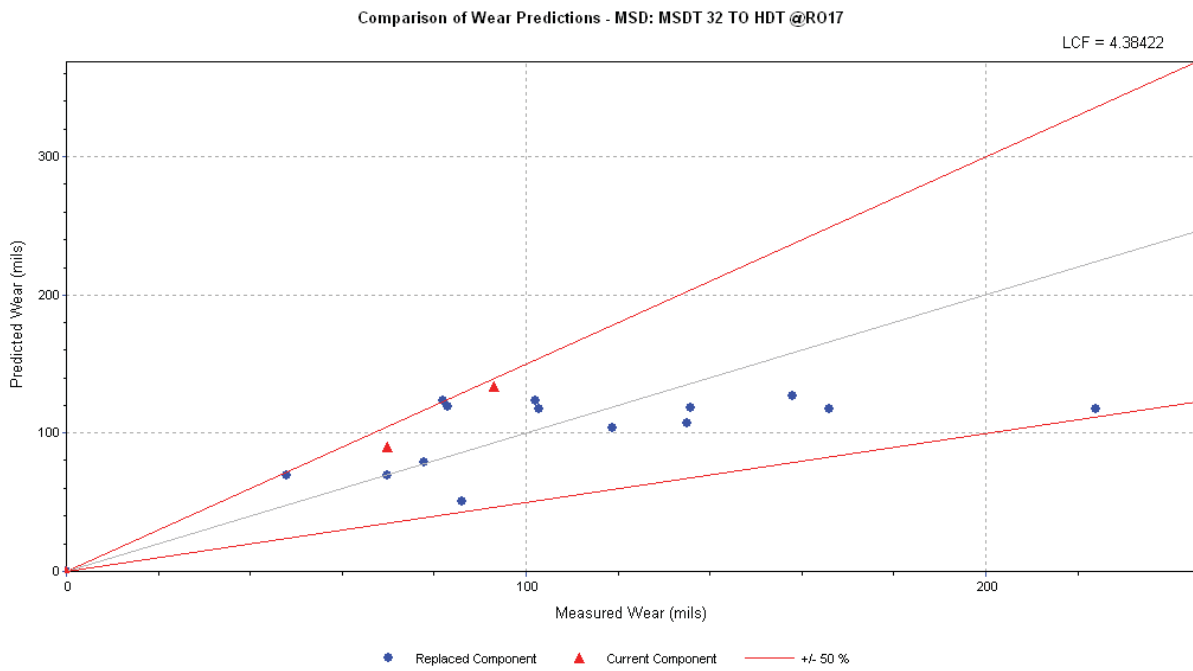
Plot J.33: MSD: MS 33 TO MSDT



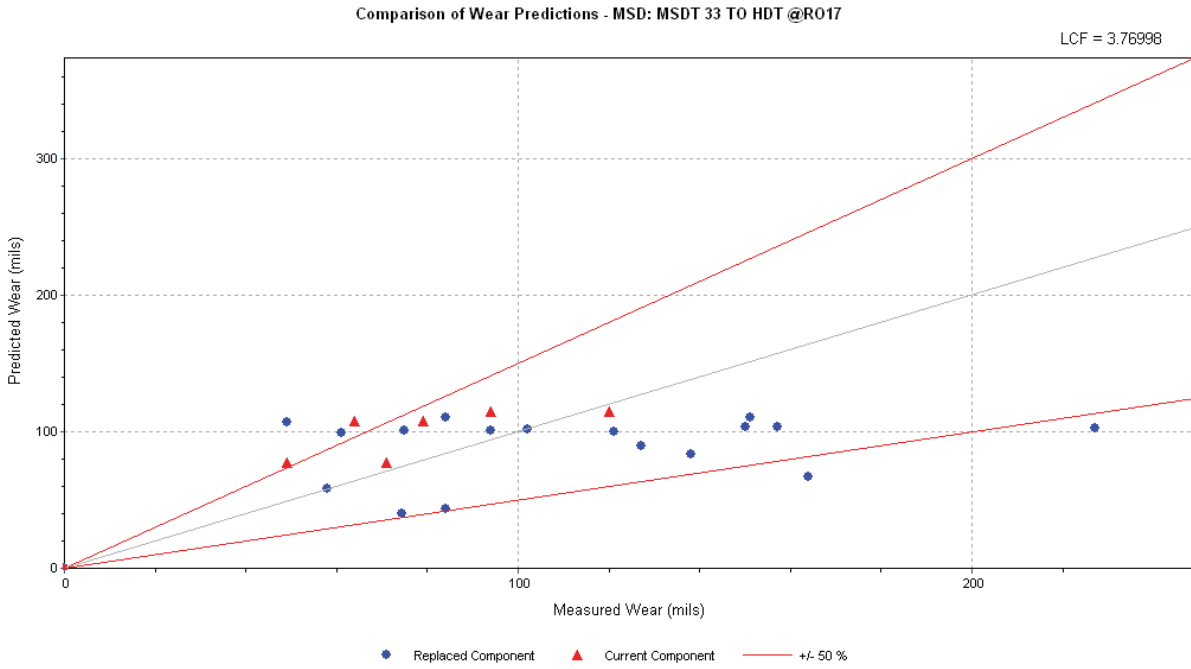
Plot J.34: MSD: MSDT 31 TO HDT



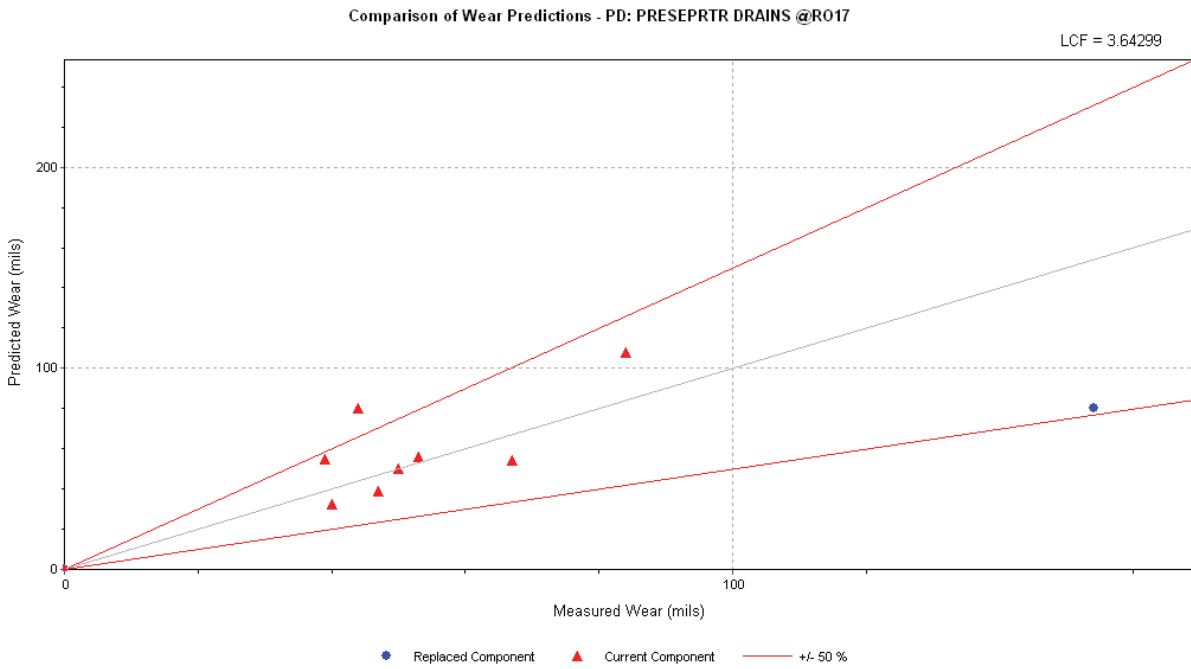
Plot J.35: MSD: MSDT 32 TO HDT



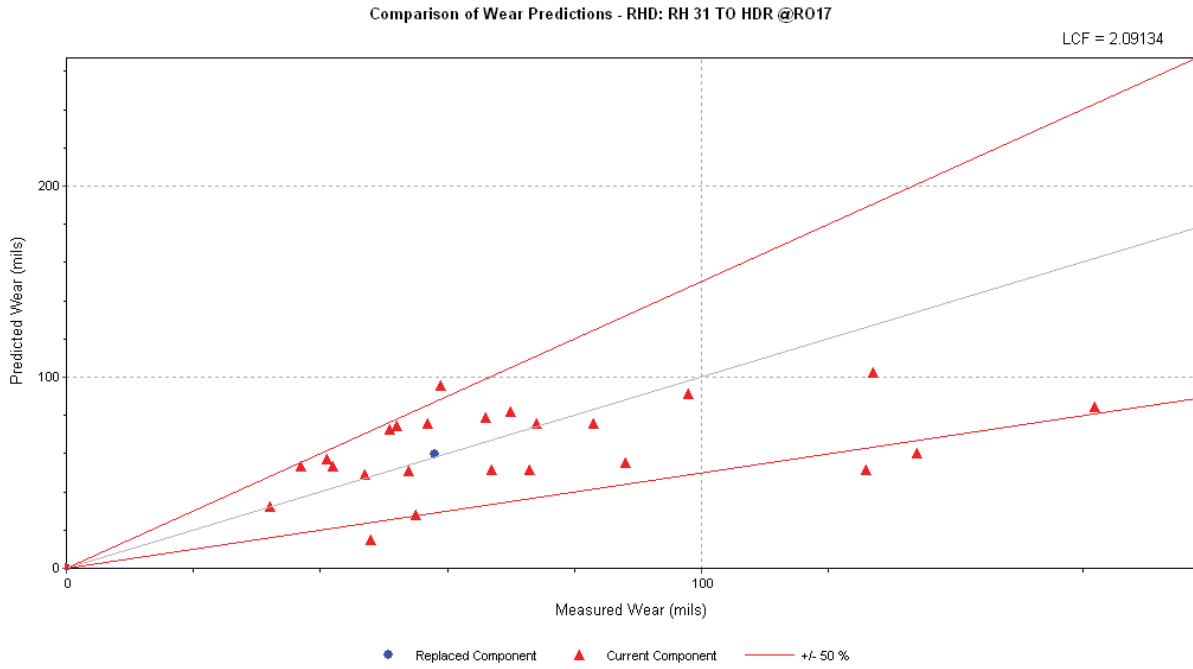
Plot J.36: MSD: MSDT 33 TO HDT



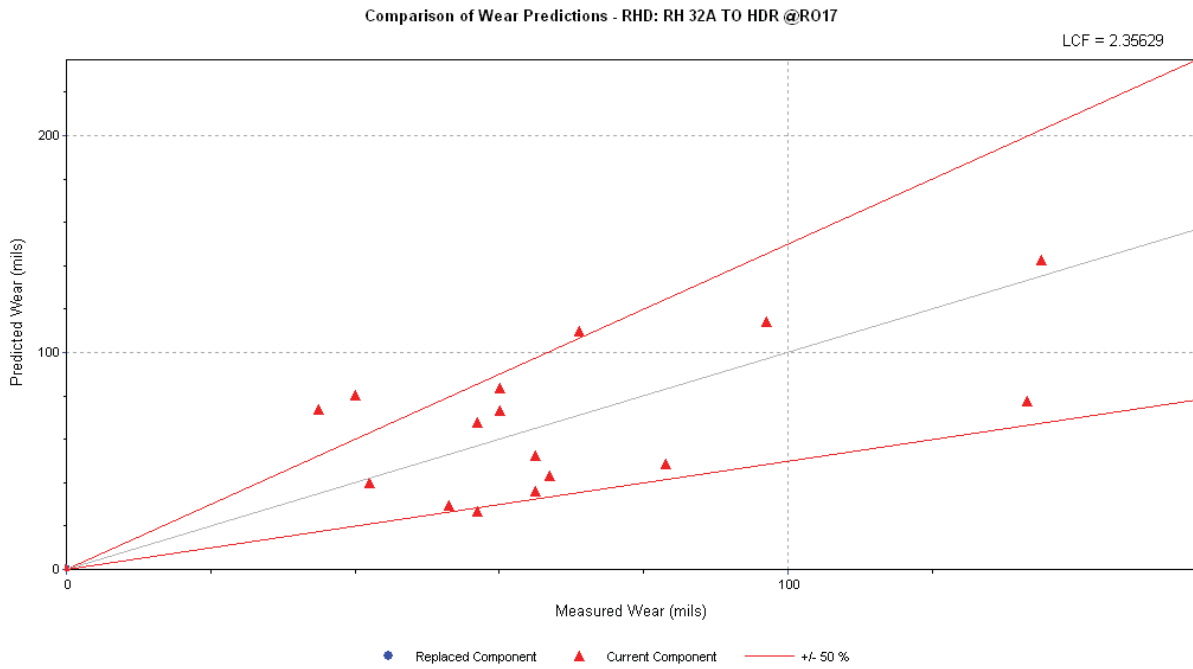
Plot J.37: PD: PRESEPRTR DRAINS



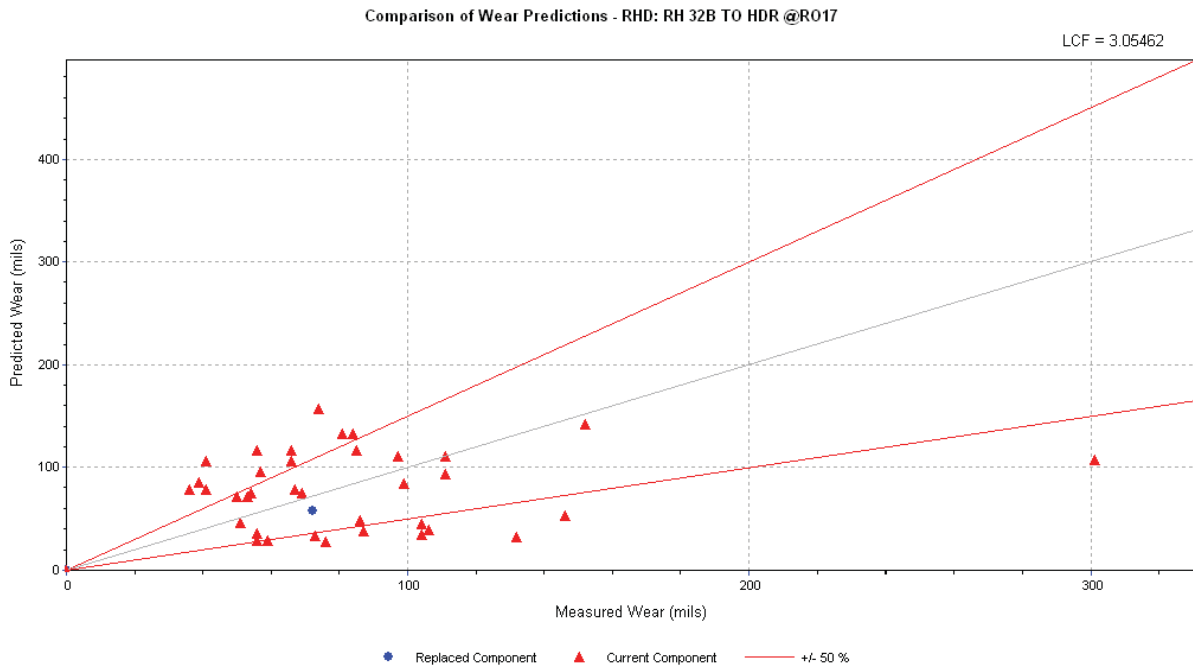
Plot J.38: RHD: RH 31 TO HDR



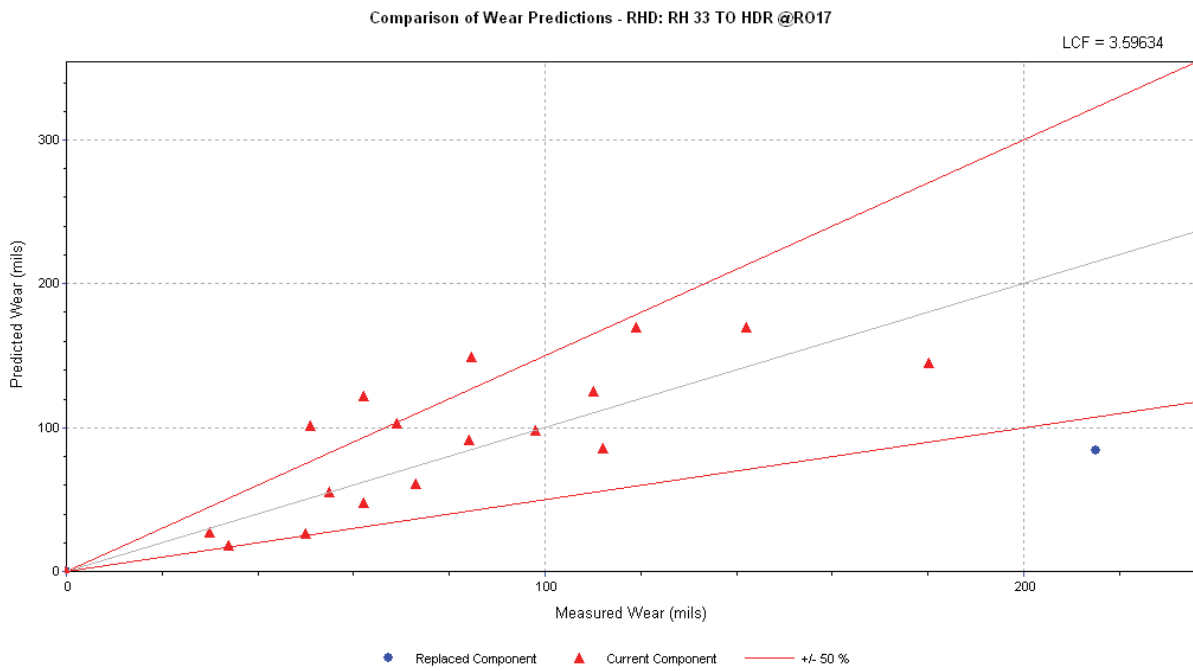
Plot J.39: RHD: RH 32A TO HDR



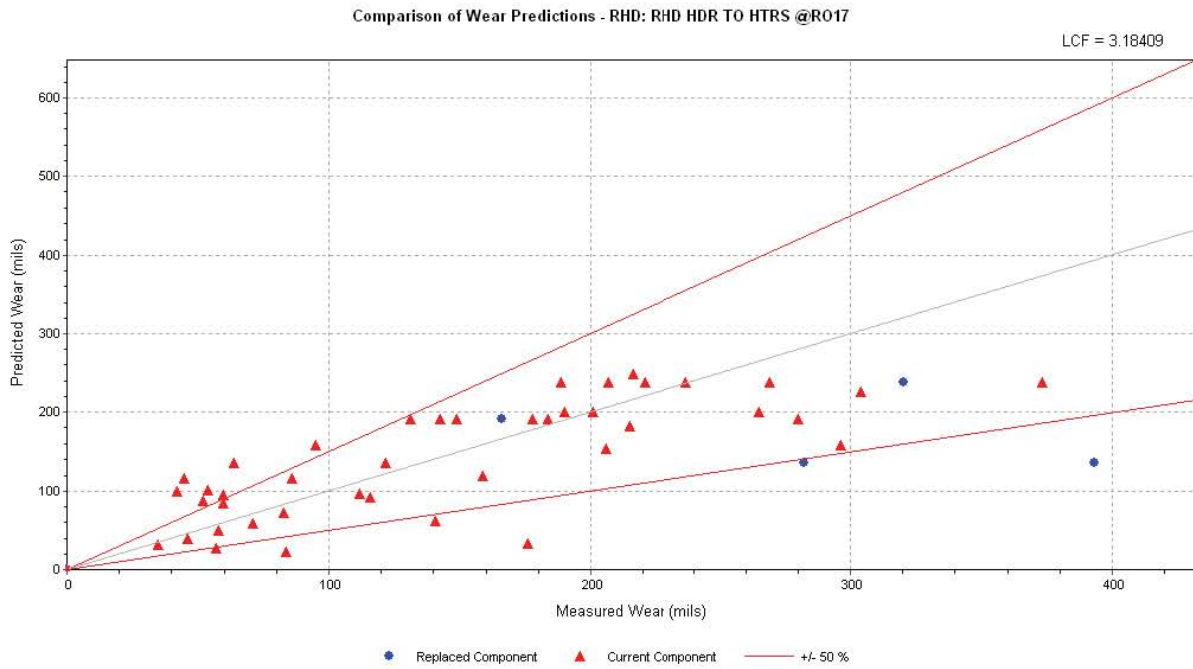
Plot J.40: RHD: RH 32B TO HDR



Plot J.41: RHD: RH 33 TO HDR



Plot J.42: RHD: RHD HDR TO HTRS



Appendix K
Components with Negative Time to Tcrit

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
CD: HDR TO BFP	CD-06.2A HDR to BFP 31	CD-06.2A-07V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.
		CD-06.2A-24O	Yes	Orifices are generally inspected through the Corrective Action Program and not by the FAC Program. To gather information about orifice wear, the upstream and/or the downstream piping is inspected. Since no wear data is applied directly to the orifice, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this orifice has been inspected.
	CD-06.2B HDR to BFP 32	CD-06.2B-05V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
CD: HDR TO BFP	CD-06.2B HDR to BFP 32	CD-06.2B-08O	Yes	Orifices are generally inspected through the Corrective Action Program and not by the FAC Program. To gather information about orifice wear, the upstream and/or the downstream piping is inspected. Since no wear data is applied directly to the orifice, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this orifice has been inspected.
CD: HDR TO HTR 33	CD-02.8B HDR to FWH 33B	CD-02.8B-04V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.
CD: HTR 32 TO 33 HDR	CD-02.4 FWH 32 OUT HDR	CD-02.4-02V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream elbow has been inspected. The pipe modeled between the valve and elbow is a flange.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
CD: HTR 32 TO HDR	CD-02.1A FWH 32A to HDR	CD-02.1A-05V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.
	CD-02.1B FWH 32B to HDR	CD-02.1B-07V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream elbow has been inspected.
	CD-02.1C FWH 32C to HDR	CD-02.1C-08V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream elbow has been inspected.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
CD: HTR 35 TO HDR	CD-05.1A FWH 35A to HDR	CD-05.1A-05V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.
	CD-05.1B FWH 35B to HDR	CD-05.1B-01N	Yes	This component has been inspected and is due for reinspection in 3R17.
		CD-05.1B-05V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.
	CD-05.1C FWH 35C to HDR	CD-05.1C-05V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. The closest FAC inspection to this valve is three components downstream; however, inspections on this valve are covered by the Correction Action Program.
ES: HDR TO 35 HTRS	EX-02.16 HDR 35 to FWH 35A	EX-02.16-05V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. The components downstream of this valve have been replaced with CrMo. Inspections on this valve are controlled by the Corrective Actions Program.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
ES: HDR TO 35 HTRS	EX-02.16 HDR 35 to FWH 35A	EX-02.16-09N	Yes	This component is modeled only for continuity in the model and does not exist in the plant. The upstream elbow has been inspected.
	EX-02.17 HDR 35 to FWH 35B	EX-02.17-02V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream elbow has been inspected.
		EX-02.17-05E	Yes	This component was inspected in 1999. At that time, the calculated remaining service life for the component was 16.7 years. The next scheduled inspection for this component is in 3R18.
	EX-02.18 HDR 35 to FWH 35C	EX-02.18-02V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream elbow has been inspected.
ES: HDR TO 36 HTRS	EX-01.5A HP EX HDR to FWH 36A	EX-01.5A-11V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. All other components in this line have been replaced with Stainless Steel. Inspections on this valve are controlled by the Corrective Actions Program.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
ES: HDR TO 36 HTRS	EX-01.5B HP EX HDR to FWH 36B	EX-01.5B-09V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. All other components in this line have been replaced with Stainless Steel. Inspections on this valve are controlled by the Corrective Actions Program.
	EX-01.5C HP EX HDR to FWH 36C	EX-01.5C-09V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. All other components in this line have been replaced with Stainless Steel. Inspections on this valve are controlled by the Corrective Actions Program.
ES: HTR 36 HEADE R	EX-01.2 HP EXT to FWH 36 HDR	EX-01.2-01N	No	This component has not been inspected, and all other components in this line are Stainless Steel.
	EX-01.3 HP EXT FWH 36 HEADER	EX-01.3-06V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. All other components in this line have been replaced with Stainless Steel. Inspections on this valve are controlled by the Corrective Actions Program.
		EX-01.3-07V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. All other components in this line have been replaced with Stainless Steel. Inspections on this valve are controlled by the Corrective Actions Program.
		EX-01.3-08V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. All other components in this line have been replaced with Stainless Steel. Inspections on this valve are controlled by the Corrective Actions Program.
ES: PRESEP TO 35 HDR	EX-02.14 FWH 35 HEADER	EX-02.14-03P	No	This component has not been inspected, but the upstream and downstream components have been inspected and have long remaining service lives.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
ES: PRESEP TO 35 HDR	EX-02.14 FWH 35 HEADER	EX-02.14-04T	Yes	This component was inspected in 2005. At that time, the calculated remaining service life for the component was 45.4 years. The next scheduled inspection for this component is in 3R43.
		EX-02.14-05P	No	This component has not been inspected, but the upstream and downstream components have been inspected and have long remaining service lives.
		EX-02.14-09P	No	This component has not been inspected.
		EX-02.14-10V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of the downstream valve has been inspected.
		EX-02.14-11V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
ES: PRESEP TO 35 HDR	EX-02.14 FWH 35 HEADER	EX-02.14-13V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.
		EX-02.14-16E	Yes	This component was inspected in 1997. At that time, the calculated remaining service life for the component was 20.9 years. The next scheduled inspection for this component is in 3R19.
		EX-02.14-19P	Yes	This component was inspected in 2003. At that time, the calculated remaining service life for the component was 78.6 years. The next scheduled inspection for this component is in 3R23.
		EX-02.14-32T	Yes	This component was inspected in 2003. At that time, the calculated remaining service life for the component was 39.3 years. The next scheduled inspection for this component is in 3R38.
FW: 36 HTR TO SG HDR	FW-02.1A FWH 36A to SG HDR	FW-02.1A-01N	No	This component cannot be inspected with a UT transducer due to a lack of parallel surfaces.
		FW-02.1A-05V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. The closest FAC inspection to this valve is four components downstream; however, inspections on this valve are covered by the Correction Action Program.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
FW: 36 HTR TO SG HDR	FW-02.1B FWH 36B to SG HDR	FW-02.1B-05V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.
	FW-02.1C FWH 36C to SG HDR	FW-02.1C-05V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. The closest FAC inspection to this valve is five components downstream; however, inspections on this valve are covered by the Correction Action Program.
FW: BFP TO 36 HTR	FW-01.2A BFP31 RCIRC T to HDR	FW-01.2A-05V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. The closest FAC inspection to this valve is five components downstream; however, inspections on this valve are covered by the Correction Action Program.
		FW-01.2A-06V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. The closest FAC inspection to this valve is four components downstream; however, inspections on this valve are covered by the Correction Action Program.
	FW-01.2B BFP32 RCIRC T to HDR	FW-01.2B-07V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. The closest FAC inspection to this valve is twenty components downstream; however, inspections on this valve are covered by the Correction Action Program.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
FW: BFP TO 36 HTR		FW-01.2B-08V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. The closest FAC inspection to this valve is nineteen components downstream; however, inspections on this valve are covered by the Correction Action Program.
	FW-01.6A BFP HDR to FWH 36A	FW-01.6A-07V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. The closest FAC inspection to this valve is five components downstream; however, inspections on this valve are covered by the Correction Action Program.
	FW-01.6B BFP HDR to FWH 36B	FW-01.6B-05V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.
	FW-01.6C BFP HDR to FWH 36C	FW-01.6C-05V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. The closest FAC inspection to this valve is three components downstream; however, inspections on this valve are covered by the Correction Action Program.
FW: SG HEADERS	FW-02.4 SG INLET HEADER	FW-02.4-03P	No	This component has not been inspected.
		FW-02.4-12P_1	No	This component has not been inspected.
		FW-02.4-12P_2	No	This component has not been inspected.
		FW-02.4-13E	No	This component has not been inspected.
		FW-02.4-14P	Yes	This component was inspected in 2003. At that time, the calculated remaining service life for the component was 187.1 years. The next scheduled inspection for this component is in 3R18.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
FW: SG HEADERS	FW-02.5 SG INLET HEADER	FW-02.5-02P	No	This component has not been inspected, but the upstream and downstream components have been inspected and have long remaining service lives.
		FW-02.5-03T	Yes	This component was inspected in 2007. At that time, the calculated remaining service life for the component was 76.2 years. The next scheduled inspection for this component is in 3R52.
	FW-02.8A SG HDR to SG 31	FW-02.8A-04V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. The downstream component has been replaced, and wear readings on this component would not be an accurate representation of wear on this valve. Inspections on this valve are covered by the Corrective Actions Program.
		FW-02.8A-12F	Yes	The downstream component was inspected in 2009. At that time, the calculated remaining service life for the component was 55.5 years. The next scheduled inspection for this component is in 3R42.
		FW-02.8A-18V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. The closest FAC inspection to this valve is fifteen components downstream; however, inspections on this valve are covered by the Correction Action Program.
		FW-02.8A-19V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. The closest FAC inspection to this valve is fourteen components downstream; however, inspections on this valve are covered by the Correction Action Program.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
FW: SG HEADERS	FW-02.8B SG HDR to SG 32	FW-02.8B-05V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.
		FW-02.8B-19V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The tee downstream of this valve has been inspected.
		FW-02.8B-20V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The tee downstream of this valve has been inspected.
	FW-02.8C SG HDR to SG 34	FW-02.8C-13F	Yes	The downstream component was inspected in 2009. At that time, the calculated remaining service life for the component was 56.5 years. The next scheduled inspection for this component is in 3R43.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
FW: SG HEADERS	FW-02.8C SG HDR to SG 34	FW-02.8C-18V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of the downstream valve has been inspected.
		FW-02.8C-19V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.
	FW-02.8D SG HDR to SG 33	FW-02.8D-05V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
FW: SG HEADERS	FW-02.8D SG HDR to SG 33	FW-02.8D-13F	Yes	The downstream component was inspected in 2009. At that time, the calculated remaining service life for the component was 109.1 years. The next scheduled inspection for this component is in 3R69.
		FW-02.8D-17V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of the downstream valve has been inspected.
		FW-02.8D-18V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.
HD: HD PMP TO BFP HDR	HD-11.1B HD PMP 32 to HDR	HD-12.2B-06O	Yes	Orifices are generally inspected through the Corrective Action Program and not by the FAC Program. To gather information about orifice wear, the upstream and/or the downstream piping is inspected. Since no wear data is applied directly to the orifice, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this orifice has been inspected.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
HD: HTR 34 TO HTR 33	HD-04.1A FWH 34A to FWH 33A	HD-4.2A-02V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.
	HD-04.1B FWH 34B to FWH 33B	HD-4.2B-02V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.
	HD-04.1C FWH 34C to FWH 33C	HD-4.2C-02V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
MSD: MS 31 TO MSDT	MSD-01.3A HDR to MSEP TK 31A	MSD-01.3A-04V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. This component has not been inspected by the FAC program.
		MSD-01.3A-06V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. This component has not been inspected by the FAC program.
	MSD-01.3B HDR to MSEP TK 31B	MSD-01.3B-01T	No	This component has not been inspected.
		MSD-01.3B-04V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. The closest FAC inspection to this valve is three components downstream; however, inspections on this valve are covered by the Correction Action Program.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
MSD: MS 31 TO MSDT	MSD- 01.3B HDR to MSEP TK 31B	MSD-01.3B- 06V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.
MSD: MS 32 TO MSDT	MSD- 01.8A HDR to MSEP TK 32A	MSD-01.8A- 04V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.
		MSD-01.8A- 06V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream nozzle has been inspected.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
MSD: MS 32 TO MSDT	MSD- 01.8B HDR to MSEP TK 32B	MSD-01.8B- 04V	Yes	Valves are best-effort exams. To gather information about valve wear, the downstream component is inspected. The closest FAC inspection to this valve is three components downstream; however, inspections on this valve are covered by the Correction Action Program.
		MSD-01.8B- 06V	Yes	UT inspections on valves are best-effort exams due to the contour and/or unparallel surfaces. Consequently, valves are not inspected through the FAC Program, but they are inspected through the Preventative Maintenance or Corrective Action Programs. To gather information about valve wear, the downstream component is inspected. Since no wear data is applied directly to the valve, CHECWORKS uses an often overpredicted wear value, leading to a low or negative remaining service life. The downstream component of this valve has been inspected.
RHD: RH 32B TO HDR	RHD- 01.3B_2 TK 32B to B HDR	RHD01.5B-03F	Yes	The downstream component was inspected in 2011. At that time, the calculated remaining service life for the component was 71.4 years. The next scheduled inspection for this component is in 3R39.
RHD: RH 33 TO HDR	RHD- 01.10A_1 RH 33A to TK 33A	RHD01.10A- 01N	No	This component has not been inspected.
	RHD- 01.10A_2 RH 33A to TK 33A	RHD01.10A- 18F	Yes	The downstream component was inspected in 2011. At that time, the calculated remaining service life for the component was 40.7 years. The next scheduled inspection for this component is in 3R36.
	RHD- 01.10B_2 TK 33B to B HDR	RHD01.10B- 04N	No	This component has not been inspected.
		RHD01.10B- 26F	Yes	The downstream component was inspected in 2011. At that time, the calculated remaining service life for the component was 78.8 years. The next scheduled inspection for this component is in 3R40.

WRA Run Name	Line Name	Component Name	Negative Time to Tcrit Understood?	Explanation
RHD: RHD HDR TO HTRS	RHD- 02.8A TK A HDR to FWH 36	RHD02.6A-06L	Yes	This component has been inspected and is due for reinspection in 3R17.

Attachment A

Referenced Correspondence and Communications

Reference 7.12.1

Email from James Sherman (IP3) to Jeff Chow (CSI Technologies), dated 2/21/2000, regarding Moisture Separator Drain Piping Replacement Modification, CSI Doc. No. 94-10.1-79.

From: Sherman, James [James.Sherman@nypa.gov]
Sent: Monday, February 21, 2000 6:55 AM
To: Jeffrey Chow
Subject: FW: Moisture Separator Drain Piping Replacement Modification, MMP 98-3-05 1

JEFF:

RESENDING THE FOLLOWING MESSAGE.

JIM SHERMAN

> ---- Original Message ----
> From: Sherman, James
> Sent: Friday, February 18, 2000 2:49 PM
> To: 'jchow @ www.csitechnologies.com'
> Cc: Penny, Robert; Smith, Glenroy; Spataro, William
> Subject: Moisture Separator Drain Piping Replacement Modification, MMP 98-3-05 1
>
> Jeff,
>
> In response to your question on the ASTM designation for the replacement materials, the following can be used.
>
> Pipe (6" & 8") A-335 Gr P-11
>
> Fittings (6" & 8" Butt Welded Ends) A-182 F-11
>
> Forgings A-234 WP- 11
>
> As I said, the forgings are for welded attachments to pipe or fittings.
> None of these attachment should be in the CHEC WORKS model.
>
> Any questions please contact me.
>
> Jim Sherman

Reference 7.12.2

Email from Harry Hartjen (IP3) to Daniel R. Poe (CSI Technologies), dated 10/12/2004, regarding SPU implementation dates, CSI Doc. No. 04071111.

Dan:

Following are input to the DDIR:

No. 8A SPU operations are expected to be implemented on 11/22/2004 at IP2.

No. 9A SPU operations are expected to be implemented on 04/08/2005 at IP3.

Harry Hartjen

(914) 736-8356

Reference 7.12.3

Email from Harry Hartjen (IP3) to Daniel R. Poe (CSI Technologies), dated 10/18/2004, regarding operational and configuration changes due to SPU, CSI Doc. No. 04071113.

Dan:

Attached is the response from our engineer, the Shaw Group to your request for a listing of all operational and/or configuration changes due to the SPU. Note that there are no operational and/or configuration changes to IP2/IP3 due to the SPU.

This information was required for DDIR No. 6 and 7.

Per your request, a hard copy set of IP3 FAC isometric drawings will be mailed today to your attention. Note that drawing EC-H-50077 is not yet revised in this mailing. For correct piping configuration, see the information I sent you for the 3R1 2 Checworks update.

Included in this mailing is:

1. Flow Accelerated Corrosion Program Checworks Analysis Enhancement, Technical Report No. 001 30-TR-001 Revision 0 Volume 1 of 1. December, 2000. This report serves as the Unit 2 Checworks Model documentation. In addition to the Checworks Wear Rate Analysis Run Definitions listed in Table 1.0, there are the following two additions:
 - a. X-under w/exp joints
 - b. CND FWH 22 to FWH 23; this was added due to the SPU.

This information was required for DDIR No. 4

Harry Hartjen

From: Cunningham, Glenn [<mailto:glenn.cunningham@shawgrp.com>]
Sent: Thursday, October 07, 2004 2:45 PM
To: Hartjen, Harry
Cc: Scanlon, Michael; Chakrabarti, Syamal
Subject: RE: RAI FAC-1

Harry,

There are no operational changes for Steam Plant Systems, such as use of additional trains or use of bypass lines not currently in operation, associated with uprate of IP2 / IP3. Changes due to the uprate which affect FAC are primarily changes in system flowrates and temperatures, which are documented in the Heat Balance calculations. Impact of these changes on piping velocities and temperatures is addressed in the

applicable sections of the BOP Uprate Engineering Reports, forwarded to Entergy for review.

Modifications associated with the uprate of IP2 / IP3 include: (1) MSR internal moisture separation system replacement, (2) HP Turbine rotor replacement, (3) HP turbine interstage drain piping modification, and (4) Relocation of HP turbine 1st stage pressure taps.

Regards, Glenn C.

From: Hartjen, Harry [<mailto:HHartje@entergy.com>]

Sent: Wednesday, October 06, 2004 1:30 PM

To: Cunningham, Glenn Subject: RE: RAI FAC-1

Glen:

This is to confirm that the wear rate comparison will be completed by 12/31/2004.

As I mentioned to you we are having a contractor perform the update to our Checworks models. One of the inputs I have to provide to them is:

The listing of all Unit 2 and Unit 3 operational and/or configuration changes due to the power uprate (i.e., additional trains in operation, bypass lines operated at full power, etc.)

Do you have this information or can you direct my question to someone who has this information.

Thanks,

Harry Hartjen
(914) 736-8356

Reference 7.12.4

Email from Ron Macina (IP3) to Brian Trudeau (CSI Technologies), dated 1/10/2005, regarding addition al Heat Balance Diagrams and uprate start dates, CSI Doc. No 04071140.

CSI Doc. No. 04071140

Brian,

Please find below the requested Heat Balances/Information.

- 1) IP3 Pre and Post Appendix K Heat Balances
<<IP3TuningR4 Pre Appendix K (3037 NSS Pwr).pdf>> <<IP3TuningR4 Post Apendix K.pdf>>
- 2) IP2 Pre Appendix K Heat Balance
<<IP2-TuningR4 Pre Appendix K (3090 NSS Pwr).pdf>>
- 3) Start Date for IP3 Appendix K uprate was 12/22/02
- 4) Start Date for IP2 Appendix K uprate was 5/23/03

Thanks,
Ron Macina
914-736-8363

-----Original Message-----

From: Brian Trudeau [mailto:btrudeau@csitechnologies.com]
Sent: Tuesday, December 28, 2004 3:52 PM
To: Macina, Ron
Subject: Request for Additional HBDs

CSI Doc. No. 04071137

Ron,

Based on our discussion earlier today, it appears that we have some additional work to do on this end. We plan on modeling all three power levels (100% - the Original power level, ~1 01.4% - the Appendix K power level, and 105% - the SPU power level) for each unit. In doing this, we will capture plant conditions at each point in history.

To complete this task, we will need the following input:

- (1) Unit 3 PEPSE or HBD at ~1 01.4% power (the Appendix K power uprate)
- (2) Unit 2 Original PEPSE or HBD at 100% power (pre-Appendix K)
- (3) Unit 3 Start date for the Appendix K Uprate
- (4) Unit 2 Start date for the Appendix K Uprate

Please let me know if you have any questions. We will be contacting Harry to inform him of this plan.

Thank you,

Brian Trudeau
CSI Technologies, Inc.
(847) 836-3000 ext. 717
www.csitechnologies.com

Reference 7.12.5

Email from Harry Hartjen (IP3) to Greg M. Lupia (CSI Technologies), dated 8/2/2005, regarding operating hours for Cycle 13 and MOPS/SCRUPS piping replacement, CSI Doc. No. 050714c 02

Greg:

EX-02. 1 3-06R and EX-02.7-02T were replaced with chrome moly. P22.

Harry

----- Original Message -----

From: Gregory. M Lupia [<mailto:glupia@csitechnologies.com>]
Sent: Monday, August 08, 2005 4:50 PM
To: Hartjen, Harry
Subject: RE: Component Replacement Question

Harry,

Do these two components EX-02.1 3-06R and EX-02.7-02T, replaced in RO8, 01/01/1994 also follow the stainless clad pipe spec used during R13?

----- Original Message -----

From: Hartjen, Harry [<mailto:H.Hartje@entergy.com>]
Sent: Monday, August 08, 2005 1:58 PM
To: Gregory. M Lupia
Subject: RE: Component Replacement Question

Greg:

Attached is spreadsheet marked up in red. The components were rearranged in flow direction order, and additional as-built components are designated as New. This pipe replacement replaced all the carbon steel pipe with clad pipe upstream of reducer EX-02.13-06R and upstream of the branch of tee EX-02.7-02T.

In answer to your specific questions, EX-02.9-10P was replaced. EX-02.9-7P no longer exists. EX-02.1 3-03P is a pipe and was replaced. EX-02. 1 3-06R is a reducer and it was replaced along with EX-02.7-02T, RO8, 01/01/1994.

If you need anything else, let me know.

Harry Hartjen

----- Original Message -----

From: Gregory. M Lupia [<mailto:glupia@csitechnologies.com>]
Sent: Thursday, August 04, 2005 12:21 PM
To: Hartjen, Harry
Subject: Component Replacement Question

Harry,

Attached is your spreadsheet with the modeled replacement components, to which I have added additional components highlighted in yellow. The yellow components are in a line where the remainder of the components have been replaced, and I suspect these components have been as well. In some cases the yellow components could be extensions of the US components. Could you verify this for me. Call me with questions.

<<Replaced Modeled Components 3R1 3.xls>>

Gregory M. Lupia
CSI Technologies, Inc
(847) 836-3000 ext 728
www.csitechnologies.com
glupia@csitechnologies.com

Reference 7.12.6

Email from Harry Hartjen (IP3) to Greg M. Lupia (CSI Technologies), dated 8/2/2005, regarding operating hours for Cycle 13 and MOPS/SCRUPS piping replacement, CSI Doc. No. 050714c 03

Greg:

The stainless steel clad carbon piping used for the MOPS/SCRUPS piping replacement is as follows:

10" NPS	A-106 Gr. B	STD / Sch. 40	0.365"	
14" NPS	A-106 Gr. B	STD / Sch. 30	0.375"	
18" NPS	A-106 Gr. B	XS / N/A		0.500"

FYI I have also attached a sheet from the modification explaining the change.

Harry

----- Original Message -----

From: Gregory. M Lupia [<mailto:glupia@csitechnologies.com>]
Sent: Tuesday, August 02, 2005 1:39 PM
To: Hartjen, Harry
Subject: RE: Operating hrs for Cycle 13

Thanks Harry

----- Original Message -----

From: Hartjen, Harry [<mailto:H.Hartje@entergy.com>]
Sent: Tuesday, August 02, 2005 12:16 PM
To: Gregory. M Lupia
Subject: RE: Operating hrs for Cycle 13

Gregory:

Operating hours for Unit 3 Cycle 13 was 16267.99 hours.

Harry G. Hartjen

----- Original Message -----

From: Gregory. M Lupia [<mailto:glupia@csitechnologies.com>]
Sent: Monday, August 01, 2005 12:49 PM
To: Hartjen, Harry
Subject: Operating hrs for Cycle 13

Harry,

I'm working on IP3, CHECWORKS Model for cycle 13, I'll need to have the operating hours for IP3, operating cycle 13 for input to the model. Thanks.

Gregory M. Lupia
CSI Technologies, Inc
(847) 836-3000 ext 728
www.csitechnologies.com
glupia@csitechnologies.com

Reference 7.12.8**Email from Harry Hartjen (IP3) to Dan R. Poe (CSI Technologies), dated 8/2/2005, regarding Comments on Revision A of the IP3 R13 Pass 2 Calculation, CSI Doc. No. 050714c11**

Dan:

I have reviewed the CHECWORKS Pass 2 Analysis for the Indian Point 3, 3R13 refuel outage and have the following three comments:

1. The following two extraction steam nozzles were not listed in Appendix F, UT Inspection Data: EX-05.1 B-01 N (05UT095) and EX-05.2B-01 N (05UT105). These two components have inspection data and should also be included in the model.
2. Components inspected in UT exam RHD-01 .10B-26F (05UT074) were not listed in Appendix F, UT Inspection Data. There is inspection data for two components RHD-01.10B-27P and RHD-01.10B-26E and should also be included in the model.
3. There is a warning for the Pass 2 analysis of component CD-02.8A-03P (Page I-12) indicating a conflict exists in LCF/Measured Wear option selected. This should be resolved in the model or explained in Appendix B.

After resolution of these comments, please issue for use. If you have any questions, just give me a call at 914-271-7239.

As always, CSI has produced a first-rate, high-quality CHECWORKS Pass 2 update for IPEC. Please extend my appreciation for a job well done to your staff.

Harry G. Hartjen
FAC Program Engineer
Indian Point Energy Center

Reference 7.12.9**Email from Harry Hartjen (IP3) to Al Sipkovsky (CSI Technologies), dated 9/14/2007, regarding questions about recent replacements, CSI Doc. No. 0705.100-03**

Al:

See responses to your questions below.

I need to look up the info on the second bullet.

I am on an unstable dial-up so I will send you a partial response now and a followup in a few minutes, in case I loose the connection.

Harry

-----Original Message-----

From: Al Sipkovsky [mailto:asipkovsky@csitechnologies.com]

Sent: Thursday, September 13, 2007 11:18 AM

To: Hartjen, Harry G

Subject: IPEC3 Replacement Lists

Harry,

I am currently working on updating your SFA model with the latest plant period, chemistry, replacement, and inspection info. I just need a little clarification on what exactly you want us to do with some of the information that you provided on the FTP site.

- The EXCEL file called REPLACED COMPONENTS.xls contains the components that were replaced in this last outage (RO14). The second component in this list is RHD-02.14B-12T-DS. Does this mean that the pipe on the downstream main of this tee has been replaced? If this is true, the pipe on the downstream main of this tee is not a component that was modeled in SFA. The same is true for component RHD-02.15A-11T-DS. Or did you mean the tee itself?
[Each of these components is a pup piece downstream of the tee, and upstream of the feedwater heater nozzle. Please add these components to the model.](#)
- Component RHD-02.6A-06L in the same spreadsheet is said to have the geometry of a pipe. I just wanted to make sure that the tee was the replaced component and not the downstream pipe. So, which component is the replaced component?
- The component FAC-07-VCD-09 is an SNM component right? I just want to verify that it is not in the official CHECWORKS model.
[Yes this is a SNM component.](#)
- In the other EXCEL spreadsheet called Replaced Modeled Components 3R13 REV1.xls there are components that have their replacements documented in SFA. Tell me if this is right: you just want me to rearrange the components in SFA to how they are listed in that spreadsheet and also to do what the instructions say in the far right column of the sheet? The three isometrics you provided also visually show how the components should be ordered as well, right?
[Yes. The spreadsheet shows the correct component order.](#)

I just want to make sure I'm doing what you are asking us to do. I think I understand, but I just want to hear from you first.

If you have any comments or issues about my questions, please email or call me back at the

number below.

Thanks,

Al Sipkovsky
CSI Technologies, Inc.
847-836-3000 ext. 787

Reference 7.12.10**Email from Harry Hartjen (IP3) to Al Sipkovsky (CSI Technologies), dated 9/14/2007, regarding questions about recent replacements, CSI Doc. No. 0705.100-04**

Al:

This second installment should answer the remaining questions.
Please send me back a short email that you received this and of course, let me know if you have any more questions

Harry

-----Original Message-----

From: Al Sipkovsky [mailto:asipkovsky@csitechnologies.com]**Sent:** Thursday, September 13, 2007 11:18 AM**To:** Hartjen, Harry G**Subject:** IPEC3 Replacement Lists

Harry,

I am currently working on updating your SFA model with the latest plant period, chemistry, replacement, and inspection info. I just need a little clarification on what exactly you want us to do with some of the information that you provided on the FTP site.

- The EXCEL file called REPLACED COMPONENTS.xls contains the components that were replaced in this last outage (RO14). The second component in this list is RHD-02.14B-12T-DS. Does this mean that the pipe on the downstream main of this tee has been replaced? If this is true, the pipe on the downstream main of this tee is not a component that was modeled in SFA. The same is true for component RHD-02.15A-11T-DS. Or did you mean the tee itself?
- Component RHD-02.6A-06L in the same spreadsheet is said to have the geometry of a pipe. I just wanted to make sure that the tee was the replaced component and not the downstream pipe. So, which component is the replaced component?
You are correct. The pipe immediately downstream of RHD-02.6A-06L was replaced, not RHD-02.6A-06L
- The component FAC-07-VCD-09 is an SNM component right? I just want to verify that it is not in the official CHECWORKS model.
- In the other EXCEL spreadsheet called Replaced Modeled Components 3R13 REV1.xls there are components that have their replacements documented in SFA. Tell me if this is right: you just want me to rearrange the components in SFA to how they are listed in that spreadsheet and also to do what the instructions say in the far right column of the sheet? The three isometrics you provided also visually show how the components should be ordered as well, right?
Right. The spreadsheet and iso's show the correct component order. I wanted to make sure you had the correct field configuration to model this area correctly. How the components broken up and are assigned lines, I will leave to your expertise. There were other questions I had reviewing this area in a spreadsheet Presep Component comments.xls. This should be on the ftp site. I will attach a copy here. Mainly deals with components I could not find in the SFA model.

I just want to make sure I'm doing what you are asking us to do. I think I understand, but I just

want to hear from you first.

If you have any comments or issues about my questions, please email or call me back at the number below.

Thanks,

AI Sipkovsky
CSI Technologies, Inc.
847-836-3000 ext. 787

Reference 7.12.11

Email from Ian Mew (IP3) to Amanda Wajrowski (CSI Technologies), dated 9/3/2009, regarding Turbine Run Hours, CSI Doc. No. 0705.105.05

Jan D. Mew
IPEC FAC Engineer
Phone 914-827-7741

From: Macina, Ronald
Sent: Thursday, March 12, 2009 3:36 PM
To: Mew, Ian
Subject: RE: 3R15 Cycle run hours

The IP3 Cycle 15 Turbine run hours was 16,468.62 hours.
Thanks,
Ron

From: Mew, Ian
Sent: Thursday, March 12, 2009 3:07 PM
To: Macina, Ronald
Subject: 3R15 Cycle run hours

Ron,
Can you send me the cycle run hours for 3R15.

Jan D. Mew
IPEC FAC Engineer
Phone 914-827-7741

Reference 7.12.12

Email from Ian Mew (IP3) to Ryan Doremus (CSI Technologies), dated 6/27/2011, regarding Cycle 17 Start time, CSI Doc. No. 0705.111.007.

Friday, April 08, 2011 12:58 PM; Unit 3 on line at 1249.

Ian D. Mew
IPEC FAC Engineer
Phone 914-827-7741

-----Original Message-----

From: Andreozzi, Vincent Joseph
Sent: Friday, April 08, 2011 12:58 PM
To: dl - IPEC Engineering
Subject: FW: Unit 3 Synch to Grid

Unit 3 on line at 1249.