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(Indian Point Nuclear Generating Units 2 and 3)



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Indian Point Unit 3 CHECWORKS FAC Model

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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 13 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 [7.19].

2. Purpose

The purpose of CHECWORKS FAC 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 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 the CHECWORKS model. Additionally, this calculation provides the results of the CHECWORKS 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
- Moisture Preseparator Drains
- Moisture Separator Drains
- Reheater Drains

Selected lines from the above systems are modeled in the IP3 CHECWORKS Model. 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 13. All historical records (i.e. inspections, replacements, water chemistry, power levels, etc.) through Refuel Outage 13 were included in this analysis. Note that this model addresses changes due to Appendix K Uprate and Stretch Power Uprate [7.19.1]. 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 FAC version 1.0G.

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 do not significantly affect the flow rate or cause a flow disturbance were not modeled.
- 4.1.4. Replaced components were added to the model with materials and schedule according to Addendum A to Spec. No. 6604-104-248-4 [7.15]. Replacement dates used were either the first day of the outage in which the work was done or, for work done in 1994, as 1/1/94.
- 4.1.5. 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, 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 [7.6].

- 4.1.6. 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.
- 4.1.7. Parallel trains of equal pipe diameter were assumed to have equal flow unless otherwise indicated.
- 4.1.8. Due to the use of the Advanced Run Definition feature in this model, which is required for accurate modeling of the power uprate condition, CHECWORKS FAC Version 1.0G cannot accurately represent the operating conditions in tees that combine or split flow. In order to maintain simplicity in the CHECWORKS model, tees were modeled with a flow rate equal to the highest flow rate present in the tee. Therefore, the predicted wear rates for tees should be used with caution.
- 4.1.9. For a number of lines on the Heat Balance Diagrams [7.18], 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" [7.3].
- 4.1.10. When hydrazine data was not available at the Steam Generator Outlet and MSR Drain, the "rules of thumb" [7.3] 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.
- 4.1.11. Plant period data was estimated for the cycle where the SPU will occur. Start and end dates were estimated based on anticipated dates [7.19.1]. An estimation of operating hours was calculated from these dates based

on calendar days. The model can be updated with actual values for these inputs when this data becomes available.

- 4.1.12. The CHECWORKS 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.
- 4.1.13. 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 and SPU power levels for this location. Flow rate was obtained from the original HBD [7.18.1]. 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 [7.18.3]. Note that this assumption has little impact on the model as no components in the Feed Pump Turbine drain are modeled.
- 4.1.14. The flow rate in the Feedwater Pump Recirculation lines was shown as zero on the SPU Heat Balance [7.18.3] and Appendix K Heat Balance [7.18.2]. In general flow through such lines is 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) [7.21]. 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.

4.2. Component Assumptions and Modeling Decisions

4.2.1. General

- 4.2.1.1. Replacement dates used the first day of the outage in which the work was done. The replacement date 1/1/94 was used for work done in 1994.

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 diameter equal to 90% of the inside diameter of the pipe. 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 [7.3], elbows cut to an angle between 0° and 45° were modeled as 45° elbows.
- 4.2.6.3. Per EPRI recommendations [7.3], elbows cut to an angle between 46° and 90° were modeled as 90° elbows.
- 4.2.6.4. Per EPRI recommendations [7.3], 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 [7.3], 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 A217-C5 and A155 EFW Grade C55 Class 2 were added to the material library.

4.2.9. Design and Operating Conditions

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

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 T_{crit} .
- 4.3.6. See Appendix F for any changes (excluding points, excluding counterbore rows, etc.) made to the UT data after importation.

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 Heat Balance Diagram (HBD) [7.18]. 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 operating cycles they apply to.

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 End of Life	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 [7.3].

- **Steam Rate:** The steam mass flow rate out of the Steam Generator was taken from the Heat Balance Diagrams [7.18].
- **Steam Generator/Reactor Vessel Pressure:** The pressure at the outlet of the Steam Generator was taken from the Heat Balance Diagrams [7.18].
- **Steam Generator/Reactor Vessel Temperature:** The temperature at the outlet of the Steam Generator was taken from the Heat Balance Diagrams [7.18].
- **Steam Generator Blowdown Rate:** The blowdown rate was taken from the Heat Balance Diagrams [7.18].
- **Carryover:** The carryover percentage was obtained from the Heat Balance Diagrams [7.18].
- **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 [7.18] 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 [7.18], was entered in this location as necessary.
- **Enthalpy:** The enthalpy, from the HBD [7.18], is required for the two-phase lines and was entered as necessary in this field in Btu/lb.
- **Temperature:** The temperature, from the HBD [7.18] was entered in this field as necessary in °F.
- **Pressure:** The pressure, from the HBD [7.18], was entered in this field as necessary in psia.

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 4.1.10).

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.

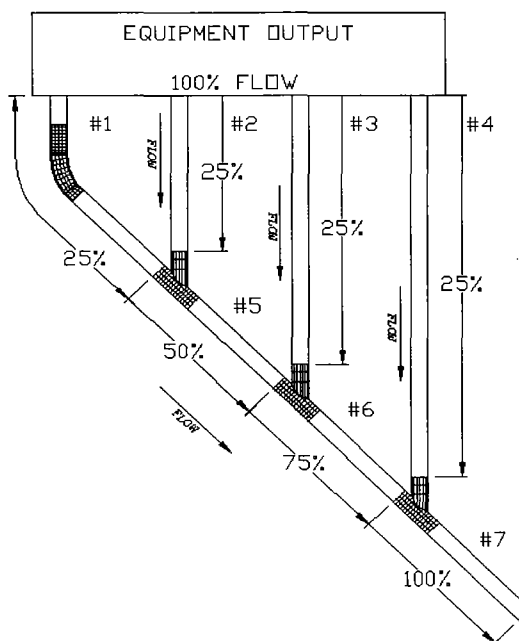
- **Water Treatment:** The appropriate water treatment was selected for each period from a list of all water treatments in the CHECWORKS model.
- **Power Level:** The appropriate power level was selected for each period from a list of all power levels in the CHECWORKS model.
- **Period Type:** The appropriate 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 (see Section 4.1.8).

Figure 5-1 Diagram of Line Grouping Convention



Components were grouped into lines by comparing the input CHECWORKS model [7.21] with FAC isometrics [7.23] and flow diagrams [7.22]. 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 [7.22] and FAC isometrics [7.23]. 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 5.7.1.2). 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 one main form, the Component Data Form, and three sub-forms: the Installation Form, the Operating Data Form, and the Size/Acceptance Form. All component input data is presented in Appendix E.

5.3.1. Component Data Form

The Component Data Form contains key information about the component, including its name, geometry, size and material. From this main form, three sub-forms can be accessed.

- **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

Note that there are some exceptions to this naming convention.

- **Geometry:** A description of the component type (e.g., “Reducer”) was automatically entered by CHECWORKS when the geometry code was entered.
- **Geometry Code:** The component geometry code was entered in accordance with the CHECWORKS FAC User’s Guide [7.2].
- **Pipe Size:** The pipe size data was imported from the CHECMATE model [7.20].
- **Material:** The material code was imported from the previously verified CHECMATE model [7.20].
- **WRA Options:** These buttons give the user four options. “Use Measured Wear for LCF” allows CHECWORKS FAC to use inspection data for the component in the Pass 2 Wear Rate Analysis (WRA). “Do Not Use Any Measured Wear” eliminates the inspection data for the component from the Pass 2 WRA. “Exclude From Analysis” eliminates the component itself from WRA. The fourth option, “Use D/S Ext. from Prev. Comp” is available only for piping components. This option allows CHECWORKS FAC to compare the predicted wear for a component with the calculated wear for the downstream extension of the previous component in the calculation of the LCF. For most components, the option “Use Measured Wear for LCF” was selected (Note: the use of UT inspection data is discussed in Section 5.4.5 of this calculation). Selection of the fourth option “Use D/S Ext. from Prev. Comp” is discussed in Section 5.4.2.2.
- **Notes:** Comments and notes were entered in this field as appropriate.

5.3.2. Operating Data Subform

The Operating Data Subform is accessed from the Component Data Form. It contains information on the component’s operating conditions, design conditions, flow control information, and insulation. Appendix E contains CHECWORKS Component Summary Report #1 which specifies the data that is contained in the Operating Data Subform.

- **Operating Data:** Component level operating data (pressure, enthalpy, quality, and temperature) is not used in the calculation of wear rates as all operating data was obtained from the Heat Balance Diagram or the Advanced Run Definition. Data may appear in these fields due to past entry, but it is no longer used.
- **Design Data:** Design pressure and temperature are entered here (see Section 4.2.9).
- **Insulation:** The insulation type and insulation thickness fields appear here. This data is optional unless Network Flow Analysis (NFA) is used.
- **Orientation Angle:** Component orientation angle is entered here.

- **Orifice Size:** Orifice size is entered for all orifices and for all piping immediately downstream of an orifice (see Section 4.2.5).
- **Valve Size and Valve Coefficient:** The valve opening size (Valve Size) and valve flow capacity (Valve Coefficient) are entered in these fields. This data is optional unless Network Flow Analysis (NFA) is used.

5.3.3. Size/Acceptance Subform

The Size/Acceptance Subform is accessed from the Component Data Form. It contains information on the component's flow rate, size, and T_{crit} .

- **Flow Rate:** Component level flow rate is not used in the calculation of wear rates as flow rate is obtained from the Heat Balance Diagram or the Advanced Run Definition. Data may appear in these fields due to past entry, but it is no longer used.
- **Size:** Pipe nominal wall thickness is entered here as needed [7.16]. Other than lines requiring NFA, length is not required in order to calculate predicted wear rates.
- **Calculated T_{crit} :** CHECWORKS 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. In this model, T_{crit} was set equal to T_{hoop} .

T_{hoop} was calculated using the following equation:

$$T_{hoop} = \frac{(D_o \times P_D)}{2[S_A + (P_D \times Y)]} \quad [7.8]$$

where:

D_o = Outside Diameter

P_D = Design Pressure

S_A = Allowable Stress

Y = (0.4) constant

- **Moments and Stresses:** Moments and stresses can be entered in this subform, but are not required in order to calculate predicted wear rates.
- **Branch OD:** For tees, the outside diameter of the branch was entered in this field [7.23].
- **Br./Bend Angle:** This field may be used to specify the angle between the main run and the branch in the case of a lateral but is not required in order to calculate predicted wear rates.
- **Elbow R/D:** For elbows and bends, the radius to diameter ratio was entered in this field.

5.3.4. Installation Subform

This subform contains information on component location, installation, replacement, and adjacent equipment. All data other than installation and

replacement dates are optional. A list of replacements appears in Appendix E.

5.4. 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 CHECWORKS guidelines [7.3].

Appendix F contains a listing of all UT inspection data that has been imported. UT inspection data was received as UT examination reports [7.25.1] and electronic UT grid files [7.26.1]. 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
- T_{init} value, or T_{nom} when T_{init} 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 2R8 and 2R9, and both inspections were available for use in the LCF. In this case, only the wear from 2R9 would be used. Since the 2R8 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.

5.4.1. 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} s 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.

A potential bug exists in CHECWORKS, for each component where the main component is partitioned into upstream and downstream main portions (i.e., reducers and tees). If user-specified wear (T_{DAT}) is imported to one main portion and not the other for a reducer, or to only 1 out of 3 (U/S main, D/S main, or branch) subcomponents for a tee, CHECWORKS does not recognize this wear in the calculation of the LCF. On the other hand, if user-specified wear (T_{DAT}) is entered to both main portions, or a main and a branch, both values are recognized by CHECWORKS.

5.4.2. 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 [7.3].

5.4.2.1. 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.

5.4.2.2. 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.

5.4.3. 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.

5.4.3.1. 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.

5.4.3.2. 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.

5.4.3.3. 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 T_{init} 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.

After CHECWORKS calculates component single outage wear using the three methods discussed above, the resulting wear value from just one method was selected as the value to be used by CHECWORKS in the calculation of the LCF. A user-specified value for wear can be chosen instead, or the data can be identified as baseline data by selection of the "Baseline" option. Finally, the option "Do Not Use for LCF" is selected if the wear value for the component will not be included in the calculation of the LCF during Pass 2 WRA. The selection of these options was in accordance with the recommendations made in the EPRI Guidelines [7.3].

5.4.3.4. Method Selection

Selection of the wear calculation method is based upon the component geometry:

Table 5.2 UT Wear Calculation Method Selection

Component Geometry	Single Outage Wear Calculation Method
Elbows, Bends, Reducing Elbows, Expanding Elbows, Eccentric Reducers, Eccentric Expanders, and Forged Tees	Blanket Method
Pipe, Concentric Reducers, Concentric Expanders, and Fabricated Tees	Band Method
All Others	Band Method

The area method is only used based on engineering judgment because it tends to be overly conservative and not as accurate as the band or blanket methods.

5.4.4. 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.

5.4.5. Exclusion of Measured Wear

The option “Do Not Use MW” or “Do Not Use Measured Wear” was selected given any of the following conditions.

- The component was neither an elbow, bend, reducer, expander, tee, nozzle, nor 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.

5.4.6. 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 FAC 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.

5.4.7. 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 [7.3]. An LCF outside this range may be the result of inaccuracies in the model (e.g., incomplete chemistry history) or non-representative inspection data.

5.5. 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.

The Indian Point Unit 3 model does not contain any Network Flow Analysis run definitions.

5.6. 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 constituent concentrations at various locations around the steam cycle. These values strongly affect FAC wear 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 Treatment Period in order to review the results to ensure that they are reasonable; the reports are presented in Appendix G.

5.7. Wear Rate Analysis

Wear Rate Analysis (WRA) calculates a predicted wear rate for each component as well as the predicted time until the component wall thins to T_{crit} . WRA automatically takes into account all global input through use of Water Chemistry Analysis results. Wear Rate Analysis Runs were defined to contain the CHECWORKS lines, and a separate WRA was performed upon each. Wear Rate Analysis Runs are defined by the following inputs:

5.3.1 Run Name and Title

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

5.3.2 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 current operating cycle, Cycle 14.

5.3.3 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.

5.3.4 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.

5.3.5 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 [7.3].

Duty factors were taken from the input CHECWORKS model [7.21].
Duty factors for each line appear in Appendix D.

5.7.1. Advanced Run Definition

The Advanced Run Definition (ARD) involves a redefinition of the source in which CHECWORKS obtains thermodynamic conditions (pressure, enthalpy, temperature, and quality) and flow rate conditions for a component. Previously all thermodynamic and flow rate conditions had been entered individually for each component on the component data forms. However, the component form allows only one set of thermodynamic and flow rate conditions to be entered (i.e. from one power level). Therefore, use of the component form as the input for thermodynamic and flow rate conditions is not valid, as it does not reflect both pre-uprate and post-uprate conditions.

Instead, thermodynamic and flow conditions were entered globally and linked to components through the association of a line to the CHECWORKS HBD (except Z-type lines). The following sections detail the Advanced Run Definition.

5.7.1.1. Flow Factors

On the CHECWORKS 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 for the lines so that the actual flow rate is used to calculate wear rate at the component level. Thus for each line a flow multiplier, or flow factor, was calculated. The flow factor is used to adjust the CHECWORKS HBD calculated flow rate. The calculated flow factor for each line was entered on the ARD form.

There are some exceptions to the use of flow factors. The first is for lines and flow segments where NFA would be used to calculate operating conditions and flow rate. For these the train flow is directly entered into the NFA definitions. Therefore, 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. In some cases, 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 HBD, the plant heat balance diagrams [7.18], and the flow diagrams [7.22]. Flow factors for each line appear in Appendix D.

5.7.1.2. Advanced Run Definition Form for Z-Type Lines

Lines not associated to the CHECWORKS HBD are called Z-type lines. Because they are not associated to the HBD, CHECWORKS 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 were created due to limitations in the CHECWORKS HBD. In these cases, the computer model does not obtain the data from the correct location on the HBD, or the CHECWORKS program did not allow the correct data to be entered. For example, there is no global input into CHECWORKS to specify the pressure, temperature, enthalpy, or quality in feedwater heater drain lines. Instead the model calculates the conditions in the shell side drain as being equivalent to tube side heater outlet. This is incorrect, so the CHECWORKS HBD was not used as the source of operating conditions for heater drain lines. Instead, operating conditions for heater drain lines were entered on the ARD form.

Appendix D lists all the lines in the model and indicates whether or not the line is a Z-type line.

For Z-type lines, thermodynamic data and flow rate was obtained from the Heat Balance Diagrams [7.18].

6. Results

6.1. 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 Rates/Input Data Report (sorted by wear rate)
- Wear Rates/Input Data Report (unsorted)
- Thickness/Service Time Report (sorted by remaining life)
- Thickness/Service Time Report (unsorted)

6.2. 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. For each WRA Run, the following reports are presented:

- Wear Rates/Input Data Report (sorted by wear rate)
- Wear Rates/Input Data Report (unsorted)
- Thickness/Service Time Report (sorted by remaining life)
- Thickness/Service Time Report (unsorted)
- Wear Predictions Report (for runs with inspection data)
- Wear Plot “Comparison of Wear Predictions” (for runs with inspection data)

6.3. Discussion of Results

Certain criteria are used to determine if a run can be considered a properly calibrated Pass 2 analysis. These criteria consist of correlation between measured and predicted wear, the number of inspections, train coverage, the types of geometries inspected within the run, the number of outliers, and the Line Correction Factor. These criteria are used together to determine if the run is calibrated. One factor alone does not produce a calibrated run. However, one factor may require that the results be considered not calibrated.

- **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 [7.3 & 7.4]. 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 [7.3]. 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.

Poor: *The inspection data exhibits significant scatter that does not adhere to the 45° line or a significant number of outliers are present.*

Moderate: *The inspections points are within the ± 50% wear boundaries with few outliers, but the inspection points do not form tight clusters around the 45° LCF line.*

Good: *The inspection points adhere well to the 45° LCF line. There are very few outliers present.*

- **Parallel Train Coverage:** EPRI's "Recommendations for an Effective Flow-Accelerated Corrosion Program" advises that inspections be performed on parallel trains [7.3]. 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 [7.4]. 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.

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- 7.20.2. CHECMATE Erosion/Corrosion Analysis of Extraction Steam System, Utilizing CHECMATE, Report No.: IP3-RPT-EX-00911, 10/22/93.
- 7.20.3. CHECMATE Erosion/Corrosion Analysis of Feedwater and Feedwater Recirculation Systems", Utilizing CHECMATE, Report No.: IP3-RPT-FW-00984, Rev. 0, 8/24/94.
- 7.20.4. CHECMATE Erosion/Corrosion Analysis of Heater Drains System, Utilizing CHECMATE, Report No.: Unknown.
- 7.20.5. CHECMATE Erosion/Corrosion Analysis of Moisture Separator Drain System, Utilizing CHECMATE, Report No.: IP3-RPT-MSD-01158, Rev. 1, 3/24/97.
- 7.20.6. CHECMATE Erosion/Corrosion Analysis of Moisture Preseparator Drain System, Utilizing CHECMATE, Report No.: IP3-RPT-HD-00913, Rev. 0, 10/23/93.
- 7.20.7. CHECMATE Erosion/Corrosion Analysis of Reheater Drain System, Utilizing CHECMATE, Report No.: IP3-RPT-HD-01144, Rev. 0, 8/22/94.
- 7.21. 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. 050714c02.

7.22. Indian Point 3 Erosion Corrosion Inspection Flow Diagrams

Condensate & Boiler Feed Pump Suction, Dwg No. EC-F-20183 Sh. 1, Rev. 1
Condensate & Boiler Feed Pump Suction, Dwg No. EC-F-20183 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
Heater Drains & Vents, Dwg No. EC-F-20223 Sh. 2, Rev. 1
Moisture Separator and Reheater Drains & Vents, Dwg No. EC-F-20233 Sh. 1, Rev. 1
Moisture Separator and Reheater Drains & Vents, Dwg No. EC-F-20233 Sh. 2, Rev. 1

7.23. Indian Point 3 FAC Isometrics and Plan/Section Drawings

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-201862

Dwg No. EC-H-50020, Rev. 2	Dwg No. A-201881
Dwg No. EC-H-50021, Rev. 2	Dwg No. A-202112
Dwg No. EC-H-50022, Rev. 2	Dwg No. A-202110
Dwg No. EC-H-50029, Rev. 1	Dwg No. A-202113
Dwg No. EC-H-50030, Rev. 1	Dwg No. A-202111
Dwg No. EC-H-50031, Rev. 2	Dwg No. A-201869
Dwg No. EC-H-50035, Rev. 2	

7.24. MSD Piping Replacement Isometric Drawings:

7.24.1. Turbine Building & Heater Bay Replace Piping From MSD Tanks 31A&B, 32A&B, and 33A&B Spool Piece Location Isometric From MSD Tank 31A, 32A, & 33A to Heater Drain Tank, NYPA Drawing No. SK-98-3-051-001, Rev. 0.

7.24.2. 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.

7.25. Ultrasonic Examination Reports

7.25.1. 3RO9 UT Exam Reports, hardcopy reports.

7.25.2. 3RO10 UT Exam Reports, hardcopy reports.

7.25.3. 3RO11 UT Exam Reports, hardcopy reports.

7.25.4. 3RO12 UT Exam Reports, hardcopy reports.

7.25.5. 3RO13 UT Exam Reports, hardcopy reports.

7.26. Ultrasonic Examination Grid Files

7.26.1. 3RO9 UT Exam Electronic Grid Files, electronic text files.

7.26.2. 3RO10 UT Exam Electronic Grid Files, electronic text files.

7.26.3. 3RO11 UT Exam Electronic Grid Files, electronic text files.

7.26.4. 3RO12 UT Exam Electronic Grid Files, electronic text files.

7.26.5. 3RO13 UT Exam Electronic Grid Files, electronic text files.

- 7.27. Referenced Correspondence and Communications (see Attachment A)
- 7.27.1. E-mail regarding Moisture Separator Drain Piping Replacement Modification, MMP 98-3-051, from James Sherman (NYPA) to Jeffrey Chow dated February 21, 2000, CSI E-mail 94-10.1-79.
 - 7.27.2. Email from Harry Hartjen (IP3) to Daniel R. Poe (CSI Technologies), dated 10/12/2004, regarding SPU implementation dates, CSI Doc. No. 04071111.
 - 7.27.3. 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.
 - 7.27.4. 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
 - 7.27.5. Email from Harry Hartjen (IP3) to Greg R. Lupia (CSI Technologies), dated 8/2/2005, regarding operating hours for Cycle 13 and MOPS/SCRUPS piping replacement, CSI Doc. No. 050714c07
 - 7.27.6. Email from Harry Hartjen (IP3) to Greg R. Lupia (CSI Technologies), dated 8/9/2005, regarding replacement operations during Cycle 13, CSI Doc. No. 050714c03
 - 7.27.7. Letter from Harry Hartjen (IP3) to Dan Poe (CSI Technologies), dated 7/26/2005, regarding input data for the 3R13 outage, CSI Doc. No. 050714c00.
 - 7.27.8. Email from Harry Hartjen (IP3) to Dan Poe (CSI Technologies), dated 10/18/2005, regarding Comments on Revision A of the IP3 R13 Pass 2 Calculation, CSI Doc. No. 050714c11.

Appendix A

CHECWORKS Model Change History

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1 Global

- 1.1 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 [7.3]. The enthalpy for this HBD line was assumed to be the same as the line from the preseparator, as shown on the heat balance diagrams [7.18].
- 1.2 For MSEP 1 on the 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.
- 1.3 For RHTR 1 on the HBD, the steam cycle pressure was taken from the previously verified CHECMATE model, and translated to psia from psig.
- 1.4 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.
- 1.5 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.
- 1.6 The Steam Generator Moisture Carryover Percentage was left at the default value of 0.25%.
- 1.7 The Blowdown Tank venting rate was entered as 0% [7.18.1].
- 1.8 The Heater Drain Tank venting rate was also entered as 0%. This does not necessarily represent actual operating conditions but is used to obtain reasonable oxygen concentration values.

2 Condensate

- 2.1 For component CD-06.2-01R, the design pressure was reduced to 625 psig. This was done to reduce the value of Tcrit so that it is less than the value for Tnom. This is acceptable since the operating pressure is 156.4 psig.
- 2.2 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.
- 2.3 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.

- 2.4 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.
- 2.5 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.
- 2.6 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.
- 2.7 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.
- 2.8 Point (F,4) was removed from the refueling outage 9 inspection of CD-02.1A-13R (report 97UT053) due to an unrealistically high reading.
- 2.9 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.
- 2.10 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.

3 Extraction Steam

- 3.1 The orientation angle of component EX-04.1-07P was changed to 180 degrees.
- 3.2 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

- 3.3 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

- 3.4 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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- 3.5 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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- 3.6 The orientation angle of component EX-01.3-21E was changed to 90 degrees.
- 3.7 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.
- 3.8 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.
- 3.9 An orientation angle of 90 degrees was added for component EX-01.3-21E
- 3.10 Components EX-01.5A-03E and EX-01.5A-09E were changed to geometry code 102, 90 degree elbow with counterbore.
- 3.11 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 [7.24.1] & [7.24.2]. Therefore, the installation date for the components within these lines was set to the start date of RO5, 05/02/87.
- 3.12 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 [7.11]. The replacement date used was the first day of Refueling Outage 9 or 5/14/97. The feedwater heaters inlet nozzles were internally weld overlaid with stainless steel material. 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.
- 3.13 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.

- 3.14 Type 12 tees with no flow in the upstream or downstream main were changed to a geometry code of 10 or 13 or 14, respectively. The downstream pipe was changed from a geometry code of 62 to 60 or 63 or 64 as well. 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

- 3.15 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.
- 3.16 Component EX-01.3-18P was deleted from the model since the 1992 inspection of adjacent components revealed that no pipe actually exists.
- 3.17 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.
- 3.18 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.
- 3.19 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. This material, A691/EFW/22, was used for replaced piping to the 35 Heaters.
- 3.20 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".

- 3.21** 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		

- 3.22** Components EX-01.1-03P and EX-01.2-10L had two inspections during RO8. The later of the two was imported.
- 3.23** Component EX-02.3-03T is not in the model, therefore its RO8 inspection data could not be imported.
- 3.24** 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.
- 3.25** 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 EX042100.DAT.
- 3.26** 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).
- 3.27** 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.
- 3.28** For component EX-03.1C-13E in RO9 the data point (I,1) was removed from the main section.
- 3.29** 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 EX021603.DAT.
- 3.30** 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.
- 3.31** 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.

- 3.32** For RO10P 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.
- 3.33** For component EX-02.16-06E data points (AA,1), (AB,1), (Y,2), and (AB,3) were removed from the downstream extension analysis.
- 3.34** 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.
- 3.35** 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.
- 3.36** 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.

Inspection		
Component	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-02.13-03E

- 3.37** The table below lists the components in this system that were replaced during this outage. These replacements are documented in inspection report number 03UT151. 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	

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

4 Feedwater

- 4.1 The feedwater heaters inlet nozzles were internally weld over-layered with stainless steel material. 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.
- 4.2 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.
- 4.3 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.
- 4.4 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.
- 4.5 Component FW-03.1A-08B was changed to Geometry Code 4 from Geometry Code 3.
- 4.6 Component FW-03.1C-05B was changed to Geometry Code 2 from Geometry Code 3.
- 4.7 Tinit was deleted from component FW-02.8B-22T since it resulted in an unrealistic value for calculated wear.
- 4.8 Tinit was deleted from the small end of component FW-01.2B-27R since it resulted in an unrealistic value for calculated wear.
- 4.9 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

- 4.10 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.
- 4.11 Tinit was removed from the downstream main of component FW-02.8B-26R since it provided unrealistic calculated wear.
- 4.12 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.
- 4.13 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.
- 4.14 Component FW-02.5-01T'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.
- 4.15 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.
- 4.16 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.
- 4.17 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.
- 4.18 The component name was obtained from the inspection packet. Pipe material and schedule was assumed to be identical as other piping components nearby.
- 4.19 The initial thickness (Tinit) value of 1.312" 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.
- 4.20 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).

5 Heater Drains

- 5.1 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.
- 5.2 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.
- 5.3 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.
- 5.4 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.
- 5.5 Component HD-10.2B-01E was changed to Geometry Code 16 from Geometry Code 4.
- 5.6 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.

6 Moisture Preseparator Drains

- 6.1 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	PD-01.6-02B	A106/B/B	A53/B/S

Line Name	Component Name	Old Material	New Material
2B			
	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 TANK	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

- 6.2 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.

- 6.3 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

7 Moisture Separator Drains

- 7.1 The Moisture Separator Drains from the Drain Tanks to the Heater Drain Tank were updated to reflect piping replacements during RFO10. 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.
- 7.2 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.
- 7.3 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.
- 7.4 The inspection information on the D/S extension of MSD-01.15A-17E was imported to component MSD-01.15A-18P since the pipe was inspected, replaced, and baselined.

- 7.5 Tinit for component MSD-01.5A-01E was causing over-calculation of wear and was thus deleted.
- 7.6 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.
- 7.7 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.
- 7.8 Tinit for component MSD-01.15A-01E was removed since it was forcing an over-calculation of measured wear.
- 7.9 The first and last bands were excluded from the analysis of component MSD-01.7A-01T's Cycle 10B inspection due to counterbore.
- 7.10 The first and last bands were excluded from the analysis of component MSD-01.8A-01T's Cycle 10B inspection due to counterbore.
- 7.11 The first and 7th band was excluded from the analysis of component MSD-01.8B-01T's Cycle 11 inspection due to counterbore.

8 Reheater Drains

- 8.1 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.
- 8.2 Component RHD01.12A-01T, which is actually an elbolet, was modeled as a Type 15 tee in CHECMATE. It was changed to a Type 12 tee, since flow is through the elbolet.
- 8.3 Points (A,4) and (M,6) were removed from the 1992 Refueling Outage inspection for component RHD01.8A-01R since they were obviously inaccurate.
- 8.4 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.
- 8.5 Tinit for component RHD02.4B-02E was deleted since it provided an inaccurate value for measured wear using the 1992 Refueling Outage inspection data.
- 8.6 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.

- 8.7 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.
- 8.8 Counterbore was excluded from the analysis of the D/S Main of component RHD02.5A-02R in RO11.
- 8.9 Point P,2 (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.

9 Update for 3R013

- 9.1 The model was updated with all information necessary to run Wear Rate Analysis (WRA) for plant conditions through Refuel Outage 13 (3R013), such as updates to the plant period table, water chemical treatments, WRA run definitions, replacements, UT inspection data, etc.
- 9.2 All 3R013 FAC inspections were imported to the appropriate component. These inspections are listed in Appendix F.
- 9.3 Operating cycle 13 water chemistry was updated to reflect actual measured concentrations. This data appears in Appendix C.
- 9.4 The plant period table was updated with the actual Operating Cycle 13 start date, end date, and operating hours. Refuel 13 outage actual start and end dates were updated. Operating cycle 14 was updated with the actual start date, estimated end date, operating hours and water chemistry. This data appears in Appendix C.
- 9.5 The model was updated with the following 3R013 component replacements

Component I.D.	Component Type	Component Size (in.)	Component Location and Notes	Drawing	Material Note
Transport steam from Preseparator 1A					
EX-02.2-02P	PIPE	10		EC-H-50071	1
EX-02.2-03E	ELBOW	10		EC-H-50071	1
EX-02.2-04P	PIPE	10		EC-H-50071	1
EX-02.2-05E	ELBOW	10		EC-H-50071	1
EX-02.2-06P	PIPE	10		EC-H-50071	1
EX-02.2-08O	ORIFICE	10		EC-H-50071	1
EX-02.2-07T	TEE	10 / 18		EC-H-50071	1
Transport steam from Preseparator 2A					
EX-02.1-02P	PIPE	10		EC-H-50071	1
EX-02.1-03E	ELBOW	10		EC-H-50071	1
EX-02.1-04P	PIPE	10		EC-H-50071	1
EX-02.1-05O	ORIFICE	10		EC-H-50071	1
EX-02.1-06T	TEE	10 / 18		EC-H-50071	1
Transport steam from Preseparator 2A Xunder					
EX-02.4-02P	PIPE	14		EC-H-50071	1
EX-02.4-03E	ELBOW	14		EC-H-50071	1
EX-02.4-04P	PIPE	14		EC-H-50071	1
EX-02.4-05T	TEE	14 / 18		EC-H-50071	1
EX-02.4-06O	ORIFICE	14		EC-H-50071	1
Transport steam from Preseparator 1B					
EX-02.9-02P	PIPE	10		EC-H-50081	1
EX-02.9-03E	ELBOW	10		EC-H-50081	1
EX-02.9-04P	PIPE	10		EC-H-50081	1
EX-02.9-05E	ELBOW	10		EC-H-50081	1
EX-02.9-06P	PIPE	10		EC-H-50081	1
EX-02.9-07E	ELBOW	10		EC-H-50081	1
EX-02.9-08P	PIPE	10		EC-H-50081	1
EX-02.9-09E	ELBOW	10		EC-H-50081	1
EX-02.9-10T	TEE	10 / 18		EC-H-50081	1
EX-02.9-11O	ORIFICE	10		EC-H-50081	1

Component I.D.	Component Type	Component Size (in.)	Component Location and Notes	Drawing	Material Note
EX-02.9-10P	PIPE	10			1
EX-02.9-7P	PIPE	10	Not on replacement list		
Transport steam from Preseparator 2B					
EX-02.8-02E	ELBOW	10		EC-H-50081	1
EX-02.8-03P	PIPE	10		EC-H-50081	1
EX-02.8-04E	ELBOW	10		EC-H-50081	1
EX-02.8-05P	PIPE	10		EC-H-50081	1
EX-02.8-06E	ELBOW	10		EC-H-50081	1
EX-02.8-07O	ORIFICE	10		EC-H-50081	1
EX-02.8-08T	TEE	10 / 18		EC-H-50081	1
Transport steam from Preseparator 2B Xunder					
EX-02.11-02P	PIPE	14		EC-H-50081	1
EX-02.11-03E	ELBOW	14		EC-H-50081	1
EX-02.11-04P	PIPE	14		EC-H-50081	1
EX-02.11-05T	TEE	14 / 18		EC-H-50081	1
EX-02.11-06O	ORIFICE	14		EC-H-50081	1
Steam from Preseparator 1B and 2B					
EX-02.12-01P	PIPE	18		EC-H-50082	1
EX-02.13-01P	PIPE	18		EC-H-50082	1
EX-02.13-02B	BEND	18		EC-H-50082	1
EX-02.13-03E	ELBOW	18		EC-H-50082	1
EX-02.13-04E	ELBOW	18		EC-H-50082	1
EX-02.13-05P	PIPE	18		EC-H-50082	1
EX-02.13-03P	ELBOW	18		EC-H-50082	
EX-02.13-06R	ELBOW	18	Not on the replacement list		3
Steam from Preseparator 1A and 2A					
EX-02.5-01P	PIPE	18		EC-H-50082	1
EX-02.6-01P	PIPE	18		EC-H-50082	1
EX-02.7-01P	PIPE	18		EC-H-50082	1
EX-02.7-02T	TEE				3
Reheater Drain Piping from LCV-1105, 1105A and 1105B to FWH 36A, B & C					
RHD-02.3B-02R	REDUCER	4 x 10	Also replaced ~12" of RHD-02.4B-01P	EC-H-50010	2
RHD-02.6B-01E	ELBOW	8		EC-H-50010	2

Material Notes

- 1 Clad Carbon Steel pipe with A-240 Type 304/304L Stainless Steel Cladding
- 2 A-234 Carbon Steel, Schedule 80
- 3 Replaced with CrMo P-22 in RO8, 01/01/1994

3R13 CHECWORKS MODELED PIPE REPLACEMENTS

Component I.D.	Component Type	Component Size (in.)	Component Location and Notes	Drawing	Material Note	Note					
			Transport steam from Preseparator 1A								
EX-02.2-02P	PIPE	10	gml	EC-H-50071	1						
EX-02.2-03E	ELBOW	10	gml	EC-H-50071	1						
EX-02.2-04P	PIPE	10	gml	EC-H-50071	1						
EX-02.2-05E	ELBOW	10	gml	EC-H-50071	1						
EX-02.2-06P	PIPE	10	gml	EC-H-50071	1						
EX-02.2-08O	ORIFICE	10	gml	EC-H-50071	1						
EX-02.2-07T	TEE	10 / 18	gml	EC-H-50071	1						
			Transport steam from Preseparator 2A								
EX-02.1-02P	PIPE	10	gml	EC-H-50071	1						
EX-02.1-03E	ELBOW	10	gml	EC-H-50071	1						
EX-02.1-04P	PIPE	10	gml	EC-H-50071	1						
EX-02.1-05O	ORIFICE	10	gml	EC-H-50071	1						
EX-02.1-06T	TEE	10 / 18	gml	EC-H-50071	1						
			Transport steam from Preseparator 2A Xunder								
EX-02.4-02P	PIPE	14	gml	EC-H-50071	1						
EX-02.4-03E	ELBOW	14	gml	EC-H-50071	1						
EX-02.4-04P	PIPE	14	gml	EC-H-50071	1						
EX-02.4-06O	ORIFICE	14	gml	EC-H-50071	1	FLOW ORDER					
EX-02.4-07P	PIPE	14	gml	EC-H-50071	1	NEW					
EX-02.4-05T	TEE	14 / 18	gml	EC-H-50071	1	FLOW ORDER					
			Transport steam from Preseparator 1B								
EX-02.9-02P	PIPE	10	gml	EC-H-50081	1						
EX-02.9-03E	ELBOW	10	gml	EC-H-50081	1						
EX-02.9-04P	PIPE	10	gml	EC-H-50081	1						
EX-02.9-05E	ELBOW	10	gml	EC-H-50081	1						
EX-02.9-06P	PIPE	10	gml	EC-H-50081	1						
EX-02.9-11O	ORIFICE	10	gml	EC-H-50081	1	FLOW ORDER					
EX-02.9-07E	ELBOW	10	gml	EC-H-50081	1						
EX-02.9-08P	PIPE	10	gml	EC-H-50081	1						
EX-02.9-09E	ELBOW	10	gml	EC-H-50081	1						
EX-02.9-10P	PIPE	10	Not on replacement list			FLOW ORDER					
EX-02.9-10T	TEE	10 / 18	gml	EC-H-50081	1						
EX-02.9-7P	PIPE	10	Not on replacement list			COMPONENT DOES NOT EXIST					
			Transport steam from Preseparator 2B								
EX-02.8-02E	ELBOW	10	gml	EC-H-50081	1						
EX-02.8-03P	PIPE	10	gml	EC-H-50081	1						
EX-02.8-04E	ELBOW	10	gml	EC-H-50081	1						
EX-02.8-05P	PIPE	10	gml	EC-H-50081	1						
EX-02.8-07O	ORIFICE	10	gml	EC-H-50081	1	FLOW ORDER					
EX-02.8-06E	ELBOW	10	gml	EC-H-50081	1	FLOW ORDER					
EX-02.8-09P	PIPE	10	gml	EC-H-50081	1	NEW					
EX-02.8-08T	TEE	10 / 18	gml	EC-H-50081	1						
			Transport steam from Preseparator 1B Xunder								
EX-02.11-02P	PIPE	14	gml	EC-H-50081	1						
EX-02.11-03E	ELBOW	14	gml	EC-H-50081	1						
EX-02.11-04P	PIPE	14	gml	EC-H-50081	1						
EX-02.11-06O	ORIFICE	14	gml	EC-H-50081	1	FLOW ORDER					
EX-02.11-07P	PIPE	14	gml	EC-H-50081	1	NEW					
EX-02.11-05T	TEE	14 / 18	gml	EC-H-50081	1	FLOW ORDER					
			Steam from Preseparator 1B and 2B								
EX-02.12-01P	PIPE	18	gml	EC-H-50082	1						
EX-02.13-01P	PIPE	18	gml	EC-H-50082	1						
EX-02.13-02B	BEND	18	gml	EC-H-50082	1						
EX-02.13-03E	ELBOW	18	gml	EC-H-50082	1						
EX-02.13-03P	ELBOW	18	Not on the replacement list	EC-H-50082	1	SHOULD BE PIPE					
EX-02.13-04E	ELBOW	18	gml	EC-H-50082	1						
EX-02.13-05P	PIPE	18	gml	EC-H-50082	1						
EX-02.13-06R	ELBOW	18	Not on the replacement list Steam from Preseparator 1A and 2A			SHOULD BE REDUCER; NOT REPLACED IN 3R13					

3R13 CHECWORKS MODELED PIPE REPLACEMENTS

Component I.D.	Component Type	Component Size (In.)	Component Location and Notes	Drawing	Material Note	Note				
EX-02.5-01P	PIPE	18	gml	EC-H-50082	1					
EX-02.6-01P	PIPE	18	gml	EC-H-50082	1					
EX-02.7-01P	PIPE	18	gml	EC-H-50082	1					
			Reheater Drain Piping from LCV-1105, 1105A and 1105B to FWH 36A, B & C							
RHD-02.3B-02R	REDUCER	4 x 10	Also replaced ~12" of RHD-02.4B-01P gml	EC-H-50010	2					
RHD-02.6B-01E	ELBOW	8	gml	EC-H-50010	2					
Material Notes										
1	Clad Carbon Steel pipe with A-240 Type 304/304L Stainless Steel Cladding									
2	A-234 Carbon Steel, Schedule 80									

Appendix B
Pass 2 Wear Rate Analysis Summary

Pass 2 Wear Rate Analysis Summary

WRA Run Name & Run Note	Is Run Calibrated?	Inspection Locations	Outliers	Correlation (Scatter)	LCF	Geometry Coverage	Parallel Train Coverage	Insp. D/S of CVs & Orifices	Notes
CD: HDR TO BFP	Yes	8	0	Good	0.528	Fair	Fair	Yes	Run can be considered calibrated based on Good correlation between predicted and measured wear and fulfillment of all other criterion. However it is recommended to perform more inspections, which should include elbows. This location corresponds to the Surry failure (Ref. 7.22.9, Ch 1) Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
CD: HDR TO HTR 33	Yes	10	2	Moderate	0.815	Good	Good	N/A	Run can be considered calibrated based on moderate correlation between predicted and measured wear and fulfillment of all other criterion. The operating conditions for this Run being single phase and 198°F make it minimally susceptible to FAC. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
CD: HTR 31 TO HTR 32	No	0	N/A	N/A	N/A	N/A	N/A	N/A	There are no inspections for this Run. The operating conditions for this Run being single phase and 157°F make it minimally susceptible to FAC. Therefore it is not recommended to divert inspection resources to this Run.
CD: HTR 32 TO HTR 33 HDR	Yes	8	4	Moderate	0.550	Good	Good	N/A	Run can be considered calibrated based on moderate correlation between predicted and measured wear and fulfillment of all other criterion. The operating conditions for this Run being single phase and 198°F make it minimally susceptible to FAC.

WRA Run Name & Run Note	Is Run Calibrated?	Inspection Locations	Outliers	Correlation (Scatter)	LCF	Geometry Coverage	Parallel Train Coverage	Insp. D/S of CVs & Orifices	Notes
CD: HTR 32 TO HDR	No	3	0	Good	0.624	Fair	Fair	N/A	At least 2 more inspections required preferably elbows or pipes downstream of valves before this Run may be considered for calibration. Note that the operating conditions for this Run being single phase and 198°F, make it minimally susceptible to FAC.
CD: HTR 33 TO HTR 34	No	7	0	Good	0.507	Good	Poor	N/A	Run needs to have inspections performed on the "C" train before it can be considered for calibration. All other criterion has been met. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
CD: HTR 34 TO HTR 35	Yes	7	0	Good	0.475	Good	Fair	N/A	Run can be considered calibrated based on Good correlation between predicted and measured wear and fulfillment of all other criterion. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs
CD: HTR 35 TO BFP HDR	No	4	2	N/A	0.411	Good	Good	N/A	Run has only 4 inspection locations, but there remains only one component that has not been inspected. Therefore the number of inspection locations is adequate. This Run is not considered calibrated since there is only moderate correlation between predicted and measured wear, and the LCF is below desired range. Recommend reinspections on components with high wear and low predicted wear. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.

WRA Run Name & Run Note	Is Run Calibrated?	Inspection Locations	Outliers	Correlation (Scatter)	LCF	Geometry Coverage	Parallel Train Coverage	Insp. D/S of CVs & Orifices	Notes
CD: HTR 35 TO HDR	No	5	0	Good	0.447	Good	Fair	N/A	Run is not considered calibrated based on low number of inspections, LCF is below the desired range. The correlation between predicted and measured wear is good. Therefore when more inspections locations are completed this Run may be considered calibrated. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
CD: S/G BLWDN HX IN	No	4	1	N/A	1.192	Fair	Good	Yes	Run needs to have at least one more inspection analyzed before this Run may be considered for calibration. The operating conditions for this Run are single phase and 198°F, which is minimally susceptible to FAC.
CD: S/G BLDWN HX OUT	Yes	7	3	Moderate	2.004	Good	Good	N/A	Run is considered calibrated, however with the operating conditions for this Run being single phase and 198°F, which is minimally susceptible to FAC.
ES: HDR TO 35 HTRS	Yes	9	3	Good	1.354	Good	Good	N/A	Run can be considered calibrated based on the correlation between predicted and measured wear and fulfillment of all other criterion. Note that many components in this run have been replaced with non-susceptible material. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
ES: HDR TO 36 HTRS	No	7	4	Moderate	0.474	Fair	Good	N/A	Note that all components in this Run, except the valves, have been replaced with non-susceptible material. Therefore there is no need for future inspections. Run not considered calibrated based on only moderate correlation between predicted and measured wear, and LCF below the desired range.

WRA Run Name & Run Note	Is Run Calibrated?	Inspection Locations	Outliers	Correlation (Scatter)	LCF	Geometry Coverage	Parallel Train Coverage	Insp. D/S of CVs & Orifices	Notes
ES: HTR 36 TO HEADER	Yes	10	4	Moderate	0.412	Good	Good	N/A	Run can be considered calibrated. All of the components have been replaced except the Nozzles.
ES: LP TO 31 HEATERS	No	0	0	N/A	N/A	N/A	N/A	N/A	There are no inspections for this run, operating conditions are < 200°F, however it is still a 2-phase fluid. Therefore it is recommended to perform some sort of inspection on these lines to document the level of wear.
ES: LP TO 32 HEATERS	No	6	1	Moderate	0.279	Good	Poor	N/A	Run is not calibrated based on the need for parallel train coverage, and the fact that the LCF is below the desired range.
ES: LP TO 33 HEATERS	No	12	0	Good	1.465	Fair	Poor	N/A	Run is not considered calibrated based on the need for better parallel train coverage. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
ES: LP TO 34 HEATERS	Yes	7	0	Good	8.389	Good	Fair	N/A	Run can be considered calibrated based on good correlation between predicted and measured wear and fulfillment of all other criterion. However it is recommended to perform additional inspections on the "A" Train. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
ES: PRESEP TO 35 HDR	Yes	21	4	Moderate	1.663	Good	Good	Yes	This run can be considered calibrated based on moderate correlation and fulfillment of all other criterion. The majority of components (including all orifices and d/s piping) have been replaced with FAC-resistant materials, however a number of carbon steel components remain. Future inspections on carbon steel components should be done in accordance with FAC program guidelines for Pass 2 runs.

WRA Run Name & Run Note	Is Run Calibrated?	Inspection Locations	Outliers	Correlation (Scatter)	LCF	Geometry Coverage	Parallel Train Coverage	Insp. D/S of CVs & Orifices	Notes
FW: 36 HTR TO SG HDR	Yes	10	3	Moderate	3.231	Good	Good	N/A	Run can be considered calibrated based fulfillment of all criterion. However the LCF is higher than the recommended range and the correlation is moderate. Therefore future inspections are recommended and should be done in accordance with FAC program guidelines for Pass 2 runs.
FW: BFP TO 36 HTR	Yes	27	0	Good	0.628	Good	Good	N/A	Run can be considered calibrated based on good correlation between predicted and measured wear and fulfillment of all other criterion. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
FW: FW RECIRC	No	0	0	N/A	N/A	N/A	N/A	N/A	There are no inspections for the FW recirculating lines, since the lines are CrMo and not considered susceptible to FAC. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
FW: SG HEADERS	No	31	17	Moderate	2.393	Good	Fair	No	Run is not considered calibrated based on the need to perform inspections downstream of flow elements. Inspections should be performed downstream of the following components: FW-2.8A-12F, FW-2.8C-13F, and FW-2.8D-13F.

WRA Run Name & Run Note	Is Run Calibrated?	Inspection Locations	Outliers	Correlation (Scatter)	LCF	Geometry Coverage	Parallel Train Coverage	Insp. D/S of CVs & Orifices	Notes
HD: HTR 33 TO HTR 31	Yes	13	1	Good	1.773	Good	Good	Yes	Run can be considered calibrated due to good correlation and fulfillment of all other criterion. All piping d/s of controls valves has been inspected and all un-inspected lines are composed of FAC-resistant materials. Future inspections on the remaining carbon steel components should be done in accordance with FAC program guidelines for Pass 2 runs.
HD: HTR 34 TO HTR 33	Yes	8	0	Moderate	1.424	Good	Good	Yes	Run can be considered calibrated based on moderate correlation between predicted and measured wear and fulfillment of all other criterion. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
HD: HTR 35 & 36 TO HDT	No	14	0	Moderate	0.962	Good	Poor	No	Run may be considered calibrated after inspection on line HD-3.1B, and inspection downstream of control valve HD-2.1B-01V. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
HD: HTR DN PUMPS	No	14	0	Good	0.782	Good	Poor	Yes	Run may be considered calibrated after inspections on line HD-10.1.B. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
MSD: MS 31 TO HDT	No	13	3	Good	1.031	Good	Poor	N/A	Run is not considered calibrated due to lack of parallel train coverage. One inspection is required on lines MSD-1.1A_1, MSD-1.1A_2, or MSD-1.1A_3. One inspection is required on line MSD-1.1B_1, MSD-1.1B_2, or MSD-1.1B_3. One inspection is required on line MSD-1.3B. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.

WRA Run Name & Run Note	Is Run Calibrated?	Inspection Locations	Outliers	Correlation (Scatter)	LCF	Geometry Coverage	Parallel Train Coverage	Insp. D/S of CVs & Orifices	Notes
MSD: MS 32 TO MSDT	No	11	2	Moderate	4.136	Good	Poor	N/A	Run is not considered calibrated due to lack of parallel train coverage. One inspections is required one line MSD-1.6A_1, MSD-1.6A_2, or MSD-1.6A_3. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
MSD: MS 33 TO MSDT	No	6	2	Moderate	3.553	Good	Poor	N/A	Run is not considered calibrated parallel train coverage is poor, 8 of the 10 lines in this Run are not inspected. The LCF is outside of the desired range. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
MSD: MS 32 TO HDT	Yes	12	0	Good	1.645	Good	Good	N/A	Run can be considered calibrated based on good correlation between predicted and measured wear and fulfillment of all other criterion. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
MSD: MS 33 TO HDT	Yes	18	4	Moderate	1.646	Good	Good	N/A	Run can be considered calibrated based on good correlation between predicted and measured wear and fulfillment of all other criterion. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
PD: PRESEPRTR DRAINS	No	7	0	Moderate	0.670	Good	Poor	No	Need inspections on lines PD1.1 and PD1.7, and downstream of valves PD 1.2-100, 1.4-100, 1.6-140 and 1.8-140 before this run can be considered calibrated. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.

WRA Run Name & Run Note	Is Run Calibrated?	Inspection Locations	Outliers	Correlation (Scatter)	LCF	Geometry Coverage	Parallel Train Coverage	Insp. D/S of CVs & Orifices	Notes
RHD: RH 31 TO HDR	No	15	0	Good	2.091	Good	Poor	No	This run is not considered calibrated due to the lack of parallel train coverage. One inspection on line RHD-1.1B is required before this run can be considered calibrated. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
RHD: RH 32A TO HDR	No	7	2	Good	3.248	Good	Poor	Yes	Need to have inspections on line RHD-1.3A before this run can be considered calibrated. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
RHD: RH 32B TO HDR	No	13	17	Poor	2.470	Good	Good	Yes	This run is not considered calibrated due to poor correlation between predicted and measured wear. Other criterion appears to have been met. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
RHD: RH 33 TO HDR	No	12	5	Moderate	2.797	Good	Poor	Yes	Need to have inspections on line RHD-1.10A-1 before this run can be considered calibrated. The LCF is outside of the desired range and there are a relatively large number of outliers. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs
RHD: RHD HDR TO HTRS	No	7	3	Moderate	2.803	Good	Poor	N/A	This run is not considered calibrated since 8 of the 12 lines that make up the run do not have inspections. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs

Note: Correlation (Scatter) field entered only when minimum number of inspection locations was met.

Appendix C

Global Data

Table C.1 Original Power Level Input Data

CHECWORKS Field	Power Level 100.0%	Reference
Steam Rate (Mlb/hr)	13.024152	7.18.1
Pressure (psia)	779.0	7.18.1
Temp (F)	515.2	7.18.1
Blowdown Rate (Mlb/hr)		7.18.1
Carryover (%)	0.01	7.18.1
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	7.18.2
Pressure (psia)	774.4	7.18.2
Temp (F)	514.5	7.18.2
Blowdown Rate (Mlb/hr)	0.057785	7.18.2
Carryover (%)	0.08	7.18.2
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	7.18.3
Pressure (psia)	760.4	7.18.3
Temp (F)	512.4	7.18.3
Blowdown Rate (Mlb/hr)	0.057785	7.18.3
Carryover (%)	0.08	7.18.3
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	7.18.1
FWHTR 2	Tube side outlet	x	x	x	371.6	7.18.1
FWHTR 3	Tube side outlet	x	x	x	293.6	7.18.1
FWHTR 4	Tube side outlet	x	x	x	243.8	7.18.1
FWHTR 5	Tube side outlet	x	x	x	191.8	7.18.1
FWHTR 6	Tube side outlet	x	x	x	155.7	7.18.1
SPUMP 1	Driven steam and drain enthalpy and pressure	0.116701	974.8	1.0	x	7.18.1
MSEP 1	Moist Sep & Moist PreSep Drains ²	0.942923	364.8	221.9	x	7.18.1
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	7.18.1
HPEXTLINE 1	Conditions in line (Presep Outlet to FWH 5) ³	0.929080	1136.9	185.6	x	7.18.1
HPEXTLINE 2	Conditions in line to FWH 6	0.706255	1136.9	340.4	x	7.18.1
LPEXTLINE 1	Conditions in line to FWH 4	0.502856	1177.4	64.98	x	7.18.1
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 [7.3].

(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 [7.3].

(4) Flow rate is for exiting steam flow was entered as zero as recommended by EPRI Guidelines [7.3]. Pressure and enthalpy were obtained from the HBD "F" [7.18.1].

(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.[7.18.1]

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	7.18.2
FWHTR 2	Tube side outlet	x	x	x	374.7	7.18.2
FWHTR 3	Tube side outlet	x	x	x	296.6	7.18.2
FWHTR 4	Tube side outlet	x	x	x	243.0	7.18.2
FWHTR 5	Tube side outlet	x	x	x	196.4	7.18.2
FWHTR 6	Tube side outlet	x	x	x	155.3	7.18.2
SPUMP 1	Driven steam and drain enthalpy and pressure	0.147147	976.3	1.0	x	7.18.2
MSEP 1	Moist Sep & Moist PreSep Drains ²	0.922509	355.9	199.8	x	7.18.2
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	7.18.2
HPEXTLINE 1	Conditions in line (Presep Outlet to FWH 5) ³	0.935949	1148.2	200.9	x	7.18.2
HPEXTLINE 2	Conditions in line to FWH 6	0.751563	1138.6	361.4	x	7.18.2
LPEXTLINE 1	Conditions in line to FWH 4	0.531280	1197.4	74.54	x	7.18.2
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 [7.3].

(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 [7.3].

(4) Flow rate is for exiting steam flow and was entered as zero as recommended by EPRI Guidelines [7.3]. Pressure and enthalpy were obtained from the Appendix K PEPSE model [7.18.2].

(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 [7.18.2].

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	7.18.3
FWHTR 2	Tube side outlet	x	x	x	377.3	7.18.3
FWHTR 3	Tube side outlet	x	x	x	298.3	7.18.3
FWHTR 4	Tube side outlet	x	x	x	245.2	7.18.3
FWHTR 5	Tube side outlet	x	x	x	198.0	7.18.3
FWHTR 6	Tube side outlet	x	x	x	156.9	7.18.3
SPUMP 1	Driven steam and drain enthalpy and pressure	0.160926	974.8	1.0	x	7.18.3
MSEP 1	Moist Sep & Moist PreSep Drains ²	1.097732	358.7	207.2	x	7.18.3
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	7.18.3
HPEXTLINE 1	Conditions in line (Presep Outlet to FWH 5) ³	0.984482	1147.3	208.3	x	7.18.3
HPEXTLINE 2	Conditions in line to FWH 6	0.852604	1155.1	388.6	x	7.18.3
LPEXTLINE 1	Conditions in line to FWH 4	0.548842	1197.6	77.28	x	7.18.3
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 [7.3].

(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 [7.3].

(4) Flow rate is for exiting steam flow and was entered as zero as recommended by EPRI Guidelines [7.3]. Pressure and enthalpy were obtained from the SPU PEPSE model [7.18.3].

(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 [7.18.3].

Table C.7 Cycle 1 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	15.67	ppb	7.19.2
Ammonia	Final Feed Water	0.680	ppm	7.19.2
Hydrazine	Final Feed Water	20.000	ppb	7.19.2
Hydrazine	SG Outlet	12.000	ppb	7.19.2
Hydrazine	MSR Drain	24.000	ppb	7.19.2

Note: This water treatment was used for Cycle 1
See Assumption 4.1.6 concerning this water treatment.

Table C.8 Cycle 2 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	16.43	ppb	7.19.2
Ammonia	Final Feed Water	0.480	ppm	7.19.2
Hydrazine	Final Feed Water	20.000	ppb	7.19.2
Hydrazine	SG Outlet	12.000	ppb	7.19.2
Hydrazine	MSR Drain	24.000	ppb	7.19.2

Note: This water treatment was used for Cycle 2
See Assumption 4.1.6 concerning this water treatment.

Table C.9 Cycle 3 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	11.72	ppb	7.19.2
Ammonia	Condensate	0.760	ppm	7.19.2
Hydrazine	Final Feed Water	25.000	ppb	7.19.2
Hydrazine	SG Outlet	15.000	ppb	7.19.2
Hydrazine	MSR Drain	30.000	ppb	7.19.2

Note: This water treatment was used for Cycles 3
See Assumption 4.1.6 concerning this water treatment.

Table C.10 Cycle 4 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	9.13	ppb	7.19.2
Ammonia	Final Feed Water	1.260	ppm	7.19.2
Hydrazine	Final Feed Water	40.000	ppb	7.19.2
Hydrazine	SG Outlet	24.000	ppb	7.19.2
Hydrazine	MSR Drain	48.000	ppb	7.19.2

Note: This water treatment was used for Cycle 4
See Assumption 4.1.6 concerning this water treatment.

Table C.11 Cycle 5 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	2.83	ppb	7.19.2
Ammonia	Final Feed Water	1.290	ppm	7.19.2
Hydrazine	Final Feed Water	40.000	ppb	7.19.2
Hydrazine	SG Outlet	24.000	ppb	7.19.2
Hydrazine	MSR Drain	48.000	ppb	7.19.2

Note: This water treatment was used for Cycle 5
See Assumption 4.1.6 concerning this water treatment.

Table C.12 Cycle 6 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	2.53	ppb	7.19.2
Ammonia	Final Feed Water	1.290	ppm	7.19.2
Hydrazine	Final Feed Water	40.000	ppb	7.19.2
Hydrazine	SG Outlet	24.000	ppb	7.19.2
Hydrazine	MSR Drain	48.000	ppb	7.19.2

Note: This water treatment was used for Cycle 6
See Assumption 4.1.6 concerning this water treatment.

Table C.13 Cycle 7 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	3.00	ppb	7.19.2
Morpholine	Final Feed Water	4.500	ppm	7.19.2
Hydrazine	Final Feed Water	58.000	ppb	7.19.2
Ammonia	Final Feed Water	0.060	ppm	7.19.2
Hydrazine	SG Outlet	34.800	ppb	7.19.2
Hydrazine	MSR Drain	69.600	ppb	7.19.2

Note: This water treatment was used for Cycle 7
See Assumption 4.1.6 concerning this water treatment.

Table C.14 Cycle 8 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	4.00	ppb	7.19.2
Morpholine	Final Feed Water	4.500	ppm	7.19.2
Hydrazine	Final Feed Water	190.000	ppb	7.19.2
Ammonia	Final Feed Water	0.200	ppm	7.19.2
Hydrazine	SG Outlet	114.000	ppb	7.19.2
Hydrazine	MSR Drain	228.000	ppb	7.19.2

Note: This water treatment was used for Cycle 8
See Assumption 4.1.6 concerning this water treatment.

Table C.15 Cycle 9 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	9.00	ppb	7.19.2
Morpholine	Final Feed Water	4.500	ppm	7.19.2
Hydrazine	Final Feed Water	225.000	ppm	7.19.2
Ammonia	Final Feed Water	0.680	ppb	7.19.2
Hydrazine	SG Outlet	135.000	ppb	7.19.2
Hydrazine	MSR Drain	270.000	ppb	7.19.2

Note: This water treatment was used for Cycles 9A-9B
See Assumption 4.1.6 concerning this water treatment.

Table C.16 Cycle 10A Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	1.80	ppb	7.19.2
Morpholine	Final Feed Water	4.500	ppm	7.19.2
Hydrazine	Final Feed Water	180.000	ppb	7.19.2
Ammonia	Condensate	2.000	ppb	7.19.2
Hydrazine	SG Outlet	108.000	ppb	7.19.2
Hydrazine	MSR Drain	216.000	ppb	7.19.2

Note: This water treatment was used for Cycle 10A
See Assumption 4.1.6 concerning this water treatment.

Table C.17 Cycle 10B Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	2.50	ppb	7.19.2
Ethanolamine	Final Feed Water	2.000	ppm	7.19.2
Hydrazine	Final Feed Water	225.000	ppb	7.19.2
Ammonia	Condensate	2.000	ppb	7.19.2
Hydrazine	SG Outlet	135.000	ppb	7.19.2
Hydrazine	MSR Drain	270.000	ppb	7.19.2

Note: This water treatment was used for Cycle 10B
See Assumption 4.1.6 concerning this water treatment.

Table C.18 Cycle 11 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	3.3	ppb	7.19.2
Ethanolamine	Final Feed Water	2.400	ppm	7.19.2
Hydrazine	Final Feed Water	190.000	ppb	7.19.2
Ammonia	Final Feed Water	5.285	ppm	7.19.2
Hydrazine	SG Outlet	114.000	ppb	7.19.2
Hydrazine	MSR Drain	228.000	ppb	7.19.2

Note: This water treatment was used for Cycle 11
See Assumption 4.1.6 concerning this water treatment.

Table C.19 Cycle 12 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	0.69	ppb	7.19.2
Ethanolamine	Final Feed Water	3.558	ppm	7.19.2
Hydrazine	Final Feed Water	104.657	ppb	7.19.2
Ammonia	Final Feed Water	5.830	ppm	7.19.2
Hydrazine	SG Outlet	62.794	ppb	7.19.2
Hydrazine	MSR Drain	125.589	ppb	7.19.2

Note: This water treatment was used for Cycles 12A-12B

See Assumption 4.1.6 concerning this water treatment.

Table C.20 Cycle 13 Water Treatment Data Input

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	3.34	ppb	7.27.7
Ethanolamine	Final Feed Water	3.423	ppm	7.27.7
Hydrazine	Final Feed Water	98.400	ppb	7.27.7
Ammonia	Final Feed Water	4.886	ppm	7.27.7
Hydrazine	SG Outlet	58.100	ppb	7.27.7
Hydrazine	MSR Drain	116.200	ppb	7.27.7

Note: This water treatment was used for Cycles 13-14

See Assumption 4.1.6 concerning this water treatment.

Table C.21 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	7.19.2
RO1	6/7/1978	8/25/1978	Maintenance	----	----	----	7.19.2
Cycle 2	8/25/1978	9/14/1979	Operating	Cycle 2	100	7874.4	7.19.2
RO2	9/14/1979	2/11/1980	Maintenance	----	----	----	7.19.2
Cycle 3	2/11/1980	3/25/1982	Operating	Cycle 3	100	8944.8	7.19.2
RO3	3/25/1982	6/8/1983	Maintenance	----	----	----	7.19.2
Cycle 4	6/8/1983	6/7/1985	Operating	Cycle 4	100	9854.4	7.19.2
RO4	6/7/1985	10/4/1985	Maintenance	----	----	----	7.19.2
Cycle 5	10/4/1985	5/2/1987	Operating	Cycle 5	100	10012.8	7.19.2
RO5	5/2/1987	9/5/1987	Maintenance	----	----	----	7.19.2
Cycle 6	9/5/1987	2/4/1989	Operating	Cycle 6	100	10461.6	7.19.2
RO6	2/4/1989	6/25/1989	Maintenance	----	----	----	7.19.2
Cycle 7	6/25/1989	9/15/1990	Operating	Cycle 7	100	9463.2	7.19.2
RO7	9/15/1990	12/23/1990	Maintenance	----	----	----	7.19.2
Cycle 8	12/23/1990	4/18/1992	Operating	Cycle 8	100	9916.8	7.19.2
RO8	4/18/1992	7/2/1995	Maintenance	----	----	----	7.19.2
Cycle 9A	7/2/1995	9/14/1995	Operating	Cycle 9	100	1852.2	7.19.2
Winter 1995	9/15/1995	4/13/1996	Maintenance	----	----	----	7.19.2
Cycle 9B	4/14/1996	5/14/1997	Operating	Cycle 9	100	11703.0	7.19.2
RO9	5/14/1997	9/12/1997	Maintenance	----	----	----	7.19.2
Cycle 10A	9/12/1997	3/20/1998	Operating	Cycle 10A	100	3864.0	7.19.2
Cycle 10B	3/20/1998	9/10/1999	Operating	Cycle 10B	100	11841.6	7.19.2
RO10	9/10/1999	10/19/1999	Maintenance	----	----	----	7.19.2
Cycle 11	10/19/1999	4/27/2001	Operating	Cycle 11	100	13113.8	7.19.2
RO11	4/28/2001	5/23/2001	Maintenance	----	----	----	7.19.2
Cycle 12A	5/24/2001	12/21/2002	Operating	Cycle 12	100	13848.0	7.19.2
Cycle 12B	12/22/2002	3/28/2003	Operating	Cycle 12	101.12	2328.0	7.19.2
RO12	3/29/2003	4/23/2003	Maintenance	----	----	----	7.19.2
Cycle 13	4/24/2003	3/11/2005	Operating	Cycle 13	101.12	16268.0	7.19.2
RO13	3/11/2005	4/6/2005	Maintenance	----	----	----	7.19.2
Cycle 14	4/7/2005	3/12/2007	Operating	Cycle 14	104.95	16900.0	7.19.2

17.5 yrs
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Appendix D
CHECWORKS Modeled Lines

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	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	8	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	8	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	8	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	7	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	7	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	7	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	7	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	7	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	7	1	1	CD: HTR 32 TO 33 HDR
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	7	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	7	1	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	7	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	7	0.333	1	CD: HDR TO HTR 33

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	Flow Factor	Duty Factor	WRA Run Name
CD-02.8B HDR to FWH 33B	Cond: FW Heaters 32 Outlet Header to FW Heater 33B	EC-F-20183 SH. 2	HBD	7	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	7	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	7	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	6	0.333	1	CD: HTR 33 TO HTR 34
CD-03.1B FWH 33B to FWH 34B	Cond: FW Heater 33B to FW Heater 34B	EC-F-20183 SH. 2	HBD	6	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	6	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	5	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	5	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	5	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	4	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	4	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	4	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	4	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	4	1	1	CD:HTR 35 TO BFP HDR
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	Z-type	3	1	1	CD: HDR TO BFP

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	Flow Factor	Duty Factor	WRA Run Name
CD-06.2A HDR to BFP 31	Cond: FW Heaters 35 Outlet Header to Boiler Feed Pump 31	EC-F-20183 SH. 2	Z-type	3	0.5	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	Z-type	3	0.5	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	17	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	17	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	17	1	1	ES: HTR 36 HEADER
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	17	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	17	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	17	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	17	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	Z-type	18	0.25	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	Z-type	18	0.5	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	Z-type	18	0.5	1	ES: PRESEP TO 35 HDR

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	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	Z-type	18	0.5	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	Z-type	18	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	Z-type	18	0.667	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	Z-type	18	0.333	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	Z-type	18	0.333	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	Z-type	18	0.333	1	ES: HDR TO 35 HTRS
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	Z-type	18	0.25	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	Z-type	18	0.5	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	Z-type	18	0.5	1	ES: PRESEP TO 35 HDR

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	Flow Factor	Duty Factor	WRA Run Name
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	Z-type	18	0.5	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	Z-type	18	0.25	1	ES: PRESEP TO 35 HDR
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	Z-type	18	0.25	1	ES: PRESEP TO 35 HDR
EX-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	HBD	21	0.333	1	ES: LP TO 34 HEATERS
EX-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	HBD	21	0.333	1	ES: LP TO 34 HEATERS
EX-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	HBD	21	0.333	1	ES: LP TO 34 HEATERS
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	22	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	22	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	22	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	22	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	22	0.167	1	ES: LP TO 33 HEATERS

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	Flow Factor	Duty Factor	WRA Run Name
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	22	0.167	1	ES: LP TO 33 HEATERS
EX-04.18 LPEX FWH 33C IN HDR	Ext Steam: LP Extraction Header Upstream of FW Heater 33C	EC-F-20203 Sh. 2	HBD	22	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	22	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	22	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	22	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	22	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	22	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	22	0.167	1	ES: LP TO 33 HEATERS
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	22	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	22	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	23	0.167	1	ES: LP TO 32 HEATERS

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	Flow Factor	Duty Factor	WRA Run Name
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	23	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	23	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	23	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	23	0.167	1	ES: LP TO 32 HEATERS
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	23	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	24	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	24	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	24	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	24	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	24	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	24	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	24	0.083	1	ES: LP TO 31 HEATERS

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	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	24	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	24	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	24	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	24	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	24	0.083	1	ES: LP TO 31 HEATERS
FW-01.1A BFP 31 to RCIRC T	Feed: Boiler Feed Pump 31 Discharge to Recirculation Takeoff	EC-F-20193	Z-type	2	0.5	1	FW: BFP TO 36 HTR
FW-01.1B BFP 32 to RCIRC T	Feed: Boiler Feed Pump 32 Discharge to Recirculation Takeoff	EC-F-20193	Z-type	2	0.5	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	Z-type	2	0.5	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	Z-type	2	0.5	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	Z-type	2	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	Z-type	2	0.667	1	FW: BFP TO 36 HTR

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	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	Z-type	2	0.333	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	Z-type	2	0.333	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	Z-type	2	0.333	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	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	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	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	1	0.667	1	FW: SG HEADERS
FW-02.4 SG INLET HEADER	Feed: SG Inlet Header Between FW Heater 36C Connection and SG 31 Takeoff	EC-F-20193	HBD	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	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	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	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	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	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	1	0.25	1	FW: SG HEADERS

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	Flow Factor	Duty Factor	WRA Run Name
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	Z-type	2	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	Z-type	2	1	0.02	FW: FW RECIRC
HD-01.1A FWH 36A to HD TK	Heater Dr: FW Heater 36A Drain to Heater Drain Tank	EC-F-20223 Sh. 1	Z-type	11	0.333	1	HD: HTR 35&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	Z-type	11	0.333	1	HD: HTR 35&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	Z-type	11	0.333	1	HD: HTR 35&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	Z-type	12	0.333	1	HD: HTR 35&36 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	Z-type	12	0.333	1	HD: HTR 35&36 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	Z-type	12	0.333	1	HD: HTR 35&36 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	Z-type	13	0.333	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	Z-type	13	0.333	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	Z-type	13	0.333	1	HD: HTR 34 TO HTR 33
HD-06.1A FWH 33A to FWH 32A	Heater Dr: FW Heater 33A Drain to FW Heater 32A	EC-F-20223 Sh. 2	Z-type	14	0.333	1	HD: HTR 33 TO HTR 31
HD-06.1B FWH 33B to FWH 32B	Heater Dr: FW Heater 33B Drain to FW Heater 32B	EC-F-20223 Sh. 2	Z-type	14	0.333	1	HD: HTR 33 TO HTR 31
HD-06.1C FWH 33C to FWH 32C	Heater Dr: FW Heater 33C Drain to FW Heater 32C	EC-F-20223 Sh. 2	Z-type	14	0.333	1	HD: HTR 33 TO HTR 31

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	Flow Factor	Duty Factor	WRA Run Name
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	Z-type	15	0.333	1	HD: HTR 33 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	Z-type	15	0.333	1	HD: HTR 33 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	Z-type	15	0.333	1	HD: HTR 33 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	Z-type	15	0.167	1	HD: HTR 33 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	Z-type	15	0.167	1	HD: HTR 33 TO HTR 31
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	Z-type	15	0.167	1	HD: HTR 33 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	Z-type	15	0.167	1	HD: HTR 33 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	Z-type	15	0.167	1	HD: HTR 33 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	Z-type	15	0.167	1	HD: HTR 33 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	10	0.5	1	HD: HTR DN PUMPS

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	Flow Factor	Duty Factor	WRA Run Name
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	10	0.5	1	HD: HTR DN PUMPS
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	HBD	9	0.5	1	HD: HTR DN PUMPS
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	HBD	9	0.5	1	HD: HTR DN PUMPS
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	HBD	9	1	1	HD: HTR DN PUMPS
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	Z-type	19	0.056	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	Z-type	19	0.056	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	Z-type	19	0.056	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	Z-type	19	0.056	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	Z-type	19	0.056	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	Z-type	19	0.056	1	MSD: MS 33 TO MSDT
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	Z-type	19	0.111	1	MSD: MS 33 TO MSDT

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	Flow Factor	Duty Factor	WRA Run Name
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	Z-type	19	0.111	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	Z-type	19	0.167	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	Z-type	19	0.167	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	Z-type	19	0.167	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	Z-type	19	0.167	1	MSD: MSDT 33 TO HDT
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	Z-type	19	0.056	1	MSD: MS 31 TO HDT
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	Z-type	19	0.056	1	MSD: MS 31 TO HDT
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	Z-type	19	0.056	1	MSD: MS 31 TO HDT
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	Z-type	19	0.056	1	MSD: MS 31 TO HDT
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	Z-type	19	0.056	1	MSD: MS 31 TO HDT
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	Z-type	19	0.056	1	MSD: MS 31 TO HDT

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	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	Z-type	19	0.111	1	MSD: MS 31 TO HDT
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	Z-type	19	0.111	1	MSD: MS 31 TO HDT
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	Z-type	19	0.167	1	MSD: MS 31 TO HDT
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	Z-type	19	0.167	1	MSD: MS 31 TO HDT
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	Z-type	19	0.167	1	MSD: MS 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	Z-type	19	0.167	1	MSD: MS 31 TO HDT
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	Z-type	19	0.056	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	Z-type	19	0.056	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	Z-type	19	0.056	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	Z-type	19	0.056	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	Z-type	19	0.056	1	MSD: MS 32 TO MSDT

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	Flow Factor	Duty Factor	WRA Run Name
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	Z-type	19	0.056	1	MSD: MS 32 TO MSDT
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	Z-type	19	0.111	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	Z-type	19	0.111	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	Z-type	19	0.167	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	Z-type	19	0.167	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	Z-type	19	0.167	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	Z-type	19	0.167	1	MSD: MSDT 32 TO HDT
PD-01.1 PRESEP 1B DR to HDR	Presep Dr: Moisture Preseparator 1B Drain to Header	EC-F-20223 Sh. 1	Z-type	19	0.25	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	Z-type	19	0.25	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	Z-type	19	0.25	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	Z-type	19	0.25	1	PD: PRESEPRTR DRAINS

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	Flow Factor	Duty Factor	WRA Run Name
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	Z-type	19	0.5	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	Z-type	19	0.75	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	Z-type	19	1	1	PD: PRESEPRTR DRAINS
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	20	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	20	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	20	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	20	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	20	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	20	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	20	0.167	1	RHD: RH 31 TO HDR
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	20	0.167	1	RHD: RH 31 TO HDR

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	Flow Factor	Duty Factor	WRA Run Name
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	20	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	20	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	20	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	20	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	20	0.333	1	RHD: RHD HDR TO HTRS
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	20	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	20	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	20	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	20	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	20	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	20	0.167	1	RHD: RHD HDR TO HTRS

CHECWORKS Line Name	Line Description	Flow Diagram No.	Op Cond Source	Steam Cycle Loc. No.	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	20	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	20	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	20	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	20	0.5	1	RHD: RHD HDR TO HTRS
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	20	0.333	1	RHD: RHD HDR TO HTRS

Appendix E
Component Summary Report

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Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 06-SEP-2005 Time: 12:46:37
 CHECWORKS FAC Version 1.0G (Build 75)

 *** FAC Database: Component Summary Report #1 ***

SELECTION CRITERIA:

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

Component Name	Br./Small End OD (in)	R/D Ratio	Orient Angle (Deg.)	Pipe Length (in)	Design Press. (psig)	Design Temp. (Deg.F)	Op. Press. (psig)	Op. Temp. (Deg.F)	Op. Enth. (Btu/lbm)	Op. Qual.	Flow Rate U/S Mn. (Mlbm/hr)	D/S Mn. Branch	Orifice/ valve size (in)	Valve Coef.
Line Name : CD-01.1A FWH 31A to FWH 32A														
CD-01.1A-01N	0.000	0.00	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1A-02P	0.000	0.00	30.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1A-03E	0.000	1.50	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1A-04P	0.000	0.00	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1A-05E	0.000	1.50	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1A-06E	0.000	1.50	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1A-07E	0.000	1.50	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1A-08P	0.000	0.00	180.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1A-09E	0.000	1.50	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1A-10P	0.000	0.00	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1A-11E	0.000	1.50	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1A-12P	0.000	0.00	30.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1A-13N	0.000	0.00	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
Line Name : CD-01.1B FWH 31B to FWH 32B														
CD-01.1B-01N	0.000	0.00	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1B-02P	0.000	0.00	30.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1B-03E	0.000	1.50	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1B-04P	0.000	0.00	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1B-05E	0.000	1.50	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1B-06E	0.000	1.50	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1B-07E	0.000	1.50	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1B-08P	0.000	0.00	180.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1B-09E	0.000	1.50	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1B-10P	0.000	0.00	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1B-11E	0.000	1.50	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1B-12P	0.000	0.00	30.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
CD-01.1B-13N	0.000	0.00	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----
Line Name : CD-01.1C FWH 31C to FWH 32C														
CD-01.1C-01N	0.000	0.00	90.00	0.00	665.00	400.00	-10.40	155.70	0.000	0.000	3.1260	----	----	-----

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

CD-02.1B-01N	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----
CD-02.1B-02P	0.000	0.00	30.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----
CD-02.1B-03E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----
CD-02.1B-04P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----
CD-02.1B-05E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----
CD-02.1B-06E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----
CD-02.1B-07V	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	0.000	0.00
CD-02.1B-08P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	0.000	0.00
CD-02.1B-09E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----
CD-02.1B-10P	0.000	0.00	0.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----

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

CD-02.1C-01N	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----
CD-02.1C-02P	0.000	0.00	30.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----
CD-02.1C-03E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----
CD-02.1C-04P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----
CD-02.1C-05E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----
CD-02.1C-06E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----
CD-02.1C-07P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----
CD-02.1C-08V	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	0.000	0.00
CD-02.1C-09P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	0.000	0.00
CD-02.1C-10E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----
CD-02.1C-11P	0.000	0.00	0.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	----	----	----	----

Line Name : CD-02.2 FWH 32 OUT HDR

CD-02.1B-11T	14.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	3.1260	6.2520	3.1260	----	----
CD-02.2-01P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	6.2520	----	----	----	----
CD-02.2-03P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	6.2520	----	----	----	----
CD-02.2-02R	20.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	6.2520	6.2520	----	----	----

Line Name : CD-02.3 FWH 32 OUT HDR

CD-02.1C-12T	14.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	6.2520	9.3780	3.1260	----	----
CD-02.3-01P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	9.3780	----	----	----	----
CD-02.3-02T	12.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	9.3780	9.3780	0.0000	----	----
CD-02.3-03P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	9.3780	----	----	----	----
CD-02.3-04E	0.000	1.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	9.3780	----	----	----	----
CD-02.3-05E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	9.3780	----	----	----	----
CD-02.3-06P	0.000	0.00	180.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	9.3780	----	----	----	----
CD-02.3-07E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	9.3780	----	----	----	----
CD-02.3-08P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	9.3780	----	----	----	----
CD-02.3-09E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	9.3780	----	----	----	----
CD-02.3-10P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	9.3780	----	----	----	----
CD-02.3-16P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	9.3780	----	----	----	----
CD-02.3-11E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	9.3780	----	----	----	----
CD-02.3-12P	0.000	0.00	180.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	9.3780	----	----	----	----
CD-02.3-13E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	9.3780	----	----	----	----
CD-02.3-14P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	9.3780	----	----	----	----
CD-02.3-15T	18.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	9.3780	8.8780	0.5000	----	----

IPEC00029000

Line Name : CD-02.4 FWH 32 OUT HDR

CD-02.3-17P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	8.8780	----	----	----	----
CD-02.4-01R	20.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	8.8780	8.8780	----	----	----
CD-02.4-02V	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	8.8780	----	----	0.000	0.00
CD-02.4-03P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	8.8780	----	----	0.000	0.00
CD-02.4-04E	20.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	8.8780	8.8780	----	----	----
CD-02.5-01P	0.000	0.00	0.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	8.8780	----	----	----	----
CD-02.5-02E	0.000	1.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	8.8780	----	----	----	----

Line Name : CD-02.5 FWH 32 OUT HDR

CD-02.5-03T	18.000	0.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	8.8780	9.3780	0.5000	----	----
CD-02.5-04T	14.000	0.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	9.3780	6.2520	3.1260	----	----

Line Name : CD-02.6 FWH 32 OUT HDR

CD-02.6-01T	12.000	0.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	6.2520	6.2520	0.0000	----	----
CD-02.6-02P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	6.2520	----	----	----	----
CD-02.6-03T	14.000	0.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	6.2520	3.1260	3.1260	----	----

Line Name : CD-02.8A HDR to FWH 33A

CD-02.7-01P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.7-02T	14.000	0.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	0.000000	3.1260	----	----	----
CD-02.8A-01P	0.000	0.00	0.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8A-02E	0.000	1.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8A-03P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8A-04V	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	0.000	0.00
CD-02.8A-05E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8A-06P	0.000	0.00	0.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8A-07E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8A-08N	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----

Line Name : CD-02.8B HDR to FWH 33B

CD-02.8B-01P	0.000	0.00	0.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8B-02E	0.000	1.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8B-03P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8B-04V	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	0.000	0.00
CD-02.8B-05E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8B-06P	0.000	0.00	0.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8B-07E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8B-08N	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----

Line Name : CD-02.8C HDR to FWH 33C

CD-02.8C-01P	0.000	0.00	0.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8C-02E	0.000	1.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8C-03P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8C-04V	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	0.000	0.00
CD-02.8C-05E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8C-06P	0.000	0.00	0.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----
CD-02.8C-07E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	195.50	0.000	0.000	3.1260	----	----	----	----

CD-02.8C-08N 0.000 0.00 90.00 0.00 665.00 400.00 -5.10 195.50 0.000 0.000 3.1260 ---- ---- -----

Line Name : CD-02.9 FWH HDR to SGBD HX3

CD-02.9-01P	0.000	0.00	0.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.9-02E	0.000	1.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.9-03P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.9-04V	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	0.000	0.00
CD-02.9-05P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	0.000	0.00
CD-02.9-06E	0.000	1.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.9-07P	0.000	0.00	180.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.9-08E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.9-09P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.9-10P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.9-11E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.9-12P	0.000	0.00	180.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.9-13E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.9-14P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.9-15P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.9-16E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.9-17T	8.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000		----	----	-----	-----
CD-02.10-01P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.10-02O	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	4.800	-----
CD-02.10-03P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	4.800	-----
CD-02.10-04E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.10-05P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.10-06E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.10-07P	0.000	0.00	180.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.10-08E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.10-09P	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.10-10E	0.000	1.50	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----
CD-02.10-11N	0.000	0.00	90.00	0.00	665.00	400.00	-5.10	191.20	0.000	0.000	0.5000	----	----	-----	-----

Line Name : CD-03.1A FWH 33A to FWH 34A

CD-03.1A-01N	0.000	0.00	90.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----
CD-03.1A-02E	0.000	1.50	90.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----
CD-03.1A-03E	0.000	1.50	90.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----
CD-03.1A-04P	0.000	0.00	180.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----
CD-03.1A-05E	0.000	1.50	90.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----
CD-03.1A-15P	0.000	0.00	135.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----
CD-03.1A-06E	0.000	1.00	90.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----
CD-03.1A-07P	0.000	0.00	90.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----
CD-03.1A-14P	0.000	0.00	90.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----
CD-03.1A-08E	0.000	1.50	90.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----
CD-03.1A-09P	0.000	0.00	90.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----
CD-03.1A-10E	0.000	1.00	90.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----
CD-03.1A-11P	0.000	0.00	0.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----
CD-03.1A-12E	0.000	1.50	90.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----
CD-03.1A-13N	0.000	0.00	90.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----

Line Name : CD-03.1B FWH 33B to FWH 34B

CD-03.1B-01N	0.000	0.00	90.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----
CD-03.1B-02E	0.000	1.50	90.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----
CD-03.1B-03E	0.000	1.50	90.00	0.00	665.00	400.00	12.00	243.80	0.000	0.000	3.1260	----	----	-----	-----

CD-05.1C-04P	0.000	0.00	180.00	0.00	665.00	400.00	162.10	371.60	0.000	0.000	3.1260	----	----	-----	-----
CD-05.1C-05V	0.000	0.00	180.00	0.00	665.00	400.00	162.10	371.60	0.000	0.000	3.1260	----	----	0.000	0.00
CD-05.1C-06P	0.000	0.00	180.00	0.00	665.00	400.00	162.10	371.60	0.000	0.000	3.1260	----	----	0.000	0.00
CD-05.1C-07E	0.000	1.50	90.00	0.00	665.00	400.00	162.10	371.60	0.000	0.000	3.1260	----	----	-----	-----
CD-05.1C-08E	0.000	1.50	90.00	0.00	665.00	400.00	162.10	371.60	0.000	0.000	3.1260	----	----	-----	-----
CD-05.1C-09P	0.000	0.00	90.00	0.00	665.00	400.00	162.10	371.60	0.000	0.000	3.1260	----	----	-----	-----

Line Name : CD-05.3 FWH 35 OUT HDR

CD-05.1B-09T	14.000	0.00	90.00	0.00	665.00	400.00	162.10	371.60	0.000	0.000	3.1260	6.2520	3.1260	-----	-----
CD-05.3-01P	0.000	0.00	90.00	0.00	665.00	400.00	162.10	371.60	0.000	0.000	6.2520	----	----	-----	-----

Line Name : CD-05.4 FWH 35 OUT HDR

CD-05.1C-10T	14.000	0.00	90.00	0.00	665.00	400.00	162.10	371.60	0.000	0.000	6.2520	9.3780	3.1260	-----	-----
CD-05.4-04P	0.000	0.00	90.00	0.00	665.00	400.00	162.10	371.60	0.000	0.000	9.3780	----	----	-----	-----
CD-05.4-01E	0.000	1.00	90.00	0.00	665.00	400.00	162.10	371.60	0.000	0.000	9.3780	----	----	-----	-----
CD-05.4-02P	0.000	0.00	180.00	0.00	665.00	400.00	162.10	371.60	0.000	0.000	9.3780	----	----	-----	-----
CD-05.4-03T	24.000	0.00	90.00	0.00	665.00	400.00	162.10	371.60	0.000	0.000	0.000000	9.3780	9.3780	-----	-----
CD-05.4-05P	0.000	0.00	90.00	0.00	665.00	400.00	162.10	371.60	0.000	0.000	9.3780	----	----	-----	-----

Line Name : CD-06.1 FWH 35 OUT HDR

CD-06.1-01T	16.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	9.3780	13.0250	3.6470	-----	-----
CD-06.1-02P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	13.0250	----	----	-----	-----
CD-06.1-03T	24.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	13.0250	6.5125	6.5125	-----	-----

Line Name : CD-06.2A HDR to BFP 31

CD-06.2A-01P	0.000	0.00	0.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-02E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-03P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-04E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-05P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-06E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-07V	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	0.000	0.00
CD-06.2A-08P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	0.000	0.00
CD-06.2A-09E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-10P	0.000	0.00	180.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-11E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-12P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-13E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-14P	0.000	0.00	0.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-15E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-16P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-17E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-18P	0.000	0.00	180.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-19E	0.000	1.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-20E	0.000	1.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-21P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-22P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-23P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-24O	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	15.666	-----
CD-06.2A-25P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	15.666	-----
CD-06.2A-26E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----

CD-06.2A-27P	0.000	0.00	0.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-28E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-29P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-30E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-31E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-32P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-33E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2A-34P	0.000	0.00	180.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.3A-01R	18.000	0.00	180.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	6.5120	----	----	-----
CD-06.3A-02N	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----

Line Name : CD-06.2B HDR to BFP 32

CD-06.2B-01R	24.000	0.00	90.00	0.00	625.00	400.00	156.40	368.95	0.000	0.000	6.5120	6.5120	----	----	-----
CD-06.2B-02P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2B-35P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2B-03T	12.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	6.5120	0.0000	----	-----
CD-06.2B-04T	24.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	0.000000	6.5120	-----	-----
CD-06.2B-05V	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	0.000	0.00
CD-06.2B-06E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2B-07P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2B-36P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2B-08O	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	15.666	-----
CD-06.2B-09P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	15.666	-----
CD-06.2B-10E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2B-11P	0.000	0.00	0.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2B-12E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2B-13P	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2B-14E	0.000	1.50	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.2B-15P	0.000	0.00	180.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----
CD-06.3B-01R	18.000	0.00	180.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	6.5120	----	----	-----
CD-06.3B-02N	0.000	0.00	90.00	0.00	665.00	400.00	156.40	368.95	0.000	0.000	6.5120	----	----	-----	-----

Line Name : EX-01.1 HP EXT to FWH 36 HDR

EX-01.1-01N	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.3530	----	----	-----	-----
EX-01.1-02E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	1136.830	0.000	0.3530	----	----	-----	-----
EX-01.1-03P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.830	0.000	0.3530	----	----	-----	-----
EX-01.1-04E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	1136.810	0.000	0.3530	----	----	-----	-----
EX-01.1-05P	0.000	0.00	180.00	0.00	450.00	450.00	333.70	0.00	1136.830	0.000	0.3530	----	----	-----	-----
EX-01.1-06E	0.000	1.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.3530	----	----	-----	-----
EX-01.1-07P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.3530	----	----	-----	-----
EX-01.1-08R	12.750	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.3530	0.3530	----	----	-----
EX-01.6-01P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.810	0.000	0.3530	----	----	-----	-----

Line Name : EX-01.2 HP EXT to FWH 36 HDR

EX-01.2-01N	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.3530	----	----	-----	-----
EX-01.2-02E	0.000	1.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.830	0.000	0.3530	----	----	-----	-----
EX-01.2-03P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.830	0.000	0.3530	----	----	-----	-----
EX-01.2-04E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.3530	----	----	-----	-----
EX-01.2-05P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.810	0.000	0.3530	----	----	-----	-----
EX-01.2-06E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	1136.850	0.000	0.3530	----	----	-----	-----
EX-01.2-07P	0.000	0.00	180.00	0.00	450.00	450.00	333.70	0.00	1136.810	0.000	0.3530	----	----	-----	-----
EX-01.2-08E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.3530	----	----	-----	-----
EX-01.2-09P	0.000	0.00	135.00	0.00	450.00	450.00	333.70	0.00	1136.820	0.000	0.3530	----	----	-----	-----

Line Name : EX-01.3 HP EXT FWH 36 HEADER

EX-01.2-10L	12.750	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.810	0.000	0.3530	0.7060	0.3530	-----	-----
EX-01.3-01P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.830	0.000	0.7060	-----	-----	-----	-----
EX-01.3-02E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.7060	-----	-----	-----	-----
EX-01.3-03P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.7060	-----	-----	-----	-----
EX-01.3-04T	6.625	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.810	0.000	0.7060	0.7060	0.0000	-----	-----
EX-01.3-05P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.830	0.000	0.7060	-----	-----	-----	-----
EX-01.3-06V	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.7060	-----	-----	0.000	0.00
EX-01.3-07V	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.7060	-----	-----	0.000	0.00
EX-01.3-08V	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.7060	-----	-----	0.000	0.00
EX-01.3-09E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.7060	-----	-----	-----	-----
EX-01.3-10P	0.000	0.00	180.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.7060	-----	-----	-----	-----
EX-01.3-11T	4.500	0.00	180.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.7060	0.7060	0.0000	-----	-----
EX-01.3-12P	0.000	0.00	180.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.7060	-----	-----	-----	-----
EX-01.3-13E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.7060	-----	-----	-----	-----
EX-01.3-14P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.7060	-----	-----	-----	-----
EX-01.3-15E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.7060	-----	-----	-----	-----
EX-01.3-16P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.830	0.000	0.7060	-----	-----	-----	-----
EX-01.3-17T	6.625	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.830	0.000	0.7060	0.7060	0.0000	-----	-----
EX-01.3-19E	0.000	1.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.830	0.000	0.7060	-----	-----	-----	-----
EX-01.3-20P	0.000	0.00	0.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.7060	-----	-----	-----	-----
EX-01.3-21E	0.000	1.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.7060	-----	-----	-----	-----
EX-01.3-22P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.830	0.000	0.7060	-----	-----	-----	-----
EX-01.3-23T	12.750	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.820	0.000	0.7060	0.4710	0.2350	-----	-----

Line Name : EX-01.4 HP EXT FWH 36 HEADER

EX-01.4-01P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.830	0.000	0.4710	-----	-----	-----	-----
EX-01.4-02T	12.750	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.830	0.000	0.4710	0.2360	0.2350	-----	-----

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

EX-01.7-01P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.2350	-----	-----	-----	-----
EX-01.5A-01R	12.750	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.810	0.000	0.2350	0.2350	-----	-----	-----
EX-01.5A-02P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.810	0.000	0.2350	-----	-----	-----	-----
EX-01.5A-03E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	1136.810	0.000	0.2350	-----	-----	-----	-----
EX-01.5A-04P	0.000	0.00	180.00	0.00	450.00	450.00	333.70	0.00	1136.810	0.000	0.2350	-----	-----	-----	-----
EX-01.5A-05E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	1136.810	0.000	0.2350	-----	-----	-----	-----
EX-01.5A-06P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.820	0.000	0.2350	-----	-----	-----	-----
EX-01.5A-16L	3.500	0.00	90.00	0.00	450.00	450.00	333.70	0.00	905.640	0.000	0.2350	0.3681	0.1331	-----	-----
EX-01.5A-07L	3.500	0.00	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.3681	0.5007	0.1326	-----	-----
EX-01.5A-08P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	-----	-----	-----	-----
EX-01.5A-09E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	-----	-----	-----	-----
EX-01.5A-10P	0.000	0.00	0.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	-----	-----	-----	-----
EX-01.5A-11V	0.000	0.00	0.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	-----	-----	0.000	0.00
EX-01.5A-12P	0.000	0.00	0.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	-----	-----	0.000	0.00
EX-01.5A-13E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	-----	-----	-----	-----
EX-01.5A-17P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5010	-----	-----	-----	-----
EX-01.5A-14E	0.000	1.00	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	-----	-----	-----	-----
EX-01.5A-15N	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	-----	-----	-----	-----

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

EX-01.5B-01P	0.000	0.00	180.00	0.00	450.00	450.00	333.70	0.00	1136.830	0.000	0.2350	----	----	-----	-----
EX-01.5B-02E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	1136.820	0.000	0.2350	----	----	-----	-----
EX-01.5B-03P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.859	0.000	0.2350	----	----	-----	-----
EX-01.5B-14L	3.500	0.00	90.00	0.00	450.00	450.00	333.70	0.00	905.640	0.000	0.2350	0.3681	0.1331	-----	-----
EX-01.5B-04L	3.500	0.00	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.3681	0.5007	0.1326	-----	-----
EX-01.5B-05P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	-----	-----
EX-01.5B-06E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	-----	-----
EX-01.5B-07E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	-----	-----
EX-01.5B-08P	0.000	0.00	0.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	-----	-----
EX-01.5B-09V	0.000	0.00	0.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	0.000	0.00
EX-01.5B-10P	0.000	0.00	0.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	0.000	0.00
EX-01.5B-11E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	-----	-----
EX-01.5B-15P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5010	----	----	-----	-----
EX-01.5B-12E	0.000	1.00	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	-----	-----
EX-01.5B-13N	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	-----	-----

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

EX-01.5C-01P	0.000	0.00	180.00	0.00	450.00	450.00	333.70	0.00	1136.810	0.000	0.2350	----	----	-----	-----
EX-01.5C-02E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	1136.810	0.000	0.2350	----	----	-----	-----
EX-01.5C-03P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	1136.810	0.000	0.2350	----	----	-----	-----
EX-01.5C-14L	3.500	0.00	90.00	0.00	450.00	450.00	333.70	0.00	905.640	0.000	0.2350	0.3681	0.1331	-----	-----
EX-01.5C-04L	3.500	0.00	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.3681	0.5007	0.1326	-----	-----
EX-01.5C-05P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	-----	-----
EX-01.5C-06E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	-----	-----
EX-01.5C-07E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5010	----	----	-----	-----
EX-01.5C-08P	0.000	0.00	0.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	-----	-----
EX-01.5C-09V	0.000	0.00	0.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	0.000	0.00
EX-01.5C-10P	0.000	0.00	0.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	0.000	0.00
EX-01.5C-11E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	-----	-----
EX-01.5C-15P	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5010	----	----	-----	-----
EX-01.5C-12E	0.000	1.00	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	-----	-----
EX-01.5C-13N	0.000	0.00	90.00	0.00	450.00	450.00	333.70	0.00	796.929	0.000	0.5007	----	----	-----	-----

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

EX-02.1-01N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.1-02P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.1-03E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.1-04P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.1-05O	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	7.500	-----
EX-02.1-06T	10.750	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.000000	0.0865	0.0865	-----	-----
EX-02.5-01P	0.000	0.00	180.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0865	----	----	-----	-----

Line Name : EX-02.11 PSEP1B 14" to 35 HDR

EX-02.11-02P	0.000	0.00	135.00	0.00	250.00	400.00	170.90	0.00	1192.180	0.000	0.2920	----	----	-----	-----
EX-02.11-03E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1192.180	0.000	0.2920	----	----	-----	-----
EX-02.11-04P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1192.180	0.000	0.2920	----	----	-----	-----
EX-02.11-06O	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1192.180	0.000	0.2920	----	----	10.000	-----

Line Name : EX-02.12 PSEP 1B&2B to 35 HDR

EX-02.9-10T	10.750	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0865	0.1730	0.0865	-----	-----
EX-02.12-01P	0.000	0.00	180.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.1730	----	----	-----	-----

Line Name : EX-02.13 PSEP 1B&2B to 35 HDR

EX-02.11-05T	14.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.570	0.000	0.1730	0.4650	0.2920	-----	-----
EX-02.13-01P	0.000	0.00	180.00	0.00	250.00	400.00	170.90	0.00	1179.580	0.000	0.4650	-----	-----	-----	-----
EX-02.13-02B	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1179.580	0.000	0.4650	-----	-----	-----	-----
EX-02.13-03E	0.000	1.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.580	0.000	0.4650	-----	-----	-----	-----
EX-02.13-03P	0.000	0.00	135.00	0.00	250.00	400.00	170.90	0.00	1179.580	0.000	0.4650	-----	-----	-----	-----
EX-02.13-04E	0.000	1.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.580	0.000	0.4650	-----	-----	-----	-----
EX-02.13-05P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.580	0.000	0.4650	-----	-----	-----	-----
EX-02.13-06R	18.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.580	0.000	0.4650	0.4650	-----	-----	-----

Line Name : EX-02.14 FWH 35 HEADER

EX-02.7-02T	18.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.4640	0.9290	0.4650	-----	-----
EX-02.14-01P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	-----	-----
EX-02.14-02E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	-----	-----
EX-02.14-03P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	-----	-----
EX-02.14-04T	6.625	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	0.9290	0.0000	-----	-----
EX-02.14-05P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	-----	-----
EX-02.14-06E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1179.590	0.000	0.9290	-----	-----	-----	-----
EX-02.14-07P	0.000	0.00	0.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	-----	-----
EX-02.14-08E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	-----	-----
EX-02.14-09P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	-----	-----
EX-02.14-10V	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	23.000	0.00
EX-02.14-11V	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	0.000	0.00
EX-02.14-12P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	0.000	0.00
EX-02.14-13V	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	0.000	0.00
EX-02.14-31P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	0.000	0.00
EX-02.14-14E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1179.600	0.000	0.9290	-----	-----	-----	-----
EX-02.14-32T	10.750	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	0.9290	0.0000	-----	-----
EX-02.14-16E	0.000	1.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	-----	-----
EX-02.14-17P	0.000	0.00	180.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	-----	-----
EX-02.14-18E	0.000	1.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	-----	-----
EX-02.14-19P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	-----	-----
EX-02.14-20E	0.000	1.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	-----	-----
EX-02.14-21P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	-----	-----
EX-02.14-33P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.600	0.000	0.9290	-----	-----	-----	-----
EX-02.14-22T	6.625	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	0.9290	0.0000	-----	-----
EX-02.14-23P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	-----	-----
EX-02.14-24E	0.000	1.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	-----	-----
EX-02.14-25E	0.000	1.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	-----	-----	-----	-----
EX-02.14-26P	0.000	0.00	0.00	0.00	250.00	400.00	170.90	0.00	1179.560	0.000	0.9290	-----	-----	-----	-----
EX-02.14-27E	0.000	1.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.580	0.000	0.9290	-----	-----	-----	-----
EX-02.14-28P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.560	0.000	0.9290	-----	-----	-----	-----
EX-02.14-29T	18.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.9290	0.6190	0.3100	-----	-----

Line Name : EX-02.15 FWH 35 HEADER

EX-02.15-01P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.580	0.000	0.6190	-----	-----	-----	-----
EX-02.15-02T	18.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.580	0.000	0.6190	0.3090	0.3100	-----	-----

Line Name : EX-02.16 HDR 35 to FWH 35A

EX-02.19-01P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.560	0.000	0.3100	-----	-----	-----	-----
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EX-02.16-01R	18.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.3100	0.3100	----	-----	-----
EX-02.16-02P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.560	0.000	0.3100	----	----	-----	-----
EX-02.16-03E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1179.580	0.000	0.3100	----	----	-----	-----
EX-02.16-04P	0.000	0.00	0.00	0.00	250.00	400.00	170.90	0.00	1179.580	0.000	0.3100	----	----	-----	-----
EX-02.16-05V	0.000	0.00	0.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.3100	----	----	0.000	0.00
EX-02.16-06E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1179.560	0.000	0.3100	----	----	-----	-----
EX-02.16-07P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.560	0.000	0.3100	----	----	-----	-----
EX-02.16-08E	0.000	1.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.560	0.000	0.3100	----	----	-----	-----
EX-02.16-09N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.3100	----	----	-----	-----

Line Name : EX-02.17 HDR 35 to FWH 35B

EX-02.17-01P	0.000	0.00	0.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.3100	----	----	-----	-----
EX-02.17-02V	0.000	0.00	0.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.3100	----	----	0.000	0.00
EX-02.17-03E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1179.560	0.000	0.3100	----	----	-----	-----
EX-02.17-04P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.560	0.000	0.3100	----	----	-----	-----
EX-02.17-05E	0.000	1.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.560	0.000	0.3100	----	----	-----	-----
EX-02.17-06N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.600	0.000	0.3100	----	----	-----	-----

Line Name : EX-02.18 HDR 35 to FWH 35C

EX-02.18-01P	0.000	0.00	0.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.3100	----	----	-----	-----
EX-02.18-02V	0.000	0.00	0.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.3100	----	----	0.000	0.00
EX-02.18-03E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1179.560	0.000	0.3100	----	----	-----	-----
EX-02.18-04P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.560	0.000	0.3100	----	----	-----	-----
EX-02.18-05E	0.000	1.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.590	0.000	0.3100	----	----	-----	-----
EX-02.18-06N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.610	0.000	0.3100	----	----	-----	-----

Line Name : EX-02.2 PSEP 1A 10" to 35 HDR

EX-02.2-01N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.2-02P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.2-03E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.2-04P	0.000	0.00	117.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.2-05E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.2-06P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.2-08O	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	10.020	-----

Line Name : EX-02.4 PSEP2A 14" to 35 HDR

EX-02.4-02P	0.000	0.00	129.00	0.00	250.00	400.00	170.90	0.00	1192.180	0.000	0.2920	----	----	-----	-----
EX-02.4-03E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1192.180	0.000	0.2920	----	----	-----	-----
EX-02.4-04P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1192.180	0.000	0.2920	----	----	-----	-----
EX-02.4-06O	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1192.180	0.000	0.2920	----	----	10.000	-----

Line Name : EX-02.6 PSEP 1A&2A to 35 HDR

EX-02.2-07T	10.750	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0865	0.1730	0.0865	-----	-----
EX-02.6-01P	0.000	0.00	180.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.1730	----	----	-----	-----

Line Name : EX-02.7 PSEP 1A&2A to 35 HDR

EX-02.4-05T	14.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1179.580	0.000	0.1730	0.4650	0.2920	-----	-----
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EX-02.7-01P	0.000	0.00	180.00	0.00	250.00	400.00	170.90	0.00	1179.580	0.000	0.4650	----	----	-----	-----
Line Name : EX-02.8 PSEP 2B 10" to 35 HDR															
EX-02.8-01N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.8-02E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.8-03P	0.000	0.00	113.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.8-04E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.8-05P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.8-06E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.8-07O	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	7.500	-----
EX-02.8-08T	10.750	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.000000	0.0860	0.0860	-----	-----
Line Name : EX-02.9 PSEP 1B 10" to 35 HDR															
EX-02.9-01N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.9-02P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.9-03E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.9-04P	0.000	0.00	150.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.9-05E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.9-06P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.9-07P	0.000	0.00	180.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.9-07E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.9-08P	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.9-09E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.9-10P	0.000	0.00	0.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	-----	-----
EX-02.9-11O	0.000	0.00	90.00	0.00	250.00	400.00	170.90	0.00	1158.300	0.000	0.0860	----	----	10.020	-----
Line Name : EX-03.1A LP EXT 12 to FWH 34A															
EX-03.1A-01N	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-02P	0.000	0.00	180.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-03E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-42X	0.000	0.00	90.00	18.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	17.550	-----
EX-03.1A-04P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	17.550	-----
EX-03.1A-05T	6.625	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	0.1676	0.0000	-----	-----
EX-03.1A-06E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-07E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-40P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-08V	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	0.000	0.00
EX-03.1A-09P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	0.000	0.00
EX-03.1A-10V	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	0.000	0.00
EX-03.1A-11P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	0.000	0.00
EX-03.1A-12E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-13P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-14E	0.000	1.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-15P	0.000	0.00	180.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-16E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-17P	0.000	0.00	135.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-18E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-20E	0.000	1.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-21P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-22T	6.625	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	0.1676	0.0000	-----	-----
EX-03.1A-23P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-24E	0.000	1.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1A-25P	0.000	0.00	0.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----

EX-03.1C-01N	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-02P	0.000	0.00	180.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-03E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-41X	0.000	0.00	90.00	18.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	17.550	-----
EX-03.1C-04P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	17.550	-----
EX-03.1C-05T	6.625	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	0.1676	0.0000	-----	-----
EX-03.1C-06E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-07E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-08P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-09V	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	0.000	0.00
EX-03.1C-10P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	0.000	0.00
EX-03.1C-11V	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	0.000	0.00
EX-03.1C-12P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	0.000	0.00
EX-03.1C-13E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-14P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-15E	0.000	1.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-16P	0.000	0.00	180.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-17E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-18P	0.000	0.00	135.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-19E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-20P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-21E	0.000	1.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-22E	0.000	1.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-23P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-24T	6.625	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	0.1676	0.0000	-----	-----
EX-03.1C-25P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-26E	0.000	1.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-27E	0.000	1.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-28P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-29E	0.000	1.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-30P	0.000	0.00	180.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-31E	0.000	1.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-32P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-33T	6.625	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	0.1676	0.0000	-----	-----
EX-03.1C-34P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-35E	0.000	1.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-36P	0.000	0.00	0.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-37E	0.000	1.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-38P	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-39E	0.000	1.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----
EX-03.1C-40N	0.000	0.00	90.00	0.00	100.00	400.00	49.88	0.00	1177.400	0.000	0.1676	----	----	-----	-----

Line Name : EX-04.1 LPEX14 to FWH33A HDR

EX-04.1-01N	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.1-08X	0.000	0.00	180.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	17.550	-----
EX-04.1-02E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.1-03E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.1-04P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.1-05E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.1-07P	0.000	0.00	180.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.1-06T	20.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.570	0.000	0.000000	0.0793	0.0793	-----	-----
EX-04.3-01P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----

Line Name : EX-04.11 LPEX FWH 33B IN HDR

EX-04.9-09T	20.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	0.1586	0.0793	-----	-----
EX-04.11-01P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	-----	-----	-----	-----
EX-04.11-02T	6.625	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	0.1586	0.0000	-----	-----
EX-04.11-03P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	-----	-----	-----	-----
EX-04.11-04V	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	-----	-----	24.000	0.00
EX-04.11-05P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	-----	-----	24.000	0.00
EX-04.11-06V	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	-----	-----	0.000	0.00
EX-04.11-07P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	-----	-----	0.000	0.00
EX-04.11-08E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	-----	-----	-----	-----
EX-04.11-09E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	-----	-----	-----	-----
EX-04.11-10P	0.000	0.00	135.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	-----	-----	-----	-----
EX-04.11-11E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	-----	-----	-----	-----
EX-04.11-12P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	-----	-----	-----	-----
EX-04.11-13E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	-----	-----	-----	-----
EX-04.11-14P	0.000	0.00	180.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	-----	-----	-----	-----
EX-04.11-15E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	-----	-----	-----	-----
EX-04.11-16P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	-----	-----	-----	-----
EX-04.11-17T	6.625	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	0.1586	0.0000	-----	-----
EX-04.11-18P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.560	0.000	0.1586	-----	-----	-----	-----
EX-04.11-20P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	-----	-----	-----	-----
EX-04.11-19T	20.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	0.0793	0.0793	-----	-----

Line Name : EX-04.13 LP EXT 32 to FWH 33B

EX-04.12-01P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	-----	-----
EX-04.13-01R	20.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	0.0793	-----	-----	-----
EX-04.13-02P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.560	0.000	0.0793	-----	-----	-----	-----
EX-04.13-07T	2.375	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	0.0793	0.0000	-----	-----
EX-04.13-03E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	-----	-----
EX-04.13-04P	0.000	0.00	0.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	-----	-----
EX-04.13-05E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	-----	-----
EX-04.13-06N	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	-----	-----

Line Name : EX-04.14 LP EXT 32 to FWH 33B

EX-04.14-01P	0.000	0.00	0.00	0.00	50.00	300.00	13.15	0.00	1120.570	0.000	0.0793	-----	-----	-----	-----
EX-04.14-02E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	-----	-----
EX-04.14-03N	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	-----	-----

Line Name : EX-04.15 LPEX14 to FWH33C HDR

EX-04.15-01N	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	-----	-----
EX-04.15-08X	0.000	0.00	180.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	17.550	-----
EX-04.15-02E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	-----	-----
EX-04.15-03E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	-----	-----
EX-04.15-04P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	-----	-----
EX-04.15-05E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	-----	-----
EX-04.15-07P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	-----	-----
EX-04.15-06T	20.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.000000	0.0793	0.0793	-----	-----
EX-04.17-01P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	-----	-----

Line Name : EX-04.16 LPEX13 to FWH33C HDR

EX-04.16-01N	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	-----	-----
EX-04.16-10X	0.000	0.00	180.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	-----	-----	17.550	-----

EX-04.16-02E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.16-03E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.16-04P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.16-05E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.16-06P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.16-07E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.16-08P	0.000	0.00	180.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----

Line Name : EX-04.18 LPEX FWH 33C IN HDR

EX-04.16-09T	20.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	0.1586	0.0793	-----	-----
EX-04.18-01P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.18-02T	6.625	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	0.1586	0.0000	-----	-----
EX-04.18-03P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.18-04V	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	24.000	0.00
EX-04.18-05P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	24.000	0.00
EX-04.18-06V	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	0.000	0.00
EX-04.19-01R	24.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	0.1586	----	-----	-----
EX-04.19-02V	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	0.000	0.00
EX-04.19-03R	24.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	0.1586	----	-----	-----
EX-04.20-01P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.20-02E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.20-03P	0.000	0.00	180.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.20-04E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.20-05P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.20-06E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.20-07P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.20-08E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.20-09P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.20-10E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.20-11P	0.000	0.00	180.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.20-12E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.20-13P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.20-14T	6.625	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	0.1586	0.0000	-----	-----
EX-04.20-15P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.20-16T	20.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.560	0.000	0.1586	0.0793	0.0793	-----	-----

Line Name : EX-04.2 LPEX13 to FWH33A HDR

EX-04.2-01N	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.2-10X	0.000	0.00	180.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	17.550	-----
EX-04.2-02E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.2-03E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.2-04P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.2-05E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.2-06P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.2-07E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.2-08P	0.000	0.00	180.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----

Line Name : EX-04.21 LP EXT 31 to FWH 33C

EX-04.20-17P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.21-01R	20.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	0.0793	----	-----	-----
EX-04.21-02P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.570	0.000	0.0793	----	----	-----	-----
EX-04.21-07T	2.375	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	0.0793	0.0000	-----	-----
EX-04.21-03E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----

EX-04.21-04P	0.000	0.00	0.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.21-05E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.21-06N	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----

Line Name : EX-04.22 LP EXT 31 to FWH 33C

EX-04.22-01P	0.000	0.00	0.00	0.00	50.00	300.00	13.15	0.00	1120.570	0.000	0.0793	----	----	-----	-----
EX-04.22-02E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.22-03N	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----

Line Name : EX-04.4 LPEX FWH 33A IN HDR

EX-04.2-09T	20.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	0.1586	0.0793	-----	-----
EX-04.4-01P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.4-02T	6.625	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	0.1586	0.0000	-----	-----
EX-04.4-03P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.4-04V	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	24.000	0.00
EX-04.4-05P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	24.000	0.00
EX-04.4-06V	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	0.000	0.00
EX-04.4-07P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	0.000	0.00
EX-04.4-08E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.4-09P	0.000	0.00	180.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.4-10E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.4-11P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.4-12E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.4-13P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.4-14E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.4-15P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.4-16E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.4-17P	0.000	0.00	180.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.4-18E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.4-19P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.4-20T	6.625	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	0.1586	0.0000	-----	-----
EX-04.4-21P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.560	0.000	0.1586	----	----	-----	-----
EX-04.4-23P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.1586	----	----	-----	-----
EX-04.4-22T	20.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.570	0.000	0.1586	0.0793	0.0793	-----	-----

Line Name : EX-04.6 LP EXT to FWH 33A

EX-04.5-01P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.560	0.000	0.0793	----	----	-----	-----
EX-04.6-01R	20.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	0.0793	----	-----	-----
EX-04.6-02P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.570	0.000	0.0793	----	----	-----	-----
EX-04.6-07T	2.375	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.570	0.000	0.0793	0.0793	0.0000	-----	-----
EX-04.6-03E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.570	0.000	0.0793	----	----	-----	-----
EX-04.6-04P	0.000	0.00	0.00	0.00	50.00	300.00	13.15	0.00	1120.570	0.000	0.0793	----	----	-----	-----
EX-04.6-05E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.6-06N	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----

Line Name : EX-04.7 LP EXT to FWH 33A

EX-04.7-01P	0.000	0.00	0.00	0.00	50.00	300.00	13.15	0.00	1120.570	0.000	0.0793	----	----	-----	-----
EX-04.7-02E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.7-03N	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----

Line Name : EX-04.8 LPEX14 to FWH33B HDR

EX-04.8-01N	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.8-08X	0.000	0.00	180.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	17.550	-----
EX-04.8-02E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.8-03E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.8-04P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.8-05E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.8-07P	0.000	0.00	180.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.8-06T	20.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.000000	0.0793	0.0793	-----	-----
EX-04.10-01P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----

Line Name : EX-04.9 LPEX13 to FWH33B HDR

EX-04.9-01N	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.9-10X	0.000	0.00	180.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	17.550	-----
EX-04.9-02E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.9-03E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.9-04P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.9-05E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.9-06P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.9-07E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----
EX-04.9-08P	0.000	0.00	180.00	0.00	50.00	300.00	13.15	0.00	1120.600	0.000	0.0793	----	----	-----	-----

Line Name : EX-05.1A LP EXT 16 to FWH 32A

EX-05.1A-01N	0.000	0.00	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.1A-02P	0.000	0.00	180.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.1A-03E	0.000	1.50	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.1A-04N	0.000	0.00	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----

Line Name : EX-05.1B LP EXT 16 to FWH 32B

EX-05.1B-01N	0.000	0.00	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.1B-02P	0.000	0.00	180.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.1B-03E	0.000	1.50	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.1B-04N	0.000	0.00	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----

Line Name : EX-05.1C LP EXT 16 to FWH 32C

EX-05.1C-01N	0.000	0.00	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.1C-02P	0.000	0.00	180.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.1C-03E	0.000	1.50	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.1C-04N	0.000	0.00	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----

Line Name : EX-05.2A LP EXT 15 to FWH 32A

EX-05.2A-01N	0.000	0.00	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.2A-02E	0.000	1.50	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.2A-03E	0.000	1.50	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.2A-04P	0.000	0.00	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.2A-05E	0.000	1.50	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.2A-06N	0.000	0.00	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----

Line Name : EX-05.2B LP EXT 15 to FWH 32B

EX-05.2B-01N	0.000	0.00	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.2B-02E	0.000	1.50	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.2B-03E	0.000	1.50	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.2B-04P	0.000	0.00	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.2B-05E	0.000	1.50	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.2B-06N	0.000	0.00	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----

Line Name : EX-05.2C LP EXT 15 to FWH 32C

EX-05.2C-01N	0.000	0.00	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.2C-02E	0.000	1.50	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.2C-03E	0.000	1.50	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.2C-04P	0.000	0.00	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.2C-05E	0.000	1.50	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----
EX-05.2C-06N	0.000	0.00	90.00	0.00	50.00	300.00	-3.98	0.00	815.400	0.000	0.0680	----	----	-----	-----

Line Name : EX-06.1A LP EXT 19 to FWH 31A

EX-06.1A-01N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.1A-02E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.1A-03E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.1A-04N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----

Line Name : EX-06.1B LP EXT 19 to FWH 31B

EX-06.1B-01N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.1B-02E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.1B-03E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.1B-04N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----

Line Name : EX-06.1C LP EXT 19 to FWH 31C

EX-06.1C-01N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.1C-02E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.1C-03E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.1C-04N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----

Line Name : EX-06.2A LP EXT 17 to FWH 31A

EX-06.2A-01N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.2A-02E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.2A-03E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.2A-04N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----

Line Name : EX-06.2B LP EXT 17 to FWH 31B

EX-06.2B-01N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.2B-02E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.2B-03E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.2B-04N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----

Line Name : EX-06.2C LP EXT 17 to FWH 31C

EX-06.2C-01N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.2C-02E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.2C-03E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.2C-04N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----

Line Name : EX-06.3A LP EXT 20 to FWH 31A

EX-06.3A-01N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.3A-02E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.3A-03P	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.3A-04E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.3A-05N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----

Line Name : EX-06.3B LP EXT 20 to FWH 31B

EX-06.3B-01N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.3B-02E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.3B-03P	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.3B-04E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.3B-05N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----

Line Name : EX-06.3C LP EXT 20 to FWH 31C

EX-06.3C-01N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.3C-02E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.3C-03P	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.3C-04E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.3C-05N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----

Line Name : EX-06.4A LP EXT 18 to FWH 31A

EX-06.4A-01N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.4A-02E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.4A-03P	0.000	0.00	135.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.4A-04E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.4A-05N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----

Line Name : EX-06.4B LP EXT 18 to FWH 31B

EX-06.4B-01N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.4B-02E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.4B-03P	0.000	0.00	135.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.4B-04E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.4B-05N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----

Line Name : EX-06.4C LP EXT 18 to FWH 31C

EX-06.4C-01N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----
EX-06.4C-02E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	----	----

EX-06.4C-03P	0.000	0.00	135.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.4C-04E	0.000	1.50	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----
EX-06.4C-05N	0.000	0.00	90.00	0.00	50.00	300.00	-9.66	0.00	858.037	0.000	0.0556	----	----	-----	-----

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

FW-01.1A-01N	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.1A-02P	0.000	0.00	0.00	3.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.1A-03R	16.000	0.00	0.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	6.5120	----	----	-----
FW-01.2A-01E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-02P	0.000	0.00	90.00	18.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-03T	6.625	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	6.5120	0.0000	-----	-----

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

FW-01.1B-01N	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.1B-02P	0.000	0.00	0.00	3.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.1B-03R	16.000	0.00	0.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	6.5120	----	----	-----
FW-01.2B-01E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2B-02P	0.000	0.00	90.00	42.50	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2B-03E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2B-04P	0.000	0.00	90.00	6.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2B-05T	6.625	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	6.5120	0.0000	-----	-----

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

FW-01.2A-04P	0.000	0.00	90.00	54.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-05V	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	16.375	0.00
FW-01.2A-06V	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	13.750	0.00
FW-01.2A-07E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-08T	10.750	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	6.5120	0.0000	-----	-----
FW-01.2A-09P	0.000	0.00	90.00	30.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-10E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-11P	0.000	0.00	90.00	60.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-12E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-13P	0.000	0.00	0.00	31.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-14E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-15P_1	0.000	0.00	90.00	300.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-15P_2	0.000	0.00	90.00	50.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-16E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-17P	0.000	0.00	90.00	270.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-18E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-19P	0.000	0.00	180.00	30.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-20E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-21P	0.000	0.00	90.00	198.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-22E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2A-23P	0.000	0.00	0.00	60.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----

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

FW-01.2B-06P	0.000	0.00	90.00	42.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2B-07V	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	16.375	0.00
FW-01.2B-08V	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	13.750	0.00
FW-01.2B-09E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----
FW-01.2B-10P	0.000	0.00	90.00	12.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	-----	-----

FW-01.2B-11T	10.750	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	6.5120	0.0000	----	----
FW-01.2B-12P	0.000	0.00	90.00	30.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	----	----
FW-01.2B-13E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	----	----
FW-01.2B-14P	0.000	0.00	90.00	87.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	----	----
FW-01.2B-15E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	----	----
FW-01.2B-16P	0.000	0.00	0.00	31.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	----	----
FW-01.2B-17E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	----	----
FW-01.2B-18P	0.000	0.00	90.00	190.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	----	----
FW-01.2B-19E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	----	----
FW-01.2B-20P	0.000	0.00	180.00	30.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	----	----
FW-01.2B-21E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	----	----
FW-01.2B-22P	0.000	0.00	90.00	87.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	----	----
FW-01.2B-23E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	----	----
FW-01.2B-24P	0.000	0.00	0.00	30.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	----	----
FW-01.2B-25E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	----	----
FW-01.2B-26P	0.000	0.00	90.00	18.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	----	----	----	----
FW-01.2B-27R	20.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	6.5120	----	----	----

Line Name : FW-01.3 BFP DISCHARGE HDR

FW-01.3-01T	20.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	6.5120	13.0240	6.5120	----	----
FW-01.3-02P	0.000	0.00	90.00	24.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	----	----	----	----
FW-01.3-03E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	----	----	----	----
FW-01.3-04E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	----	----	----	----
FW-01.3-05P	0.000	0.00	90.00	111.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	----	----	----	----
FW-01.3-06E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	----	----	----	----
FW-01.3-07P	0.000	0.00	0.00	18.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	----	----	----	----
FW-01.3-08E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	----	----	----	----
FW-01.3-09P	0.000	0.00	90.00	96.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	----	----	----	----
FW-01.3-10E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	----	----	----	----
FW-01.3-11P	0.000	0.00	90.00	374.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	----	----	----	----
FW-01.3-12E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	----	----	----	----
FW-01.3-13P	0.000	0.00	90.00	303.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	----	----	----	----
FW-01.3-14E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	----	----	----	----
FW-01.3-15E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	----	----	----	----
FW-01.3-16P	0.000	0.00	90.00	6.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	----	----	----	----
FW-01.3-17T	18.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	13.0240	0.0000	----	----
FW-01.3-18P	0.000	0.00	90.00	48.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	----	----	----	----
FW-01.4-01T	18.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	13.0240	8.6827	4.3413	----	----

Line Name : FW-01.4 BFP DISCHARGE HDR

FW-01.4-02P	0.000	0.00	90.00	102.00	1440.00	450.00	1038.10	367.29	0.000	0.000	8.6830	----	----	----	----
FW-01.5-01T	18.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	8.6827	4.3413	4.3413	----	----

Line Name : FW-01.6A BFP HDR to FWH 36A

FW-01.6A-01R	18.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	4.3413	----	----	----
FW-01.6A-02P	0.000	0.00	90.00	55.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	----	----
FW-01.6A-03E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	----	----
FW-01.6A-04P	0.000	0.00	0.00	81.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	----	----
FW-01.6A-05E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	----	----
FW-01.6A-06P	0.000	0.00	90.00	40.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	----	----
FW-01.6A-07V	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	12.250	0.00
FW-01.6A-08E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	----	----
FW-01.6A-09P	0.000	0.00	0.00	4.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	----	----

FW-01.6A-10E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	-----
FW-01.6A-11P	0.000	0.00	30.00	7.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	-----
FW-01.6A-12N	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	-----

Line Name : FW-01.6B BFP HDR to FWH 36B

FW-01.6B-02P	0.000	0.00	0.00	108.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	-----
FW-01.6B-03E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	-----
FW-01.6B-04P	0.000	0.00	90.00	40.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	-----
FW-01.6B-05V	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	12.250
FW-01.6B-06E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	0.00
FW-01.6B-07P	0.000	0.00	0.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	-----
FW-01.6B-08E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	-----
FW-01.6B-10N	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	-----

Line Name : FW-01.6C BFP HDR to FWH 36C

FW-01.6C-02P	0.000	0.00	0.00	108.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	-----
FW-01.6C-03E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	-----
FW-01.6C-04P	0.000	0.00	90.00	40.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	-----
FW-01.6C-05V	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	12.250
FW-01.6C-06E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	0.00
FW-01.6C-08E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	-----
FW-01.6C-10N	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	4.3413	----	----	-----	-----

Line Name : FW-02.1A FWH 36A to SG HDR

FW-02.1A-01N	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1A-02E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1A-03P	0.000	0.00	90.00	11.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1A-04E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1A-05V	0.000	0.00	180.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	12.250
FW-02.1A-06P	0.000	0.00	180.00	30.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	0.000
FW-02.1A-07E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	0.00
FW-02.1A-08P	0.000	0.00	90.00	38.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1A-09E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1A-10P	0.000	0.00	180.00	90.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1A-11E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1A-12P	0.000	0.00	90.00	54.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1A-13R	18.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	4.3410	----	----	-----

Line Name : FW-02.1B FWH 36B to SG HDR

FW-02.1B-01N	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1B-02E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1B-03P	0.000	0.00	90.00	11.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1B-04E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1B-05V	0.000	0.00	180.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	12.250
FW-02.1B-06P	0.000	0.00	180.00	30.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	0.000
FW-02.1B-07E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	0.00
FW-02.1B-08P	0.000	0.00	90.00	38.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1B-09E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1B-10P	0.000	0.00	180.00	90.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----

Line Name : FW-02.1C FWH 36C to SG HDR

FW-02.1C-01N	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1C-02E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1C-03P	0.000	0.00	90.00	11.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1C-04E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1C-05V	0.000	0.00	180.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	12.250	0.00
FW-02.1C-06P	0.000	0.00	180.00	30.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	0.000	0.00
FW-02.1C-07E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1C-08P	0.000	0.00	90.00	38.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1C-09E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----
FW-02.1C-10P	0.000	0.00	180.00	90.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3413	----	----	-----	-----

Line Name : FW-02.3 SG INLET HEADER

FW-02.1B-11T	18.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	4.3143	8.6827	4.3683	-----	-----
FW-02.3-01P	0.000	0.00	90.00	96.00	1440.00	450.00	1038.10	423.20	0.000	0.000	8.6827	-----	-----	-----	-----

Line Name : FW-02.4 SG INLET HEADER

FW-02.1C-11T	18.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	8.6827	13.0240	4.3413	-----	-----
FW-02.4-02T	18.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	13.0240	0.0000	-----	-----
FW-02.4-03P	0.000	0.00	90.00	156.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-04E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-05E	0.000	1.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-06P	0.000	0.00	90.00	282.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-07E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-08P	0.000	0.00	90.00	312.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-09E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-10P	0.000	0.00	90.00	174.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-11E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-12P_1	0.000	0.00	90.00	450.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-12P_2	0.000	0.00	90.00	156.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-13E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-14P	0.000	0.00	0.00	69.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-15E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-16P	0.000	0.00	90.00	447.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-17E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-18P	0.000	0.00	90.00	90.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	-----	-----	-----	-----
FW-02.4-19T	18.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	13.0240	9.7680	3.2560	-----	-----

Line Name : FW-02.5 SG INLET HEADER

FW-02.5-01T	6.625	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	9.7680	9.7680	0.0000	-----	-----
FW-02.5-02P	0.000	0.00	90.00	12.00	1440.00	450.00	1038.10	423.20	0.000	0.000	9.7680	-----	-----	-----	-----
FW-02.5-03T	6.625	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	9.7680	9.7680	0.0000	-----	-----
FW-02.5-06P	0.000	0.00	90.00	2.00	1440.00	450.00	1038.10	423.20	0.000	0.000	9.7680	-----	-----	-----	-----
FW-02.5-04T	18.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	9.7680	6.5120	3.2560	-----	-----

Line Name : FW-02.6 SG INLET HEADER

FW-02.6-01P	0.000	0.00	90.00	18.00	1440.00	450.00	1038.10	423.20	0.000	0.000	6.5120	-----	-----	-----	-----
FW-02.6-03T	18.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	6.5120	3.2560	3.2560	-----	-----

Line Name : FW-02.8A SG HDR to SG 31

FW-02.8A-01P	0.000	0.00	180.00	204.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8A-02E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8A-03T	6.625	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	0.0000	-----	-----
FW-02.8A-04V	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	12.250	0.00
FW-02.8A-25R	12.750	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	----	-----	-----
FW-02.8A-05V	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	0.000	0.00
FW-02.8A-26R	12.750	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	----	-----	-----
FW-02.8A-06E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8A-07P	0.000	0.00	0.00	66.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8A-08T	6.625	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	0.0000	-----	-----
FW-02.8A-09P	0.000	0.00	0.00	12.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8A-10E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8A-11P_1	0.000	0.00	90.00	270.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8A-11P_2	0.000	0.00	90.00	126.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8A-12F	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	14.500	-----
FW-02.8A-13P	0.000	0.00	90.00	114.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	14.500	-----
FW-02.8A-14E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8A-15P	0.000	0.00	90.00	84.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8A-16E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8A-17P	0.000	0.00	0.00	93.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8A-18V	0.000	0.00	0.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	13.000	0.00
FW-02.8A-19V	0.000	0.00	0.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	11.750	0.00
FW-02.8A-20P	0.000	0.00	0.00	12.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	11.750	0.00
FW-02.8A-21T	4.500	0.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	0.0000	-----	-----
FW-02.8A-22E	0.000	1.50	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8A-23E	0.000	1.50	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8A-24P	0.000	0.00	90.00	5.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1A-01P	0.000	0.00	90.00	11.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1A-02E	0.000	1.50	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1A-03P	0.000	0.00	90.00	45.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1A-04B	0.000	43.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1A-05B	0.000	5.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1A-06P_1	0.000	0.00	25.50	270.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1A-06P_2	0.000	0.00	25.50	45.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1A-07B	0.000	5.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1A-08B	0.000	5.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1A-09N	0.000	0.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----

Line Name : FW-02.8B SG HDR to SG 32

FW-02.8B-01P	0.000	0.00	180.00	204.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8B-02E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8B-03P	0.000	0.00	90.00	48.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8B-04T	6.625	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	0.0000	-----	-----
FW-02.8B-05V	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	12.250	0.00
FW-02.8B-25R	12.750	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	----	-----	-----
FW-02.8B-06V	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	0.000	0.00
FW-02.8B-26R	12.750	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	----	-----	-----
FW-02.8B-07E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8B-08P	0.000	0.00	0.00	66.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8B-09T	6.625	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	0.0000	-----	-----
FW-02.8B-10P	0.000	0.00	0.00	12.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8B-11E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8B-12P_1	0.000	0.00	90.00	270.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8B-12P_2	0.000	0.00	90.00	102.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8B-13F	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	14.500	-----

FW-02.8B-14P	0.000	0.00	90.00	114.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	14.500	----
FW-02.8B-15E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8B-16P	0.000	0.00	90.00	42.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8B-17E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8B-18P	0.000	0.00	0.00	93.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8B-19V	0.000	0.00	0.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	13.000	0.00
FW-02.8B-20V	0.000	0.00	0.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	11.750	0.00
FW-02.8B-21P	0.000	0.00	0.00	12.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	11.750	0.00
FW-02.8B-22T	4.500	0.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	0.0000	----	----
FW-02.8B-23E	0.000	1.50	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8B-24P	0.000	0.00	90.00	5.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1B-01P	0.000	0.00	90.00	52.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1B-02E	0.000	1.50	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1B-03P	0.000	0.00	90.00	108.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1B-04B	0.000	41.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1B-05B	0.000	5.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1B-06P	0.000	0.00	21.30	319.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1B-07B	0.000	5.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1B-08E	0.000	1.50	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1B-09P	0.000	0.00	90.00	134.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1B-10E	0.000	1.50	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1B-11E	0.000	1.50	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1B-12N	0.000	0.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----

Line Name : FW-02.8C SG HDR to SG 34

FW-02.8C-01P	0.000	0.00	180.00	204.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8C-02E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8C-03P	0.000	0.00	90.00	72.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8C-04T	6.625	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	0.0000	----	----
FW-02.8C-05V	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	12.250	0.00
FW-02.8C-24R	12.750	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	----	----	----
FW-02.8C-06V	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	0.000	0.00
FW-02.8C-25R	12.750	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	----	----	----
FW-02.8C-07E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8C-08P	0.000	0.00	0.00	66.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8C-09T	6.625	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	0.0000	----	----
FW-02.8C-10P	0.000	0.00	0.00	12.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8C-11E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8C-12P_1	0.000	0.00	90.00	270.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8C-12P_2	0.000	0.00	90.00	111.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8C-13F	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	14.500	----
FW-02.8C-14P	0.000	0.00	90.00	114.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	14.500	----
FW-02.8C-15E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8C-16E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8C-17P	0.000	0.00	0.00	93.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8C-18V	0.000	0.00	0.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	13.000	0.00
FW-02.8C-19V	0.000	0.00	0.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	11.750	0.00
FW-02.8C-20P	0.000	0.00	0.00	12.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	11.750	0.00
FW-02.8C-21T	4.500	0.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	0.0000	----	----
FW-02.8C-22E	0.000	1.50	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-02.8C-23P	0.000	0.00	90.00	5.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1C-01P	0.000	0.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1C-02E	0.000	1.50	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1C-03P	0.000	0.00	90.00	256.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1C-04B	0.000	40.20	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1C-16P_1	0.000	0.00	90.00	270.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----
FW-03.1C-16P_2	0.000	0.00	90.00	23.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	----	----

FW-03.1C-05B	0.000	5.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1C-06P_1	0.000	0.00	14.50	270.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1C-06P_2	0.000	0.00	14.50	102.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1C-07B	0.000	5.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1C-09P	0.000	0.00	45.00	5.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1C-10E	0.000	1.50	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1C-11P	0.000	0.00	90.00	33.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1C-12E	0.000	1.50	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1C-13P	0.000	0.00	35.00	20.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1C-14E	0.000	1.50	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1C-15N	0.000	0.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----

Line Name : FW-02.8D SG HDR to SG 33

FW-02.6-02T	6.625	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	6.5120	6.5120	0.0000	-----	-----
FW-02.7-01P	0.000	0.00	90.00	12.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.7-02T	6.625	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	0.0000	-----	-----
FW-02.7-03P	0.000	0.00	90.00	12.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.7-04T	18.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000		0.000000	3.2560	-----	-----
FW-02.8D-01P	0.000	0.00	180.00	204.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8D-02E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8D-03P	0.000	0.00	90.00	108.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8D-04T	6.625	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	0.0000	-----	-----
FW-02.8D-05V	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	12.250	0.00
FW-02.8D-24R	12.750	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	----	-----	-----
FW-02.8D-06V	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	0.000	0.00
FW-02.8D-25R	12.750	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	----	-----	-----
FW-02.8D-07E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8D-08P	0.000	0.00	0.00	66.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8D-09T	6.625	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	0.0000	-----	-----
FW-02.8D-10P	0.000	0.00	0.00	12.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8D-11E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8D-12P_1	0.000	0.00	90.00	270.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8D-12P_2	0.000	0.00	90.00	162.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8D-13F	0.000	0.00	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	14.500	-----
FW-02.8D-14P	0.000	0.00	90.00	27.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	14.500	-----
FW-02.8D-15E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8D-16P	0.000	0.00	0.00	93.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8D-17V	0.000	0.00	0.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	13.000	0.00
FW-02.8D-18V	0.000	0.00	0.00	0.00	1440.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	11.750	0.00
FW-02.8D-19P	0.000	0.00	0.00	12.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	11.750	0.00
FW-02.8D-20T	4.500	0.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	3.2560	0.0000	-----	-----
FW-02.8D-21E	0.000	1.50	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8D-22E	0.000	1.50	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-02.8D-23P	0.000	0.00	90.00	5.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1D-01P	0.000	0.00	90.00	22.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1D-02E	0.000	1.50	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1D-03P	0.000	0.00	90.00	202.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1D-04B	0.000	42.30	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1D-05B	0.000	5.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1D-06P_1	0.000	0.00	24.00	270.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1D-06P_2	0.000	0.00	24.00	129.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1D-07B	0.000	5.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1D-08B	0.000	4.00	90.00	0.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1D-09P	0.000	0.00	90.00	65.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----
FW-03.1D-10N	0.000	0.00	90.00	22.00	1085.00	450.00	1038.10	423.20	0.000	0.000	3.2560	----	----	-----	-----

FW-04.1B-08E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.1B-09P	0.000	0.00	90.00	12.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-01R	4.500	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	3.8830	----	----	----
FW-04.2B-02P	0.000	0.00	90.00	67.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-03B	0.000	5.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-04P	0.000	0.00	90.00	27.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-05E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-06P	0.000	0.00	135.00	21.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-07E	0.000	1.50	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-08P_1	0.000	0.00	90.00	67.50	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-08P_2	0.000	0.00	90.00	495.50	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-09B	0.000	5.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-10P_1	0.000	0.00	90.00	67.50	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-10P_2	0.000	0.00	90.00	246.50	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-11B	0.000	5.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-12P	0.000	0.00	90.00	32.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-13B	0.000	5.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-14P	0.000	0.00	90.00	68.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-15B	0.000	5.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-16P	0.000	0.00	90.00	8.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-17B	0.000	5.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-18P	0.000	0.00	90.00	54.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-19B	0.000	5.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-20P	0.000	0.00	180.00	8.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-21B	0.000	5.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-22P	0.000	0.00	90.00	26.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	----	----	----	----
FW-04.2B-23R	4.500	0.00	90.00	0.00	1440.00	450.00	1038.10	367.29	0.000	0.000	3.8830	3.8830	----	----	----
FW-05.1B-01V	0.000	0.00	90.00	0.00	1440.00	450.00	-13.70	0.00	351.898	0.000	3.8830	----	----	0.000	0.00
FW-05.1B-02P	0.000	0.00	90.00	10.00	1440.00	450.00	-13.70	0.00	351.898	0.000	3.8830	----	----	0.000	0.00
FW-05.1B-03V	0.000	0.00	90.00	0.00	1440.00	450.00	-13.70	0.00	351.898	0.000	3.8830	----	----	0.000	0.00
FW-05.1B-04R	6.625	0.00	90.00	0.00	1440.00	450.00	-13.70	0.00	351.898	0.000	3.8830	3.8830	----	----	----
FW-05.2B-01N	0.000	0.00	90.00	0.00	1440.00	450.00	-13.70	0.00	351.898	0.000	3.8830	----	----	----	----

Line Name : HD-01.1A FWH 36A to HD TK

HD-01.1A-01N	0.000	0.00	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1A-02P	0.000	0.00	180.00	104.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1A-03E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1A-04P	0.000	0.00	90.00	151.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1A-05E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1A-06P	0.000	0.00	90.00	54.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1A-07E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1A-08P	0.000	0.00	180.00	39.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1A-09E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1A-10P	0.000	0.00	90.00	4.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.2A-01R	6.625	0.00	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	0.5010	----	----	----
HD-02.1A-01V	0.000	0.00	90.00	0.00	450.00	450.00	170.90	0.00	361.299	0.000	0.5010	----	----	0.000	0.00
HD-02.1A-02R	6.625	0.00	90.00	0.00	450.00	450.00	170.90	0.00	361.299	0.000	0.5010	0.5010	----	----	----
HD-02.2A-01V	0.000	0.00	90.00	0.00	450.00	450.00	170.90	0.00	361.299	0.000	0.5010	----	----	0.000	0.00
HD-02.2A-02N	0.000	0.00	90.00	0.00	450.00	450.00	170.90	0.00	361.299	0.000	0.5010	----	----	----	----

Line Name : HD-01.1B FWH 36B to HD TK

HD-01.1B-01N	0.000	0.00	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1B-02P	0.000	0.00	180.00	104.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1B-03E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1B-04P	0.000	0.00	90.00	151.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----

HD-01.1B-05E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1B-06P	0.000	0.00	180.00	39.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1B-07E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.2B-01R	6.625	0.00	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	0.5010	----	----	----
HD-02.1B-01V	0.000	0.00	90.00	0.00	450.00	450.00	170.90	0.00	361.299	0.000	0.5010	----	----	0.000	0.00
HD-02.1B-02R	6.625	0.00	90.00	0.00	450.00	450.00	170.90	0.00	361.299	0.000	0.5010	0.5010	----	----	----
HD-02.2B-01V	0.000	0.00	90.00	0.00	450.00	450.00	170.90	0.00	361.299	0.000	0.5010	----	----	0.000	0.00
HD-02.2B-02N	0.000	0.00	90.00	0.00	450.00	450.00	170.90	0.00	361.299	0.000	0.5010	----	----	----	----

Line Name : HD-01.1C FWH 36C to HD TK

HD-01.1C-01N	0.000	0.00	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1C-02P	0.000	0.00	180.00	68.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1C-03E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1C-04P	0.000	0.00	90.00	75.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1C-05E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1C-06P	0.000	0.00	180.00	6.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1C-07E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1C-08P	0.000	0.00	90.00	151.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1C-09E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1C-10P	0.000	0.00	180.00	39.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.1C-11E	0.000	1.50	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	----	----	----	----
HD-01.2C-01R	6.625	0.00	90.00	0.00	450.00	450.00	333.70	386.70	0.000	0.000	0.5010	0.5010	----	----	----
HD-02.1C-01V	0.000	0.00	90.00	0.00	450.00	450.00	170.90	0.00	361.299	0.000	0.5010	----	----	0.000	0.00
HD-02.1C-02R	6.625	0.00	90.00	0.00	450.00	450.00	170.90	0.00	361.299	0.000	0.5010	0.5010	----	----	----
HD-02.2C-01V	0.000	0.00	90.00	0.00	450.00	450.00	170.90	0.00	361.299	0.000	0.5010	----	----	0.000	0.00
HD-02.2C-02N	0.000	0.00	90.00	0.00	450.00	450.00	170.90	0.00	361.299	0.000	0.5010	----	----	----	----

Line Name : HD-03.1A FWH 35A to HD TK

HD-03.1A-01N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1A-02P	0.000	0.00	180.00	60.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1A-03E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1A-04P	0.000	0.00	90.00	9.75	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1A-05E	0.000	1.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1A-06P	0.000	0.00	180.00	26.75	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1A-07E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1A-08P	0.000	0.00	90.00	66.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1A-09E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1A-10P	0.000	0.00	180.00	96.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1A-11E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1A-12E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1A-13P	0.000	0.00	0.00	18.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1A-14E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1A-15V	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	0.000	0.00
HD-03.1A-16N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----

Line Name : HD-03.1B FWH 35B to HD TK

HD-03.1B-01N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1B-02P	0.000	0.00	180.00	108.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1B-03E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1B-04P	0.000	0.00	90.00	17.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1B-05E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1B-06P	0.000	0.00	90.00	66.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----
HD-03.1B-07E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	----	----

HD-03.1B-08P	0.000	0.00	180.00	96.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1B-09E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1B-10E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1B-11P	0.000	0.00	0.00	18.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1B-12E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1B-13V	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	0.000	0.00
HD-03.1B-14N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----

Line Name : HD-03.1C FWH 35C to HD TK

HD-03.1C-01N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1C-02P	0.000	0.00	180.00	60.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1C-03E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1C-04P	0.000	0.00	90.00	60.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1C-05E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1C-06P	0.000	0.00	180.00	18.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1C-07E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1C-08P	0.000	0.00	90.00	66.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1C-09E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1C-10P	0.000	0.00	90.00	29.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1C-11E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1C-12P	0.000	0.00	180.00	96.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1C-13E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1C-14E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1C-15P	0.000	0.00	0.00	18.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1C-16E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----
HD-03.1C-17V	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	0.000	0.00
HD-03.1C-18N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	0.3100	----	----	-----	-----

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

HD-4.1A-01N	0.000	0.00	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	-----	-----
HD-4.1A-02P	0.000	0.00	180.00	70.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	-----	-----
HD-4.1A-03T	6.625	0.00	180.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	0.1680	0.0000	-----	-----
HD-4.1A-04P	0.000	0.00	180.00	33.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	-----	-----
HD-4.1A-05E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	-----	-----
HD-4.1A-06E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	-----	-----
HD-4.1A-07P	0.000	0.00	90.00	11.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	-----	-----
HD-4.1A-08E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	-----	-----
HD-4.1A-09P_1	0.000	0.00	90.00	99.38	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	-----	-----
HD-4.1A-09P_2	0.000	0.00	90.00	919.63	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	-----	-----
HD-4.1A-10E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	-----	-----
HD-4.1A-11P	0.000	0.00	0.00	30.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	-----	-----
HD-4.1A-12E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	-----	-----
HD-4.1A-13P	0.000	0.00	90.00	63.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	-----	-----
HD-4.1A-14E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	-----	-----
HD-4.1A-15P	0.000	0.00	0.00	57.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	-----	-----
HD-4.2A-01E	4.500	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	0.1680	-----	-----	-----
HD-4.2A-02V	0.000	0.00	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	0.000	0.00
HD-4.3A-01R	3.500	0.00	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	0.1680	-----	-----	-----
HD-05.1A-01V	0.000	0.00	90.00	0.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	----	----	0.000	0.00
HD-05.1A-02R	3.500	0.00	90.00	0.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	0.1680	-----	-----	-----
HD-05.2A-01T	6.625	0.00	90.00	0.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	0.000000	0.1680	-----	-----
HD-05.2A-02P	0.000	0.00	0.00	30.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	----	----	-----	-----
HD-05.2A-03E	0.000	1.50	90.00	0.00	100.00	400.00	13.15	0.00	221.399	0.000	0.1680	----	----	-----	-----
HD-05.2A-04E	0.000	1.00	90.00	0.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	----	----	-----	-----
HD-05.2A-05P	0.000	0.00	90.00	12.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	----	----	-----	-----

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HD-05.2A-06N	0.000	0.00	90.00	0.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	----	----	----	----
Line Name : HD-04.1B FWH 34B to FWH 33B															
HD-4.1B-01N	0.000	0.00	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1B-02P	0.000	0.00	180.00	56.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1B-03E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1B-04P	0.000	0.00	135.00	13.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1B-05T	6.625	0.00	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	0.000000	0.1680	----	----
HD-4.1B-06P	0.000	0.00	90.00	60.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1B-07E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1B-08P	0.000	0.00	180.00	30.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1B-09E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1B-10E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1B-11P_1	0.000	0.00	90.00	99.38	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1B-11P_2	0.000	0.00	90.00	833.63	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1B-12E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1B-13P	0.000	0.00	0.00	30.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1B-14E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1B-15P	0.000	0.00	90.00	18.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1B-16E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1B-17P	0.000	0.00	0.00	57.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.2B-01E	4.500	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	0.1680	----	----	----
HD-4.2B-02V	0.000	0.00	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	0.000	0.00
HD-4.3B-01R	3.500	0.00	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	0.1680	----	----	----
HD-05.1B-01V	0.000	0.00	90.00	0.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	----	----	0.000	0.00
HD-05.1B-02R	3.500	0.00	90.00	0.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	0.1680	----	----	----
HD-05.2B-01T	6.625	0.00	90.00	0.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	0.000000	0.1680	----	----
HD-05.2B-02P	0.000	0.00	0.00	30.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	----	----	----	----
HD-05.2B-03E	0.000	1.50	90.00	0.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	----	----	----	----
HD-05.2B-04E	0.000	1.00	90.00	0.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	----	----	----	----
HD-05.2B-05P	0.000	0.00	90.00	12.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	----	----	----	----
HD-05.2B-06N	0.000	0.00	90.00	0.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	----	----	----	----

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

HD-4.1C-01N	0.000	0.00	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-02P	0.000	0.00	180.00	34.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-03E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-04P	0.000	0.00	90.00	9.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-05E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-06T	6.625	0.00	180.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	0.1680	0.0000	----	----
HD-4.1C-07P	0.000	0.00	180.00	4.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-08E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-09P	0.000	0.00	90.00	87.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-10E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-11P	0.000	0.00	180.00	30.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-12E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-13P_1	0.000	0.00	90.00	99.38	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-13P_2	0.000	0.00	90.00	272.63	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-14E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-15P	0.000	0.00	90.00	12.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-16E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-17P_1	0.000	0.00	90.00	99.38	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-17P_2	0.000	0.00	90.00	511.63	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-18E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-19P	0.000	0.00	0.00	30.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----

HD-4.1C-20E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-21P	0.000	0.00	90.00	9.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-22E	0.000	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.1C-23P	0.000	0.00	0.00	57.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	----	----
HD-4.2C-01E	4.500	1.50	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	0.1680	----	----	----
HD-4.2C-02V	0.000	0.00	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	----	----	0.000	0.00
HD-4.3C-01R	3.500	0.00	90.00	0.00	100.00	400.00	49.88	250.00	0.000	0.000	0.1680	0.1680	----	----	----
HD-05.1C-01V	0.000	0.00	90.00	0.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	----	----	0.000	0.00
HD-05.1C-02R	3.500	0.00	90.00	0.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	0.1680	----	----	----
HD-05.2C-01T	6.625	0.00	90.00	0.00	100.00	400.00	13.15	0.00	221.300	0.000	0.000000	0.1680	----	----	----
HD-05.2C-02P	0.000	0.00	0.00	30.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	----	----	----	----
HD-05.2C-03E	0.000	1.50	90.00	0.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	----	----	----	----
HD-05.2C-04E	0.000	1.00	90.00	0.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	----	----	----	----
HD-05.2C-05P	0.000	0.00	90.00	12.00	100.00	400.00	13.15	0.00	221.300	0.000	0.1680	----	----	----	----
HD-05.2C-06N	0.000	0.00	90.00	0.00	100.00	400.00	13.15	0.00	221.399	0.000	0.1680	----	----	----	----

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

HD-6.1A-01N	0.000	0.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-02P	0.000	0.00	180.00	63.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-03E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-04P	0.000	0.00	90.00	24.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-05E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-06P_1	0.000	0.00	90.00	129.38	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-06P_2	0.000	0.00	90.00	246.63	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-07E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-08P	0.000	0.00	180.00	5.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-09E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-10P	0.000	0.00	90.00	10.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-11E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-12P_1	0.000	0.00	90.00	129.38	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-12P_2	0.000	0.00	90.00	119.63	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-13E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-13P	0.000	0.00	90.00	2.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-14E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-15P	0.000	0.00	180.00	11.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-16E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-17P_1	0.000	0.00	90.00	129.38	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-17P_2	0.000	0.00	90.00	372.63	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-18E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-19P	0.000	0.00	180.00	18.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-20E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-21P_1	0.000	0.00	90.00	129.38	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-21P_2	0.000	0.00	90.00	41.63	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-22E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-23P	0.000	0.00	90.00	114.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-24E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-25P_1	0.000	0.00	90.00	129.38	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-25P_2	0.000	0.00	90.00	70.63	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-26E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-27P	0.000	0.00	90.00	110.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-28T	8.625	0.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	0.3260	0.0000	----	----
HD-6.1A-29P	0.000	0.00	90.00	101.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-44T	8.625	0.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	0.3260	0.0000	----	----
HD-6.1A-30E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-31P	0.000	0.00	0.00	115.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-32E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-33P	0.000	0.00	90.00	60.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----

HD-6.1A-34E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-37E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-38P	0.000	0.00	45.00	19.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-39E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-40P	0.000	0.00	90.00	7.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-41E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1A-42P	0.000	0.00	16.00	19.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.2A-01E	6.625	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	0.3260	----	----	----
HD-07.1A-01V	0.000	0.00	0.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	----	----	0.000	0.00
HD-07.1A-02R	6.625	0.00	90.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	0.3260	----	----	----
HD-07.2A-01V	0.000	0.00	90.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	----	----	0.000	0.00
HD-07.2A-02P	0.000	0.00	90.00	44.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	----	----	0.000	0.00
HD-07.2A-03T	8.625	0.00	90.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.000000	0.3260	----	----	----
HD-07.2A-04P	0.000	0.00	93.00	45.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	----	----	----	----
HD-07.2A-05R	8.625	0.00	93.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	0.3260	----	----	----
HD-07.3A-01N	0.000	0.00	90.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	----	----	----	----

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

HD-6.1B-01N	0.000	0.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-02P	0.000	0.00	180.00	63.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-03E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-04E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-05P_1	0.000	0.00	90.00	129.38	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-05P_2	0.000	0.00	90.00	114.63	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-06E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-07P	0.000	0.00	180.00	5.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-08E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-09P	0.000	0.00	90.00	8.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-10E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-11P_1	0.000	0.00	90.00	129.38	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-11P_2	0.000	0.00	90.00	89.63	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-12E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-13E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-14P	0.000	0.00	180.00	5.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-15E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-16P_1	0.000	0.00	90.00	129.38	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-16P_2	0.000	0.00	90.00	355.63	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-17E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-18P	0.000	0.00	90.00	44.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-19E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-20P	0.000	0.00	180.00	18.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-21E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-22P_1	0.000	0.00	90.00	129.38	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-22P_2	0.000	0.00	90.00	34.63	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-23T	8.625	0.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	0.3260	0.0000	----	----
HD-6.1B-24P	0.000	0.00	90.00	101.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-38T	8.625	0.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	0.3260	0.0000	----	----
HD-6.1B-25E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-26P	0.000	0.00	0.00	115.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-27E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-28P	0.000	0.00	90.00	60.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-29E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-32E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-33P	0.000	0.00	45.00	19.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-34E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-35P	0.000	0.00	90.00	7.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----
HD-6.1B-36E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	----	----

HD-6.1B-37P	0.000	0.00	90.00	17.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.2B-01E	6.625	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	0.3260	----	-----	-----
HD-07.1B-01V	0.000	0.00	90.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	----	----	0.000	0.00
HD-07.1B-02R	6.625	0.00	90.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	0.3260	----	-----	-----
HD-07.2B-01V	0.000	0.00	90.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	----	----	0.000	0.00
HD-07.2B-02P	0.000	0.00	90.00	44.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	----	----	0.000	0.00
HD-07.2B-03T	8.625	0.00	90.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000		0.000000	0.3260	-----	-----
HD-07.2B-04P	0.000	0.00	93.00	33.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	----	----	-----	-----
HD-07.2B-05R	8.625	0.00	93.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	0.3260	----	-----	-----
HD-07.3B-01N	0.000	0.00	90.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	----	----	-----	-----

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

HD-6.1C-01N	0.000	0.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-02P	0.000	0.00	180.00	63.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-03E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-04P	0.000	0.00	90.00	112.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-05E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-06P	0.000	0.00	180.00	5.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-07E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-08P_1	0.000	0.00	90.00	129.38	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-08P_2	0.000	0.00	90.00	42.63	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-09E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-10P	0.000	0.00	90.00	36.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-11E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-12P	0.000	0.00	180.00	45.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-13E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-14P	0.000	0.00	90.00	42.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-15E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-16P	0.000	0.00	90.00	44.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-17E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-18P	0.000	0.00	90.00	110.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-19T	8.625	0.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	0.3260	0.0000	-----	-----
HD-6.1C-20P	0.000	0.00	90.00	96.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-34T	8.625	0.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	0.3260	0.0000	-----	-----
HD-6.1C-35P	0.000	0.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-21E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-22P	0.000	0.00	0.00	115.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-23E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-24P	0.000	0.00	90.00	60.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-25E	0.000	1.00	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-28E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-29P	0.000	0.00	45.00	19.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-30E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-31P	0.000	0.00	90.00	7.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-32E	0.000	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.1C-33P	0.000	0.00	0.00	17.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	----	----	-----	-----
HD-6.2C-01E	6.625	1.50	90.00	0.00	50.00	300.00	13.15	196.90	0.000	0.000	0.3260	0.3260	----	-----	-----
HD-07.1C-01V	0.000	0.00	90.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	----	----	0.000	0.00
HD-07.1C-02R	6.625	0.00	90.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	0.3260	----	-----	-----
HD-07.2C-01V	0.000	0.00	90.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	----	----	0.000	0.00
HD-07.2C-02P	0.000	0.00	90.00	44.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	----	----	0.000	0.00
HD-07.2C-03T	8.625	0.00	90.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000		0.000000	0.3260	-----	-----
HD-07.2C-04P	0.000	0.00	93.00	33.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	----	----	-----	-----
HD-07.2C-05R	8.625	0.00	93.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	0.3260	----	-----	-----
HD-07.3C-01N	0.000	0.00	90.00	0.00	50.00	300.00	-3.85	0.00	170.199	0.000	0.3260	----	----	-----	-----

HD-09.2C-03E	0.000	1.50	90.00	0.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.4620	----	----	-----	-----
HD-09.2C-04T	12.750	0.00	90.00	0.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.4620	0.2310	0.2310	-----	-----

Line Name : HD-09.3A FWH 32A to FWH 31A

HD-09.3A-01P	0.000	0.00	90.00	44.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----
HD-09.3A-02N	0.000	0.00	90.00	0.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----

Line Name : HD-09.3B FWH 32B to FWH 31B

HD-09.3B-01P	0.000	0.00	90.00	44.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----
HD-09.3B-02N	0.000	0.00	90.00	0.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----

Line Name : HD-09.3C FWH 32C to FWH 31C

HD-09.3C-01P	0.000	0.00	90.00	44.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----
HD-09.3C-02N	0.000	0.00	90.00	0.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----

Line Name : HD-09.4A FWH 32A to FWH 31A

HD-09.4A-01P	0.000	0.00	60.00	5.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----
HD-09.4A-02E	0.000	1.50	90.00	0.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----
HD-09.4A-03P	0.000	0.00	90.00	44.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----
HD-09.4A-04N	0.000	0.00	90.00	0.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----

Line Name : HD-09.4B FWH 32B to FWH 31B

HD-09.4B-01P	0.000	0.00	60.00	5.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----
HD-09.4B-02E	0.000	1.50	90.00	0.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----
HD-09.4B-03P	0.000	0.00	90.00	44.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----
HD-09.4B-04N	0.000	0.00	90.00	0.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----

Line Name : HD-09.4C FWH 32C to FWH 31C

HD-09.4C-01P	0.000	0.00	60.00	5.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----
HD-09.4C-02E	0.000	1.50	90.00	0.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----
HD-09.4C-03P	0.000	0.00	90.00	44.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----
HD-09.4C-04N	0.000	0.00	90.00	0.00	50.00	300.00	-9.46	0.00	137.199	0.000	0.2310	----	----	-----	-----

Line Name : HD-10.1A HD TK to HD PMP 31

HD-10.1A-01N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	----	----	-----	-----
HD-10.1A-02P	0.000	0.00	180.00	5.00	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	----	----	-----	-----
HD-10.2A-01E	18.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	1.8300	----	----	-----
HD-10.2A-02E	0.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	----	----	-----	-----
HD-10.2A-03P	0.000	0.00	90.00	6.75	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	----	----	-----	-----
HD-10.2A-04V	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	----	----	0.000	0.00
HD-10.2A-05P	0.000	0.00	90.00	80.00	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	----	----	0.000	0.00
HD-10.2A-07X	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	----	----	15.638	-----
HD-10.2A-06N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	----	----	-----	-----

IPEC00029036

Line Name : HD-10.1B HD TK to HD PMP 32

HD-10.1B-01N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	----	----	-----	-----
HD-10.1B-02P	0.000	0.00	180.00	5.00	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	----	----	-----	-----
HD-10.2B-01E	18.000	1.50	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	1.8300	----	----	-----
HD-10.2B-02P	0.000	0.00	90.00	18.00	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	----	----	-----	-----
HD-10.2B-03V	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	----	----	0.000	0.00
HD-10.2B-04P	0.000	0.00	90.00	80.00	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	----	----	0.000	0.00
HD-10.2B-06X	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	----	----	15.638	-----
HD-10.2B-05N	0.000	0.00	90.00	0.00	250.00	400.00	170.90	374.10	0.000	0.000	1.8300	----	----	-----	-----

Line Name : HD-11.1A HD PMP 31 to HDR

HD-11.1A-01N	0.000	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	-----	-----
HD-11.1A-02V	0.000	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	0.000	0.00
HD-11.2A-01R	8.625	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	1.8300	----	----	-----
HD-12.1A-01V	0.000	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	0.000	0.00
HD-12.1A-02R	8.625	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	1.8300	----	----	-----
HD-12.2A-01V	0.000	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	0.000	0.00
HD-12.2A-02P	0.000	0.00	90.00	6.75	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	0.000	0.00
HD-12.2A-03E	0.000	1.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	-----	-----
HD-12.2A-04T	10.750	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	1.8300	0.0000	-----	-----
HD-12.2A-05P	0.000	0.00	0.00	132.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	-----	-----
HD-12.2A-06O	0.000	0.00	0.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	7.403	-----
HD-12.2A-07P	0.000	0.00	0.00	65.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	7.403	-----

Line Name : HD-11.1B HD PMP 32 to HDR

HD-11.1B-01N	0.000	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	-----	-----
HD-11.1B-02V	0.000	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	0.000	0.00
HD-11.2B-01R	8.625	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	1.8300	----	----	-----
HD-12.1B-01V	0.000	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	0.000	0.00
HD-12.1B-02R	8.625	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	1.8300	----	----	-----
HD-12.2B-01V	0.000	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	0.000	0.00
HD-12.2B-02P	0.000	0.00	90.00	6.75	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	0.000	0.00
HD-12.2B-03E	0.000	1.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	-----	-----
HD-12.2B-04T	10.750	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	1.8300	0.0000	-----	-----
HD-12.2B-05P	0.000	0.00	0.00	132.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	-----	-----
HD-12.2B-06O	0.000	0.00	0.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	7.403	-----
HD-12.2B-07P	0.000	0.00	0.00	65.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	7.403	-----
HD-12.2B-08T	12.750	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	0.000000	1.8300	1.8300	-----	-----
HD-12.3-01P	0.000	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	----	----	-----	-----

Line Name : HD-12.2A HD PMP HDR to CD SYS

HD-12.2A-08T	12.750	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	1.8300	3.6600	1.8300	-----	-----
HD-12.4-01E	0.000	1.50	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----
HD-12.4-02P	0.000	0.00	180.00	42.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----
HD-12.4-03E	0.000	1.50	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----
HD-12.4-04P	0.000	0.00	90.00	100.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----
HD-12.4-05E	0.000	1.50	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----
HD-12.4-06P	0.000	0.00	90.00	86.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----
HD-12.4-07E	0.000	1.50	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----
HD-12.4-08P	0.000	0.00	0.00	42.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----
HD-12.4-09E	0.000	1.50	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----
HD-12.4-10P_1	0.000	0.00	90.00	240.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----

HD-12.4-10P_2	0.000	0.00	90.00	60.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----
HD-12.4-11E	0.000	1.50	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----
HD-12.4-12P	0.000	0.00	180.00	42.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----
HD-12.4-13E	0.000	1.50	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----
HD-12.4-14P	0.000	0.00	90.00	114.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----
HD-12.4-15T	14.000	0.00	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	3.6600	0.0000	-----	-----
HD-12.4-16P	0.000	0.00	90.00	189.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----
HD-12.4-17E	0.000	1.50	90.00	0.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----
HD-12.4-18P	0.000	0.00	90.00	107.00	730.00	400.00	468.80	361.40	0.000	0.000	3.6600	----	----	-----	-----

Line Name : MSD-01.11A_1 MSEP 33A to HDR

MSD-01.11A-01N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----
MSD-01.11A-02T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.000000	0.0035	0.0035	-----	-----
MSD-01.11A-03P	0.000	0.00	95.00	88.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----

Line Name : MSD-01.11A_2 MSEP 33A to HDR

MSD-01.11A-04N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----
MSD-01.11A-08P	0.000	0.00	180.00	88.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----

Line Name : MSD-01.11A_3 MSEP 33A to HDR

MSD-01.11A-05N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----
MSD-01.11A-06T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.000000	0.0035	0.0035	-----	-----
MSD-01.11A-07P	0.000	0.00	95.00	44.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----

Line Name : MSD-01.11B_1 MSEP 33B to HDR

MSD-01.11B-01N	0.000	0.00	90.00	0.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0035	----	----	-----	-----
MSD-01.11B-02T	12.750	0.00	90.00	0.00	250.00	400.00	191.29	0.00	358.200	0.000	0.000000	0.0035	0.0035	-----	-----
MSD-01.11B-03P	0.000	0.00	95.00	88.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0035	----	----	-----	-----

Line Name : MSD-01.11B_2 MSEP 33B to HDR

MSD-01.11B-04N	0.000	0.00	90.00	0.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0035	----	----	-----	-----
MSD-01.11B-08P	0.000	0.00	180.00	88.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0035	----	----	-----	-----

Line Name : MSD-01.11B_3 MSEP 33B to HDR

MSD-01.11B-05N	0.000	0.00	90.00	0.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0035	----	----	-----	-----
MSD-01.11B-06T	12.750	0.00	90.00	0.00	250.00	400.00	191.29	0.00	358.200	0.000	0.000000	0.0035	0.0035	-----	-----
MSD-01.11B-07P	0.000	0.00	95.00	44.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0035	----	----	-----	-----

Line Name : MSD-01.12A MSEP 33A DR HDR

MSD-01.12A-01T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	0.0070	0.0035	-----	-----
MSD-01.12A-02P	0.000	0.00	90.00	24.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0070	----	----	-----	-----

Line Name : MSD-01.12B MSEP 33B DR HDR

IPEC00029038

MSD-01.12B-01T	12.750	0.00	90.00	0.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0035	0.0070	0.0035	-----	-----
MSD-01.12B-02P	0.000	0.00	90.00	24.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0070	-----	-----	-----	-----

Line Name : MSD-01.13A HDR to MSEP TK 33A

MSD-01.13A-01T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	0.0070	0.0105	-----	-----
MSD-01.13A-02P	0.000	0.00	95.00	32.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.13A-03E	0.000	1.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.13A-04V	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	0.000	0.00
MSD-01.13A-05P	0.000	0.00	90.00	17.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	0.000	0.00
MSD-01.13A-06V	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	0.000	0.00
MSD-01.13A-07P	0.000	0.00	90.00	24.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	0.000	0.00
MSD-01.13A-08E	0.000	1.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.13A-09P	0.000	0.00	90.00	6.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.13A-10N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----

Line Name : MSD-01.13B HDR to MSEP TK 33B

MSD-01.13B-01T	12.750	0.00	90.00	0.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0070	0.0035	0.0105	-----	-----
MSD-01.13B-02P	0.000	0.00	95.00	32.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.13B-03E	0.000	1.00	90.00	0.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.13B-04V	0.000	0.00	90.00	0.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0105	-----	-----	0.000	0.00
MSD-01.13B-05P	0.000	0.00	90.00	17.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0105	-----	-----	0.000	0.00
MSD-01.13B-06V	0.000	0.00	90.00	0.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0105	-----	-----	0.000	0.00
MSD-01.13B-07P	0.000	0.00	90.00	24.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0105	-----	-----	0.000	0.00
MSD-01.13B-08E	0.000	1.00	90.00	0.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.13B-09P	0.000	0.00	90.00	6.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.13B-10N	0.000	0.00	90.00	0.00	250.00	400.00	191.29	0.00	358.200	0.000	0.0105	-----	-----	-----	-----

Line Name : MSD-01.14A TK 33A to HD TK

MSD-01.14A-01N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.14A-02P	0.000	0.00	180.00	23.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.14A-03T	6.625	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	0.0105	0.0000	-----	-----
MSD-01.14A-04P	0.000	0.00	180.00	63.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-01E	6.625	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	0.0105	-----	-----	-----
MSD-01.15A-02V	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	0.000	0.00
MSD-01.15A-03P	0.000	0.00	90.00	29.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	0.000	0.00
MSD-01.15A-04E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-05E	0.000	1.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-06P	0.000	0.00	180.00	89.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-07E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-08P	0.000	0.00	90.00	99.38	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-21P	0.000	0.00	90.00	67.63	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-09E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-10P	0.000	0.00	90.00	61.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-11E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-12P	0.000	0.00	180.00	55.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-13E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-14P	0.000	0.00	90.00	99.38	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-22P	0.000	0.00	90.00	151.63	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-15E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-16P	0.000	0.00	90.00	99.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-17E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-18P	0.000	0.00	180.00	42.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----
MSD-01.15A-19E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	-----	-----	-----	-----

MSD-01.15A-20N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
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Line Name : MSD-01.14B TK 33B to HD TK

MSD-01.14B-01N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.14B-02P	0.000	0.00	180.00	23.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.14B-03T	6.625	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	0.0105	0.0000	-----	-----
MSD-01.14B-04P	0.000	0.00	180.00	24.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-01E	6.625	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	0.0105	----	-----	-----
MSD-01.15B-02E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-03P	0.000	0.00	180.00	30.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-04E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-05V	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.15B-06P	0.000	0.00	90.00	5.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.15B-07E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-08P	0.000	0.00	180.00	62.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-09E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-10P	0.000	0.00	90.00	13.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-11E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-12P_1	0.000	0.00	90.00	41.25	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-12P_2	0.000	0.00	90.00	58.13	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-30P	0.000	0.00	90.00	313.38	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-13E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-14P	0.000	0.00	180.00	37.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-15E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-16P	0.000	0.00	90.00	99.38	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-31P_1	0.000	0.00	90.00	782.13	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-31P_2	0.000	0.00	90.00	92.25	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-17E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-18P	0.000	0.00	90.00	48.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-19E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-20P	0.000	0.00	90.00	73.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-21E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-22P	0.000	0.00	90.00	54.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-23E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-24P	0.000	0.00	90.00	99.38	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-32P	0.000	0.00	90.00	137.63	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-25E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-26P	0.000	0.00	180.00	42.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-27E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-28P	0.000	0.00	90.00	6.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.15B-29N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----

Line Name : MSD-01.1A_1 MSEP 31A to HDR

MSD-01.1A-01N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----
MSD-01.1A-02T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.000000	0.0035	0.0035	-----	-----
MSD-01.1A-03P	0.000	0.00	95.00	88.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----

Line Name : MSD-01.1A_2 MSEP 31A to HDR

MSD-01.1A-04N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----
MSD-01.1A-08P	0.000	0.00	180.00	6.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----

Line Name : MSD-01.1A_3 MSEP 31A to HDR

IPEC00029040

MSD-01.1A-05N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	----	----
MSD-01.1A-06T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.000000	0.0035	0.0035	----	----
MSD-01.1A-07P	0.000	0.00	95.00	68.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	----	----

Line Name : MSD-01.1B_1 MSEP 31B to HDR

MSD-01.1B-01N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	----	----
MSD-01.1B-02T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.000000	0.0035	0.0035	----	----
MSD-01.1B-03P	0.000	0.00	95.00	88.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	----	----

Line Name : MSD-01.1B_2 MSEP 31B to HDR

MSD-01.1B-04N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	----	----
MSD-01.1B-08P	0.000	0.00	180.00	88.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	----	----

Line Name : MSD-01.1B_3 MSEP 31B to HDR

MSD-01.1B-05N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	----	----
MSD-01.1B-06T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.000000	0.0035	0.0035	----	----
MSD-01.1B-07P	0.000	0.00	95.00	68.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	----	----

Line Name : MSD-01.2A MSEP 31A DR HDR

MSD-01.2A-01T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	0.0070	0.0035	----	----
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Line Name : MSD-01.2B MSEP 31B DR HDR

MSD-01.2B-01T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	0.0070	0.0035	----	----
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Line Name : MSD-01.3A HDR to MSEP TK 31A

MSD-01.3A-01T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0070	0.0035	0.0105	----	----
MSD-01.3A-02P	0.000	0.00	95.00	32.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.3A-03E	0.000	1.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.3A-04V	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.3A-05P	0.000	0.00	90.00	6.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.3A-06V	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.3A-07P	0.000	0.00	90.00	6.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.3A-08N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----

Line Name : MSD-01.3B HDR to MSEP TK 31B

MSD-01.3B-01T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0070	0.0035	0.0105	----	----
MSD-01.3B-02P	0.000	0.00	95.00	32.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.3B-03E	0.000	1.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.3B-04V	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.3B-05P	0.000	0.00	90.00	6.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.3B-06V	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.3B-07P	0.000	0.00	90.00	6.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.3B-08N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----

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

MSD-01.4A-01N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.4A-02P	0.000	0.00	180.00	30.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.4A-03T	6.625	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	0.0105	0.0000	----	----
MSD-01.4A-04P	0.000	0.00	180.00	22.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-01E	6.625	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	0.0105	----	----	----
MSD-01.5A-02P	0.000	0.00	90.00	40.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-03E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-04P	0.000	0.00	180.00	10.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-05E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-06V	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.5A-07P	0.000	0.00	90.00	6.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.5A-08E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-09P	0.000	0.00	180.00	36.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-10E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-11P	0.000	0.00	90.00	79.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-12E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-13P	0.000	0.00	180.00	9.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-14E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-15P_1	0.000	0.00	90.00	81.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-15P_2	0.000	0.00	90.00	18.38	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-28P_1	0.000	0.00	90.00	923.63	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-28P_2	0.000	0.00	90.00	138.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-16E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-17P	0.000	0.00	90.00	31.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-18E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-19P	0.000	0.00	180.00	55.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-20E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-21P	0.000	0.00	90.00	99.38	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-29P	0.000	0.00	90.00	61.63	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-22E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-23P	0.000	0.00	90.00	69.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-24E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-25P	0.000	0.00	180.00	42.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-26E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5A-27N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----

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

MSD-01.4B-01N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.4B-02P	0.000	0.00	180.00	13.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.4B-03E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.4B-04P	0.000	0.00	90.00	26.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.4B-05E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.4B-07P	0.000	0.00	180.00	2.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.4B-06T	6.625	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	0.0105	0.0000	----	----
MSD-01.4B-08P	0.000	0.00	180.00	4.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5B-01R	6.625	0.00	180.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	0.0105	----	----	----
MSD-01.5B-02P	0.000	0.00	180.00	55.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5B-03E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5B-04V	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.5B-05P	0.000	0.00	90.00	13.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.5B-06E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5B-07P	0.000	0.00	180.00	48.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5B-08E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.5B-09P	0.000	0.00	90.00	6.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----

MSD-01.5B-10E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-11P_1	0.000	0.00	90.00	81.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-11P_2	0.000	0.00	90.00	18.38	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-29P	0.000	0.00	90.00	1270.63	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-12E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-13P	0.000	0.00	180.00	37.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-14E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-15P	0.000	0.00	90.00	99.38	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-30P_1	0.000	0.00	90.00	805.13	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-30P_2	0.000	0.00	90.00	92.25	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-16E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-17P	0.000	0.00	90.00	48.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-18E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-19P	0.000	0.00	90.00	73.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-20E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-21P	0.000	0.00	90.00	30.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-22E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-23P	0.000	0.00	90.00	99.38	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-31P	0.000	0.00	90.00	137.63	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-24E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-25P	0.000	0.00	180.00	42.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-32P	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-26E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-27P	0.000	0.00	90.00	21.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.5B-28N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----

Line Name : MSD-01.6A_1 MSEP 32A to HDR

MSD-01.6A-01N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----
MSD-01.6A-02T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.000000	0.0035	0.0035	-----	-----
MSD-01.6A-03P	0.000	0.00	95.00	88.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----

Line Name : MSD-01.6A_2 MSEP 32A to HDR

MSD-01.6A-04N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----
MSD-01.6A-08P	0.000	0.00	180.00	88.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----

Line Name : MSD-01.6A_3 MSEP 32A to HDR

MSD-01.6A-05N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----
MSD-01.6A-06T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.000000	0.0035	0.0035	-----	-----
MSD-01.6A-07P	0.000	0.00	95.00	39.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----

Line Name : MSD-01.6B_1 MSEP 32B to HDR

MSD-01.6B-01N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----
MSD-01.6B-02T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.000000	0.0035	0.0035	-----	-----
MSD-01.6B-03P	0.000	0.00	95.00	88.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----

Line Name : MSD-01.6B_2 MSEP 32B to HDR

MSD-01.6B-04N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----
MSD-01.6B-08P	0.000	0.00	180.00	88.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----

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Line Name : MSD-01.6B_3 MSEP 32B to HDR

MSD-01.6B-05N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	----	----
MSD-01.6B-06T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.000000	0.0035	0.0035	-----	-----
MSD-01.6B-07P	0.000	0.00	95.00	39.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	----	----	-----	-----

Line Name : MSD-01.7A MSEP 32A DR HDR

MSD-01.7A-01T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	0.0070	0.0035	-----	-----
MSD-01.7A-02P	0.000	0.00	90.00	29.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0070	----	----	-----	-----

Line Name : MSD-01.7B MSEP 32B DR HDR

MSD-01.7B-01T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0035	0.0070	0.0035	-----	-----
MSD-01.7B-02P	0.000	0.00	90.00	29.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0070	----	----	-----	-----

Line Name : MSD-01.8A HDR to MSEP TK 32A

MSD-01.8A-01T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0070	0.0035	0.0105	-----	-----
MSD-01.8A-02P	0.000	0.00	95.00	32.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.8A-03E	0.000	1.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.8A-04V	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.8A-05P	0.000	0.00	90.00	17.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.8A-06V	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.8A-07P	0.000	0.00	90.00	16.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.8A-08N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----

Line Name : MSD-01.8B HDR to MSEP TK 32B

MSD-01.8B-01T	12.750	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0070	0.0035	0.0105	-----	-----
MSD-01.8B-02P	0.000	0.00	95.00	32.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.8B-03E	0.000	1.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.8B-04V	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.8B-05P	0.000	0.00	90.00	17.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.8B-06V	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.8B-07P	0.000	0.00	90.00	16.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.8B-08N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----

Line Name : MSD-01.9A TK 32A to HD TK

MSD-01.9A-01N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.9A-02P	0.000	0.00	180.00	29.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.9A-03T	6.625	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	0.0105	0.0000	-----	-----
MSD-01.9A-04P	0.000	0.00	180.00	17.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.10A-01E	6.625	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	0.0105	----	-----	-----
MSD-01.10A-02P	0.000	0.00	90.00	88.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.10A-03E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.10A-04P	0.000	0.00	180.00	21.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.10A-05E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.10A-06V	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.10A-07P	0.000	0.00	90.00	11.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.10A-08E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----
MSD-01.10A-09P	0.000	0.00	180.00	66.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	-----	-----

MSD-01.10A-10E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-11P	0.000	0.00	135.00	13.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-12E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-13P	0.000	0.00	90.00	99.38	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-26P_1	0.000	0.00	90.00	11.63	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-26P_2	0.000	0.00	90.00	297.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-26P_3	0.000	0.00	90.00	102.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-14E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-15P	0.000	0.00	90.00	46.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-16E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-17P	0.000	0.00	180.00	55.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-18E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-19P	0.000	0.00	90.00	99.38	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-27P	0.000	0.00	90.00	106.63	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-20E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-21P	0.000	0.00	90.00	84.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-22E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-23P	0.000	0.00	180.00	42.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-24E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10A-25N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----

Line Name : MSD-01.9B TK 32B to HD TK

MSD-01.9B-01N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.9B-02P	0.000	0.00	180.00	30.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.9B-03T	6.625	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	0.0105	0.0000	----	----
MSD-01.9B-04P	0.000	0.00	180.00	8.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-01E	6.625	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	0.0105	----	----	----
MSD-01.10B-02E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-03P	0.000	0.00	180.00	30.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-04E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-05V	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.10B-06P	0.000	0.00	90.00	13.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	0.000	0.00
MSD-01.10B-07E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-08P	0.000	0.00	180.00	55.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-09E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-10P	0.000	0.00	90.00	99.38	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-28P	0.000	0.00	90.00	785.63	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-11E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-12P	0.000	0.00	180.00	37.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-13E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-14P	0.000	0.00	90.00	99.38	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-29P_1	0.000	0.00	90.00	840.13	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-29P_2	0.000	0.00	90.00	92.25	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-15E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-16P	0.000	0.00	90.00	68.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-17E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-18P	0.000	0.00	90.00	73.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-19E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-20P	0.000	0.00	90.00	26.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-21E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-22P	0.000	0.00	90.00	99.38	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-30P	0.000	0.00	90.00	73.63	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-23E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-24P	0.000	0.00	180.00	42.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-25E	0.000	1.50	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-26P	0.000	0.00	90.00	36.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----
MSD-01.10B-27N	0.000	0.00	90.00	0.00	250.00	400.00	191.28	0.00	358.200	0.000	0.0105	----	----	----	----

Line Name : PD-01.1 PRESEP 1B DR to HDR

PD-01.1-01N	0.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	-----	-----
PD-01.2-01R	10.750	0.00	180.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	0.2357	----	-----	-----
PD-01.2-02B	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	-----	-----
PD-01.2-03P	0.000	0.00	169.30	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	-----	-----
PD-01.2-04E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	-----	-----
PD-01.2-05P	0.000	0.00	138.50	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.2-06E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	-----	-----
PD-01.2-07P	0.000	0.00	120.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.2-08E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.2-09V	0.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	0.000	0.00
PD-01.2-10O	0.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	4.685	-----
PD-02.1-01T	10.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.000000	0.2357	0.2357	-----	-----

Line Name : PD-01.3 PRESEP 1A DR to HDR

PD-01.3-01N	0.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.4-01R	10.750	0.00	180.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	0.2357	----	-----	-----
PD-01.4-02B	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	-----	-----
PD-01.4-03P	0.000	0.00	169.30	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	-----	-----
PD-01.4-04E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.4-05P	0.000	0.00	149.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.4-06E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.4-07P	0.000	0.00	120.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.4-08E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.4-09V	0.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	0.000	0.00
PD-01.4-10O	0.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	4.685	-----

Line Name : PD-01.5 PRESEP 2B DR to HDR

PD-01.5-01N	0.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.6-01R	10.750	0.00	180.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	0.2357	----	-----	-----
PD-01.6-02B	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	-----	-----
PD-01.6-03P	0.000	0.00	161.40	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	-----	-----
PD-01.6-04E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	-----	-----
PD-01.6-05P	0.000	0.00	101.50	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.6-06E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	-----	-----
PD-01.6-07P	0.000	0.00	180.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.6-08E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.6-09P	0.000	0.00	133.50	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.6-10E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.6-11P	0.000	0.00	120.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.6-12E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.6-13V	0.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	0.000	0.00
PD-01.6-14O	0.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	4.685	-----

Line Name : PD-01.7 PRESEP 2A DR to HDR

PD-01.7-01N	0.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	-----	-----
PD-01.8-01R	10.750	0.00	180.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	0.2357	----	-----	-----
PD-01.8-02B	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	-----	-----
PD-01.8-03P	0.000	0.00	161.40	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	-----	-----
PD-01.8-04E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	-----	-----

PD-01.8-05P	0.000	0.00	101.50	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	----	----
PD-01.8-06E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	----	----
PD-01.8-07P	0.000	0.00	180.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	----	----
PD-01.8-08E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	----	----
PD-01.8-09P	0.000	0.00	127.50	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	----	----
PD-01.8-10E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	----	----
PD-01.8-11P	0.000	0.00	120.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	----	----
PD-01.8-12E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	----	----
PD-01.8-13V	0.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.799	0.000	0.2357	----	----	0.000	0.00
PD-01.8-14O	0.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	----	----	4.685	----

Line Name : PD-02.2 PRESEP HDR to HD TK

PD-02.2-01T	10.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.2357	0.4715	0.2357	----	----
PD-02.4-22T	2.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.4715	0.4715	0.0000	----	----

Line Name : PD-02.3 PRESEP HDR to HD TK

PD-02.3-01T	10.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.4715	0.7072	0.2357	----	----
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Line Name : PD-02.4 PRESEP HDR to HD TK

PD-02.4-01T	10.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.7072	0.9429	0.2357	----	----
PD-02.4-02E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-03P	0.000	0.00	90.00	35.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-04E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-05P	0.000	0.00	90.00	172.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-22E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-23R	16.000	0.00	0.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	0.9429	----	----	----
PD-02.4-24P	0.000	0.00	0.00	78.19	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-25T	16.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.000000	0.000000	0.9429	----	----
PD-02.4-26P	0.000	0.00	0.00	79.19	250.00	400.00	207.17	0.00	364.800	0.000	0.000000	----	----	----	----
PD-02.4-27P	0.000	0.00	90.00	12.63	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-28E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-06E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-07P	0.000	0.00	70.60	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-08E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-09P	0.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-10E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-11P	0.000	0.00	117.90	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-12E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-13P	0.000	0.00	108.70	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-14E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-15P	0.000	0.00	95.50	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-16E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-17P	0.000	0.00	95.50	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-18E	0.000	1.50	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-19P	0.000	0.00	95.50	28.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-29R	8.625	0.00	95.42	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	0.9429	----	----	----
PD-02.4-30V	0.000	0.00	95.42	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	0.000	0.00
PD-02.4-31R	8.625	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	0.9429	----	----	----
PD-02.4-32P	0.000	0.00	95.42	24.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----
PD-02.4-20O	0.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	5.040	----
PD-02.4-21N	0.000	0.00	90.00	0.00	250.00	400.00	207.17	0.00	364.800	0.000	0.9429	----	----	----	----

Line Name : RHD-01.10A_1 RH 33A to TK 33A

RHD01.10A-01N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10A-02P	0.000	0.00	165.00	11.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10A-03N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----

Line Name : RHD-01.10A_2 TK 33A to A HDR

RHD01.10A-04N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10A-05P	0.000	0.00	180.00	42.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10A-06E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10A-07P	0.000	0.00	135.00	22.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10A-08E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10A-09P	0.000	0.00	180.00	34.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10A-10E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10A-11P	0.000	0.00	90.00	11.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10A-12E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10A-13P	0.000	0.00	90.00	39.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10A-14E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10A-15P	0.000	0.00	90.00	32.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10A-16E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10A-17P	0.000	0.00	90.00	78.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10A-18F	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	5.185	-----
RHD01.10A-19P	0.000	0.00	90.00	32.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	5.185	-----
RHD01.10A-20R	6.625	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	0.1300	----	----	-----
RHD01.11A-01E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.11A-02P	0.000	0.00	90.00	48.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.11A-03E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.11A-04P	0.000	0.00	90.00	89.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.12A-01T	6.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	0.000000	0.1300	-----	-----
RHD01.12A-02P	0.000	0.00	90.00	22.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.12A-03E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.12A-04E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.12A-05P	0.000	0.00	90.00	93.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.12A-06E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.12A-07P	0.000	0.00	180.00	51.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.12A-08E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.13A-01R	4.500	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	0.1300	----	----	-----
RHD02.5A-01V	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.5A-02R	4.500	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.1300	----	----	-----
RHD02.6A-01P	0.000	0.00	90.00	30.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.6A-02E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.6A-03P	0.000	0.00	180.00	43.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.6A-04E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.6A-05P	0.000	0.00	135.00	20.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----

Line Name : RHD-01.10B_1 RH 33B to TK 33B

RHD01.10B-01N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10B-02P	0.000	0.00	165.00	11.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10B-03N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----

Line Name : RHD-01.10B_2 TK 33B to B HDR

RHD01.10B-04N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10B-05P	0.000	0.00	180.00	39.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----

RHD01.10B-60E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10B-61P_1	0.000	0.00	90.00	99.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10B-61P_2	0.000	0.00	90.00	28.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10B-62E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10B-63E	0.000	1.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.10B-64R	6.625	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	0.1300	----	-----	-----
RHD01.11B-01P_1	0.000	0.00	90.00	99.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.11B-01P_2	0.000	0.00	90.00	71.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.11B-02E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.11B-03P	0.000	0.00	180.00	60.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.11B-04E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.11B-05P	0.000	0.00	90.00	24.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.12B-01R	4.500	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	0.1300	----	-----	-----
RHD02.5B-01V	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.5B-02R	4.500	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.1300	----	-----	-----
RHD02.6B-01E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.6B-02P	0.000	0.00	180.00	54.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----

Line Name : RHD-01.1A_1 RH 31A to TK 31A

RHD01.1A-01N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-02P	0.000	0.00	165.00	10.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-03N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----

Line Name : RHD-01.1A_2 TK 31A to A HDR

RHD01.1A-04N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-05P	0.000	0.00	180.00	85.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-06E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-07P_1	0.000	0.00	90.00	99.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-07P_2	0.000	0.00	90.00	17.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-08E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-09P_1	0.000	0.00	90.00	99.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-09P_2	0.000	0.00	90.00	131.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-10E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-11P	0.000	0.00	90.00	44.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-12E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-13P_1	0.000	0.00	90.00	99.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-13P_2	0.000	0.00	90.00	23.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-14E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-15P	0.000	0.00	45.00	10.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-16E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-17P	0.000	0.00	90.00	55.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-18E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-19P	0.000	0.00	180.00	4.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-20E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-21P_1	0.000	0.00	90.00	99.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-21P_2	0.000	0.00	90.00	75.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-22E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-23P	0.000	0.00	135.00	12.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-24E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-25E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-26P	0.000	0.00	90.00	5.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-27E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-28P_1	0.000	0.00	90.00	99.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-28P_2	0.000	0.00	90.00	67.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.1A-29E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----

RHD01.1A-30P	0.000	0.00	90.00	75.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-31E	0.000	1.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-32P	0.000	0.00	180.00	4.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-33E	0.000	1.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-34P_1	0.000	0.00	90.00	99.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-34P_2	0.000	0.00	90.00	73.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-35F	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-36P	0.000	0.00	90.00	42.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	5.185	----
RHD01.1A-37T	6.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	0.1300	0.0000	----	----
RHD01.1A-38P	0.000	0.00	90.00	14.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-39E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-40P	0.000	0.00	90.00	56.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-41E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-42P_1	0.000	0.00	90.00	99.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-42P_2	0.000	0.00	90.00	43.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-43E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-44P_1	0.000	0.00	90.00	99.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-44P_2	0.000	0.00	90.00	37.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-45E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-46P	0.000	0.00	180.00	53.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-47E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1A-48P	0.000	0.00	90.00	20.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.2A-01R	4.500	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	0.1300	----	----	----
RHD02.1A-01V	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.1A-02R	4.500	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.1300	----	----	----
RHD02.2A-01P	0.000	0.00	90.00	12.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.2A-02E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.2A-03P	0.000	0.00	180.00	33.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.2A-04E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.2A-05P	0.000	0.00	135.00	34.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----

Line Name : RHD-01.1B_1 RH 31B to TK 31B

RHD01.1B-01N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-02P	0.000	0.00	165.00	11.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-03N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----

Line Name : RHD-01.1B_2 TK 31B to B HDR

RHD01.1B-04N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-05P	0.000	0.00	180.00	68.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-06E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-07P	0.000	0.00	90.00	54.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-08E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-09P	0.000	0.00	135.00	18.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-10E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-11P	0.000	0.00	180.00	55.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-12E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-13P	0.000	0.00	90.00	102.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-14F	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	5.185	----
RHD01.1B-15P	0.000	0.00	90.00	27.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	5.185	----
RHD01.1B-16E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-17P	0.000	0.00	180.00	30.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-18E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-19P	0.000	0.00	90.00	13.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-20E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-21P_1	0.000	0.00	90.00	99.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----

RHD01.1B-21P_2	0.000	0.00	90.00	388.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-22E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-23P	0.000	0.00	0.00	57.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-24E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-25P	0.000	0.00	90.00	23.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-26E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-27P_1	0.000	0.00	90.00	99.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-27P_2	0.000	0.00	90.00	137.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-28E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-29P	0.000	0.00	0.00	6.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-30E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-31P	0.000	0.00	90.00	72.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-32E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-33P	0.000	0.00	90.00	93.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-34T	6.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	0.1300	0.0000	----	----
RHD01.1B-35E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-36P	0.000	0.00	45.00	30.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-37E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-38P_1	0.000	0.00	90.00	99.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-38P_2	0.000	0.00	90.00	887.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-39E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-40P	0.000	0.00	180.00	21.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-41E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-42P_1	0.000	0.00	90.00	99.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-42P_2	0.000	0.00	90.00	27.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-43E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-44P	0.000	0.00	90.00	74.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-45E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-46P	0.000	0.00	135.00	8.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-47E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-48P	0.000	0.00	180.00	41.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-49E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-50P	0.000	0.00	90.00	17.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-51E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.1B-52P	0.000	0.00	90.00	12.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.2B-01R	4.500	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	0.1300	----	----	----
RHD02.1B-01V	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.1B-02R	4.500	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.1300	----	----	----
RHD02.2B-01P	0.000	0.00	90.00	24.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.2B-02E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.2B-03P	0.000	0.00	90.00	27.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.2B-04E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.2B-05P	0.000	0.00	90.00	52.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----

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

RHD01.3A-01N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.3A-02P	0.000	0.00	165.00	11.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.3A-03N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----

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

RHD01.3A-04N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.3A-05P	0.000	0.00	180.00	69.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.3A-06E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.3A-07P	0.000	0.00	90.00	58.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----
RHD01.3A-08E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	----	----

RHD01.3A-09P	0.000	0.00	90.00	55.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.3A-10E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.3A-11P	0.000	0.00	90.00	15.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.3A-12E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.3A-13P	0.000	0.00	180.00	4.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.3A-14E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.3A-15R	6.625	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	0.1300	----	-----	-----
RHD01.4A-01P_1	0.000	0.00	90.00	129.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.4A-01P_2	0.000	0.00	90.00	77.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.5A-01R	6.625	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	0.1300	----	-----	-----
RHD01.5A-02P	0.000	0.00	90.00	70.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.5A-03F	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	5.185	-----
RHD01.5A-04P	0.000	0.00	90.00	34.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	5.185	-----
RHD01.5A-05R	6.625	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	0.1300	----	-----	-----
RHD01.6A-01P	0.000	0.00	90.00	93.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.6A-02T	8.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	0.1300	0.0000	-----	-----
RHD01.6A-03P_1	0.000	0.00	90.00	129.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.6A-03P_2	0.000	0.00	90.00	49.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.6A-04E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.6A-05P	0.000	0.00	0.00	8.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.6A-06E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.6A-07P	0.000	0.00	90.00	95.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.6A-08E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.6A-09P	0.000	0.00	90.00	36.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.6A-10E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.6A-11P	0.000	0.00	90.00	95.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.6A-12E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.6A-13P	0.000	0.00	180.00	9.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.6A-14E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.6A-15P_1	0.000	0.00	90.00	129.38	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.6A-15P_2	0.000	0.00	90.00	250.63	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.7A-01R	6.625	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	0.1300	----	-----	-----
RHD01.7A-02E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.7A-03P	0.000	0.00	180.00	72.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.7A-04E	0.000	1.50	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.8A-01R	4.500	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	0.1300	----	-----	-----
RHD01.8A-02P	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.3A-01V	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.3A-02R	4.500	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.1300	----	-----	-----
RHD02.4A-01P	0.000	0.00	90.00	12.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.4A-02E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.4A-03P	0.000	0.00	180.00	43.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.4A-04E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.4A-05P	0.000	0.00	135.00	20.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.4A-06L	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.000000	0.1300	0.1300	-----	-----
RHD02.7A-01P	0.000	0.00	90.00	25.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----

Line Name : RHD-01.3B_1 RH 32B to TK 32B

RHD01.3B-01N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.3B-02P	0.000	0.00	165.00	11.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.3B-03N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----

Line Name : RHD-01.3B_2 TK 32B to B HDR

RHD01.3B-04N	0.000	0.00	90.00	0.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD01.3B-05P	0.000	0.00	180.00	61.00	1085.00	600.00	630.00	0.00	495.300	0.000	0.1300	----	----	-----	-----

RHD02.3B-01V	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.3B-02R	4.500	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.1300	----	----	----
RHD02.4B-01P	0.000	0.00	90.00	16.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.4B-02E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.4B-03P	0.000	0.00	180.00	72.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.4B-04E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.4B-05P	0.000	0.00	135.00	39.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.4B-06E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.4B-07P	0.000	0.00	90.00	12.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----

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

RHD02.10A-01R	8.625	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	0.2600	----	----	----
RHD02.10A-02P	0.000	0.00	90.00	75.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	----	----
RHD02.10A-03E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	----	----
RHD02.10A-04P	0.000	0.00	135.00	34.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	----	----
RHD02.10A-05E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	----	----
RHD02.10A-06P	0.000	0.00	90.00	25.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	----	----
RHD02.10A-07E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	----	----
RHD02.10A-08P	0.000	0.00	90.00	37.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	----	----
RHD02.10A-09E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	----	----
RHD02.10A-10P	0.000	0.00	90.00	72.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	----	----
RHD02.10A-11T	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	0.1300	0.1300	----	----

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

RHD02.10B-01R	6.625	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.1300	----	----	----
RHD02.10B-02P_1	0.000	0.00	90.00	99.38	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.10B-02P_2	0.000	0.00	90.00	71.63	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.10B-03E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.10B-04P	0.000	0.00	0.00	3.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.10B-05E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.10B-06P	0.000	0.00	90.00	90.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.10B-07E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.10B-08P	0.000	0.00	90.00	14.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.10B-09E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.10B-10P	0.000	0.00	0.00	60.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.10B-11E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.10B-12V	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.10B-13P	0.000	0.00	90.00	35.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.10B-14T	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000		0.000000	0.1300	----	----
RHD02.10B-15P	0.000	0.00	0.00	30.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.10B-16T	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000		0.000000	0.1300	----	----
RHD02.10B-17R	6.625	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.1300	----	----	----
RHD02.11B-01N	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----

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

RHD02.11A-01R	6.625	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.1300	----	----	----
RHD02.11A-02P_1	0.000	0.00	90.00	99.38	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.11A-02P_2	0.000	0.00	90.00	10.63	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.11A-03E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.11A-04P	0.000	0.00	0.00	3.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.11A-05E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.11A-06P	0.000	0.00	90.00	74.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----
RHD02.11A-07E	0.000	1.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	----	----

RHD02.11A-08E	0.000	1.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.11A-09P_1	0.000	0.00	90.00	99.38	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.11A-09P_2	0.000	0.00	90.00	59.63	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.11A-10E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.11A-11P	0.000	0.00	90.00	43.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.11A-12E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.11A-13P	0.000	0.00	0.00	33.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.11A-14E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.11A-15V	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.11A-16P	0.000	0.00	90.00	35.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.11A-17T	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000		0.000000	0.1300	-----	-----
RHD02.11A-18P	0.000	0.00	0.00	48.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.11A-19T	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000		0.000000	0.1300	-----	-----
RHD02.11A-20R	6.625	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.1300	----	-----	-----
RHD02.12A-01N	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----

Line Name : RHD-02.12B B HDR to FWH 36B

RHD02.12B-01P	0.000	0.00	0.00	3.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.12B-02E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.12B-03P	0.000	0.00	90.00	90.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.12B-04E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.12B-05P	0.000	0.00	90.00	14.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.12B-06E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.12B-07P	0.000	0.00	0.00	60.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.12B-08E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.12B-09V	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.12B-10P	0.000	0.00	90.00	35.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.12B-11T	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000		0.000000	0.1300	-----	-----
RHD02.12B-12P	0.000	0.00	0.00	30.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.12B-13T	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000		0.000000	0.1300	-----	-----
RHD02.12B-14R	6.625	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.1300	----	-----	-----
RHD02.13B-01N	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----

Line Name : RHD-02.13A A HDR to FWH 36B

RHD02.13A-01P	0.000	0.00	0.00	6.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.13A-02E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.13A-03P	0.000	0.00	90.00	74.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.13A-04E	0.000	1.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.13A-05E	0.000	1.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.13A-06P_1	0.000	0.00	90.00	99.38	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.13A-06P_2	0.000	0.00	90.00	56.63	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.13A-07E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.13A-08P	0.000	0.00	90.00	43.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.13A-09E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.13A-10P	0.000	0.00	0.00	33.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.13A-11E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.13A-12V	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.13A-13P	0.000	0.00	90.00	35.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.13A-14T	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000		0.000000	0.1300	-----	-----
RHD02.13A-15P	0.000	0.00	0.00	48.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.13A-16T	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000		0.000000	0.1300	-----	-----
RHD02.13A-17R	6.625	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.1300	----	-----	-----
RHD02.14A-01N	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----

Line Name : RHD-02.14B B HDR to FWH 36C

RHD02.14B-01P	0.000	0.00	0.00	3.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.14B-02E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.14B-03P	0.000	0.00	90.00	90.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.14B-04E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.14B-05E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.14B-06P	0.000	0.00	0.00	60.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.14B-07E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.14B-08V	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.14B-09P	0.000	0.00	90.00	35.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.14B-10T	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.000000	0.1300	----	----	-----
RHD02.14B-11P	0.000	0.00	0.00	30.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.14B-12T	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.000000	0.1300	----	----	-----
RHD02.14B-13R	6.625	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.1300	----	----	-----
RHD02.15B-01N	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----

Line Name : RHD-02.15A A HDR to FWH 36C

RHD02.15A-01P	0.000	0.00	90.00	29.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.15A-02E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.15A-03P	0.000	0.00	90.00	30.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.15A-04E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.15A-05P	0.000	0.00	0.00	33.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.15A-06E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.15A-07V	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.15A-08P	0.000	0.00	90.00	35.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	0.000	0.00
RHD02.15A-09T	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.000000	0.1300	----	----	-----
RHD02.15A-10P	0.000	0.00	0.00	48.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----
RHD02.15A-11T	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.000000	0.1300	----	----	-----
RHD02.15A-12R	6.625	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.1300	----	----	-----
RHD02.16A-01N	0.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	----	----	-----	-----

Line Name : RHD-02.7B TK B HDR to FWH 36

RHD02.2B-06L	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.2600	0.1300	----	----
RHD02.7B-01P	0.000	0.00	180.00	27.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	-----	-----
RHD02.7B-02E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	-----	-----
RHD02.7B-03P	0.000	0.00	90.00	12.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	-----	-----
RHD02.7B-04E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	-----	-----
RHD02.7B-05P	0.000	0.00	90.00	15.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	-----	-----
RHD02.7B-06E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	-----	-----
RHD02.7B-07P	0.000	0.00	90.00	6.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	-----	-----

Line Name : RHD-02.8A TK A HDR to FWH 36

RHD02.6A-06L	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.2600	0.1300	----	----
RHD02.8A-01P	0.000	0.00	90.00	29.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	-----	-----
RHD02.8A-02E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	-----	-----
RHD02.8A-03P	0.000	0.00	90.00	12.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	-----	-----

Line Name : RHD-02.8B TK B HDR to FWH 36

RHD02.7B-08L	8.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.1300	0.3900	0.2600	----	----
RHD02.8B-01P	0.000	0.00	90.00	29.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	----	----	-----	-----

RHD02.8B-02E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	----	----	-----	-----
RHD02.8B-03P	0.000	0.00	0.00	6.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	----	----	-----	-----
RHD02.8B-04E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	----	----	-----	-----
RHD02.8B-05P	0.000	0.00	90.00	149.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	----	----	-----	-----
RHD02.8B-06T	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	0.2600	0.1300	-----	-----

Line Name : RHD-02.9A TK A HDR to FWH 36

RHD02.2A-06L	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	0.3900	0.1300	-----	-----
RHD02.9A-01P	0.000	0.00	90.00	21.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	----	----	-----	-----
RHD02.9A-02E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	----	----	-----	-----
RHD02.9A-03P	0.000	0.00	90.00	147.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	----	----	-----	-----
RHD02.9A-04E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	----	----	-----	-----
RHD02.9A-05P	0.000	0.00	90.00	45.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	----	----	-----	-----
RHD02.9A-06E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	----	----	-----	-----
RHD02.9A-07E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	----	----	-----	-----
RHD02.9A-08P	0.000	0.00	45.00	3.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	----	----	-----	-----
RHD02.9A-09E	0.000	1.50	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	----	----	-----	-----
RHD02.9A-10P	0.000	0.00	90.00	23.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	----	----	-----	-----
RHD02.9A-11T	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.3900	0.2600	0.1300	-----	-----

Line Name : RHD-02.9B TK B HDR to FWH 36

RHD02.9B-01P	0.000	0.00	90.00	67.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	----	----	-----	-----
RHD02.9B-02T	6.000	0.00	90.00	0.00	1085.00	600.00	333.70	0.00	495.300	0.000	0.2600	0.1300	0.1300	-----	-----

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 06-SEP-2005 Time: 12:46:38
 CHECWORKS FAC Version 1.0G (Build 75)

 *** FAC Database: Component Summary Report #2 ***

SELECTION CRITERIA:

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

Component Name	Geometry Type	Code	Material Spec/Type/Class	No.	Material				Pipe Size				
					Cr. (%)	Cu. (%)	Mo. (%)	Sigma (psi)	OD (in)	Sch.	Tnom (in)	Tinit (in)	Tcrit (in)

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

CD-01.1A-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1A-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1A-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1A-04P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1A-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1A-06E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1A-07E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1A-08P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1A-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1A-10P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1A-11E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1A-12P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1A-13N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305

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

CD-01.1B-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1B-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1B-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1B-04P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1B-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1B-06E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1B-07E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1B-08P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1B-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1B-10P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1B-11E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1B-12P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1B-13N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305

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

CD-01.1C-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
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CD-01.1C-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1C-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1C-04P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1C-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1C-06E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1C-07E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1C-08P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1C-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1C-10P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1C-11E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1C-12P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-01.1C-13N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305

Line Name : CD-02.11 SGBD HX3 to FWH HDR

CD-02.11-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.812	0.188
CD-02.11-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.11-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.11-04P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.11-05E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.11-06P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.11-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.11-08P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.11-09P	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.11-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.11-11P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.11-12E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.11-13T	TEE	10	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	40	0.562	0.000	0.392
CD-02.12-01P	STRAIGHT PIPE	60	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.12-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.12-03P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.12-04V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.562	0.562	0.420
CD-02.12-05P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.12-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.12-07P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.12-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.12-09P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.12-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.12-11P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392

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

CD-02.1A-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1A-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1A-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1A-04P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1A-05V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	14.000	0	0.438	0.438	0.326
CD-02.1A-06E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1A-07E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1A-08P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1A-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1A-10P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1A-11E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1A-12P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1A-14P	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1A-13R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	40	0.594	0.000	0.436

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

CD-02.1B-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1B-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1B-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1B-04P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1B-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1B-06E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1B-07V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	14.000	0	0.438	0.438	0.326
CD-02.1B-08P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1B-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1B-10P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.661	0.305

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

CD-02.1C-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1C-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1C-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1C-04P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1C-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1C-06E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1C-07P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1C-08V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	14.000	0	0.438	0.438	0.326
CD-02.1C-09P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.1C-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.575	0.305
CD-02.1C-11P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305

Line Name : CD-02.2 FWH 32 OUT HDR

CD-02.1B-11T	TEE	12	A106/B/B	5	0.00	0.00	0.00	15000.0	20.000	40	0.594	0.624	0.436
CD-02.2-01P	STRAIGHT PIPE	62	A106/B/B	5	0.00	0.00	0.00	15000.0	20.000	0	0.594	0.594	0.436
CD-02.2-03P	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	20.000	0	0.594	0.594	0.436
CD-02.2-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523

Line Name : CD-02.3 FWH 32 OUT HDR

CD-02.1C-12T	TEE	12	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.692	0.523
CD-02.3-01P	STRAIGHT PIPE	62	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.736	0.523
CD-02.3-02T	TEE	15	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.3-03P	STRAIGHT PIPE	65	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.3-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.3-05E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.3-06P	STRAIGHT PIPE	53	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.3-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.3-08P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.3-09E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.3-10P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.3-16P	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.3-11E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.3-12P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.3-13E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.3-14P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.3-15T	TEE	14	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523

Line Name : CD-02.4 FWH 32 OUT HDR

CD-02.3-17P	STRAIGHT PIPE	62	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.4-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-02.4-02V	BUTTERFLY VALVE	23	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	20.000	0	0.594	0.594	0.466
CD-02.4-03P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	20.000	0	0.594	0.594	0.436
CD-02.4-04E	90-DEG EXP. ELBOW	19	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-02.5-01P	STRAIGHT PIPE	69	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.754	0.523
CD-02.5-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.994	0.523

Line Name : CD-02.5 FWH 32 OUT HDR

CD-02.5-03T	TEE	12	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.5-04T	TEE	14	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.730	0.523

Line Name : CD-02.6 FWH 32 OUT HDR

CD-02.6-01T	TEE	15	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.693	0.523
CD-02.6-02P	STRAIGHT PIPE	65	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.693	0.523
CD-02.6-03T	TEE	14	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.694	0.523

Line Name : CD-02.8A HDR to FWH 33A

CD-02.7-01P	STRAIGHT PIPE	64	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.675	0.523
CD-02.7-02T	TEE	14	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-02.8A-01P	STRAIGHT PIPE	64	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.8A-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.8A-03P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.8A-04V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	14.000	0	0.438	0.438	0.326
CD-02.8A-05E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.8A-06P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.8A-07E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.8A-08N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305

Line Name : CD-02.8B HDR to FWH 33B

CD-02.8B-01P	STRAIGHT PIPE	64	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.445	0.305
CD-02.8B-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-02.8B-03P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.8B-04V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	14.000	0	0.438	0.438	0.326
CD-02.8B-05E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.8B-06P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.8B-07E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.8B-08N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305

Line Name : CD-02.8C HDR to FWH 33C

CD-02.8C-01P	STRAIGHT PIPE	64	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.629	0.305
CD-02.8C-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-02.8C-03P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.594	0.305
CD-02.8C-04V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	14.000	0	0.438	0.438	0.326
CD-02.8C-05E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.8C-06P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-02.8C-07E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305

CD-02.8C-08N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
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Line Name : CD-02.9 FWH HDR to SGBD HX3

CD-02.9-01P	STRAIGHT PIPE	63	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.9-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.9-03P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.9-04V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.562	0.562	0.420
CD-02.9-05P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.9-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.9-07P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.9-08E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.9-09P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.9-10P	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.9-11E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.9-12P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.9-13E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.9-14P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.9-15P	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.9-16E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.9-17T	TEE	14	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392
CD-02.10-01P	STRAIGHT PIPE	64	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.10-02O	ORIFICE	6	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.10-03P	STRAIGHT PIPE	56	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.10-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.10-05P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.10-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.10-07P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.10-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.10-09P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.10-10E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.188
CD-02.10-11N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.812	0.812	0.188

Line Name : CD-03.1A FWH 33A to FWH 34A

CD-03.1A-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1A-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1A-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1A-04P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1A-05E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1A-15P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1A-06E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1A-07P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1A-14P	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1A-08E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1A-09P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1A-10E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1A-11P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1A-12E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1A-13N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305

Line Name : CD-03.1B FWH 33B to FWH 34B

CD-03.1B-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1B-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1B-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305

CD-03.1B-04P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1B-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.547	0.305
CD-03.1B-06E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.555	0.305
CD-03.1B-07P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.477	0.305
CD-03.1B-12P	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1B-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1B-09P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1B-10E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1B-11N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305

Line Name : CD-03.1C FWH 33C to FWH 34C

CD-03.1C-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1C-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1C-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1C-04P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1C-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1C-06E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1C-07P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1C-12P	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1C-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1C-09P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1C-10E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-03.1C-11N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305

Line Name : CD-04.1A FWH 34A to FWH 35A

CD-04.1A-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1A-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1A-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1A-04P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1A-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1A-06P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1A-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1A-08P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1A-09E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1A-10P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1A-15P	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1A-11E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1A-12P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1A-13E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1A-14N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305

Line Name : CD-04.1B FWH 34B to FWH 35B

CD-04.1B-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1B-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1B-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1B-04P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1B-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1B-06E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1B-07P	STRAIGHT PIPE	53	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1B-08E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1B-09P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1B-10E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1B-11P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305

CD-04.1B-17P	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1B-12E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1B-13E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1B-14P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1B-15E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1B-16N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305

Line Name : CD-04.1C FWH 34C to FWH 35C

CD-04.1C-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1C-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.594	0.305
CD-04.1C-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.570	0.305
CD-04.1C-04P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1C-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1C-06P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1C-07E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1C-08E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1C-09P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1C-14P	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1C-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1C-11P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1C-12E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-04.1C-13N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305

Line Name : CD-05.1A FWH 35A to HDR

CD-05.1A-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1A-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1A-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1A-04P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1A-05V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	14.000	0	0.438	0.438	0.326
CD-05.1A-06P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1A-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1A-08P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1A-09E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1A-10P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1A-11R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-05.2-01P	STRAIGHT PIPE	68	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523

Line Name : CD-05.1B FWH 35B to HDR

CD-05.1B-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1B-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1B-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1B-04P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1B-05V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	14.000	0	0.438	0.438	0.326
CD-05.1B-06P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1B-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.575	0.305
CD-05.1B-08P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.465	0.305

Line Name : CD-05.1C FWH 35C to HDR

CD-05.1C-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1C-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1C-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305

CD-05.1C-04P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1C-05V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	14.000	0	0.438	0.438	0.326
CD-05.1C-06P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1C-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1C-08E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.438	0.438	0.305
CD-05.1C-09P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.498	0.305

Line Name : CD-05.3 FWH 35 OUT HDR

CD-05.1B-09T	TEE	12	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.724	0.523
CD-05.3-01P	STRAIGHT PIPE	62	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.724	0.523

Line Name : CD-05.4 FWH 35 OUT HDR

CD-05.1C-10T	TEE	12	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-05.4-04P	STRAIGHT PIPE	62	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-05.4-01E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-05.4-02P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.722	0.523
CD-05.4-03T	TEE	10	A106/B/B	5	0.00	0.00	0.00	15000.0	30.000	0	0.625	0.696	0.653
CD-05.4-05P	STRAIGHT PIPE	60	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	0	0.625	0.625	0.561

Line Name : CD-06.1 FWH 35 OUT HDR

CD-06.1-01T	TEE	12	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	0	0.625	0.659	0.561
CD-06.1-02P	STRAIGHT PIPE	62	A155/KC70/1	9	0.00	0.00	0.00	17500.0	28.000	0	0.625	0.663	0.524
CD-06.1-03T	TEE	14	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	0	0.625	0.702	0.561

Line Name : CD-06.2A HDR to BFP 31

CD-06.2A-01P	STRAIGHT PIPE	64	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.721	0.523
CD-06.2A-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.729	0.523
CD-06.2A-03P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-05P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-07V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	24.000	0	0.688	0.688	0.559
CD-06.2A-08P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-10P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-11E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-12P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-13E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-14P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-15E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-16P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-17E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-18P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-19E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-20E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-21P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-22P	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-23P	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-24O	ORIFICE	6	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-25P	STRAIGHT PIPE	56	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-26E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523

CD-06.2A-27P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-28E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-29P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-30E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-31E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-32P	STRAIGHT PIPE	53	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-33E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2A-34P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.3A-01R	CON. REDUCER	17	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-06.3A-02N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392

Line Name : CD-06.2B HDR to BFP 32

CD-06.2B-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	30.000	0	0.625	0.000	0.615
CD-06.2B-02P	STRAIGHT PIPE	57	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.702	0.523
CD-06.2B-35P	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2B-03T	TEE	15	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2B-04T	TEE	13	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2B-05V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	24.000	0	0.688	0.688	0.559
CD-06.2B-06E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2B-07P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2B-36P	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2B-08O	ORIFICE	6	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2B-09P	STRAIGHT PIPE	56	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2B-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2B-11P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2B-12E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2B-13P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2B-14E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.2B-15P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	0	0.688	0.688	0.523
CD-06.3B-01R	CON. REDUCER	17	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-06.3B-02N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	18.000	0	0.562	0.562	0.392

Line Name : EX-01.1 HP EXT to FWH 36 HDR

EX-01.1-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.330	0.330	0.189
EX-01.1-02E	90-DEG ELBOW	4	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.446	0.194
EX-01.1-03P	STRAIGHT PIPE	54	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.352	0.194
EX-01.1-04E	90-DEG ELBOW	4	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.450	0.194
EX-01.1-05P	STRAIGHT PIPE	54	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.368	0.194
EX-01.1-06E	90-DEG ELBOW	2	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.330	0.194
EX-01.1-07P	STRAIGHT PIPE	52	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.330	0.194
EX-01.1-08R	CON. EXPANDER	18	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.000	0.274
EX-01.6-01P	STRAIGHT PIPE	68	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.375	0.378	0.274

Line Name : EX-01.2 HP EXT to FWH 36 HDR

EX-01.2-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.330	0.330	0.189
EX-01.2-02E	90-DEG ELBOW	4	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.000	0.194
EX-01.2-03P	STRAIGHT PIPE	54	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.385	0.194
EX-01.2-04E	45-DEG ELBOW	3	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.330	0.194
EX-01.2-05P	STRAIGHT PIPE	53	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.330	0.194
EX-01.2-06E	90-DEG ELBOW	4	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.330	0.194
EX-01.2-07P	STRAIGHT PIPE	54	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.330	0.194
EX-01.2-08E	45-DEG ELBOW	1	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.330	0.194
EX-01.2-09P	STRAIGHT PIPE	51	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.375	0.357	0.194

Line Name : EX-01.3 HP EXT FWH 36 HEADER

EX-01.2-10L	TEE	12	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.375	0.482	0.274
EX-01.3-01P	STRAIGHT PIPE	62	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.456	0.274
EX-01.3-02E	90-DEG ELBOW	2	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.438	0.274
EX-01.3-03P	STRAIGHT PIPE	52	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.438	0.274
EX-01.3-04T	TEE	15	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.468	0.274
EX-01.3-05P	STRAIGHT PIPE	65	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.464	0.274
EX-01.3-06V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.438	0.438	0.286
EX-01.3-07V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.438	0.438	0.286
EX-01.3-08V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.438	0.438	0.286
EX-01.3-09E	90-DEG ELBOW	4	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.438	0.274
EX-01.3-10P	STRAIGHT PIPE	54	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.438	0.274
EX-01.3-11T	TEE	15	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.438	0.274
EX-01.3-12P	STRAIGHT PIPE	65	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.438	0.274
EX-01.3-13E	90-DEG ELBOW	2	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.438	0.274
EX-01.3-14P	STRAIGHT PIPE	52	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.438	0.274
EX-01.3-15E	90-DEG ELBOW	2	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.438	0.274
EX-01.3-16P	STRAIGHT PIPE	52	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.460	0.274
EX-01.3-17T	TEE	15	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.501	0.274
EX-01.3-19E	90-DEG ELBOW	4	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.000	0.274
EX-01.3-20P	STRAIGHT PIPE	54	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.438	0.274
EX-01.3-21E	90-DEG ELBOW	2	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.438	0.274
EX-01.3-22P	STRAIGHT PIPE	52	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.528	0.274
EX-01.3-23T	TEE	14	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.539	0.274

Line Name : EX-01.4 HP EXT FWH 36 HEADER

EX-01.4-01P	STRAIGHT PIPE	63	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.528	0.274
EX-01.4-02T	TEE	14	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.439	0.274

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

EX-01.7-01P	STRAIGHT PIPE	63	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.438	0.274
EX-01.5A-01R	CON. REDUCER	7	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	18.000	0	0.438	0.000	0.274
EX-01.5A-02P	STRAIGHT PIPE	57	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.374	0.194
EX-01.5A-03E	90-DEG ELBOW	102	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.375	0.000	0.194
EX-01.5A-04P	STRAIGHT PIPE	52	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.375	0.411	0.194
EX-01.5A-05E	90-DEG ELBOW	4	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.375	0.419	0.194
EX-01.5A-06P	STRAIGHT PIPE	54	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.375	0.000	0.194
EX-01.5A-16L	TEE	12	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.375	0.000	0.194
EX-01.5A-07L	TEE	12	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.375	0.000	0.194
EX-01.5A-08P	STRAIGHT PIPE	62	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.375	0.000	0.194
EX-01.5A-09E	90-DEG ELBOW	102	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.375	0.000	0.194
EX-01.5A-10P	STRAIGHT PIPE	52	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.330	0.194
EX-01.5A-11V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.330	0.330	0.202
EX-01.5A-12P	STRAIGHT PIPE	58	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.387	0.194
EX-01.5A-13E	90-DEG ELBOW	2	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.426	0.194
EX-01.5A-17P	STRAIGHT PIPE	52	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.335	0.194
EX-01.5A-14E	90-DEG ELBOW	4	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.470	0.194
EX-01.5A-15N	INLET NOZZLE	30	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.309	0.194

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

Line Name : EX-02.13 PSEP 1B&2B to 35 HDR

EX-02.11-05T	TEE	12	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	18.000	XS	0.500	0.500	0.151
EX-02.13-01P	STRAIGHT PIPE	62	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	18.000	XS	0.500	0.500	0.151
EX-02.13-02B	45-DEG ELBOW	1	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	18.000	XS	0.500	0.500	0.151
EX-02.13-03E	90-DEG ELBOW	4	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	18.000	XS	0.500	0.375	0.151
EX-02.13-03P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	18.000	0	0.375	0.375	0.149
EX-02.13-04E	45-DEG ELBOW	3	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	18.000	XS	0.500	0.375	0.151
EX-02.13-05P	STRAIGHT PIPE	53	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	18.000	XS	0.500	0.375	0.151
EX-02.13-06R	CON. EXPANDER	18	A234/WP22/WP2	18	1.90	0.00	0.87	15000.0	28.000	0	0.375	0.000	0.232

Line Name : EX-02.14 FWH 35 HEADER

EX-02.7-02T	TEE	12	A691/EFW/22	26	2.25	0.00	0.70	15000.0	28.000	0	0.375	0.375	0.232
EX-02.14-01P	STRAIGHT PIPE	62	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.375	0.375	0.311
EX-02.14-02E	90-DEG ELBOW	2	A234/WP22/WP2	18	1.90	0.00	0.87	15000.0	28.000	0	0.375	0.375	0.232
EX-02.14-03P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.375	0.375	0.311
EX-02.14-04T	TEE	15	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.375	0.375	0.311
EX-02.14-05P	STRAIGHT PIPE	65	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.375	0.375	0.311
EX-02.14-06E	90-DEG ELBOW	2	A234/WP22/WP2	18	1.90	0.00	0.87	15000.0	28.000	0	0.375	0.375	0.232
EX-02.14-07P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.375	0.375	0.311
EX-02.14-08E	90-DEG ELBOW	2	A234/WP22/WP2	18	1.90	0.00	0.87	15000.0	28.000	0	0.375	0.375	0.232
EX-02.14-09P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.375	0.375	0.311
EX-02.14-10V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	28.000	0	0.375	0.375	0.248
EX-02.14-11V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	28.000	0	0.375	0.375	0.248
EX-02.14-12P	STRAIGHT PIPE	58	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.375	0.375	0.311
EX-02.14-13V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	28.000	0	0.375	0.375	0.248
EX-02.14-31P	STRAIGHT PIPE	58	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.375	0.375	0.311
EX-02.14-14E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.375	0.375	0.232
EX-02.14-32T	TEE	15	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.375	0.375	0.311
EX-02.14-16E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.375	0.375	0.232
EX-02.14-17P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.375	0.375	0.311
EX-02.14-18E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.375	0.375	0.232
EX-02.14-19P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.375	0.375	0.311
EX-02.14-20E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.375	0.375	0.232
EX-02.14-21P	STRAIGHT PIPE	54	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.375	0.375	0.311
EX-02.14-33P	STRAIGHT PIPE	9	A691/EFW/22	26	2.25	0.00	0.70	15000.0	28.000	0	0.375	0.375	0.232
EX-02.14-22T	TEE	15	A691/EFW/22	26	2.25	0.00	0.70	15000.0	28.000	0	0.375	0.375	0.232
EX-02.14-23P	STRAIGHT PIPE	65	A691/EFW/22	26	2.25	0.00	0.70	15000.0	28.000	0	0.375	0.375	0.232
EX-02.14-24E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.375	0.375	0.232
EX-02.14-25E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.375	0.375	0.232
EX-02.14-26P	STRAIGHT PIPE	54	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.375	0.375	0.311
EX-02.14-27E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.375	0.000	0.232
EX-02.14-28P	STRAIGHT PIPE	52	A691/EFW/22	26	2.25	0.00	0.70	15000.0	28.000	0	0.375	0.375	0.232
EX-02.14-29T	TEE	14	A691/EFW/22	26	2.25	0.00	0.70	15000.0	28.000	0	0.375	0.375	0.232

Line Name : EX-02.15 FWH 35 HEADER

EX-02.15-01P	STRAIGHT PIPE	64	A691/EFW/22	26	2.25	0.00	0.70	15000.0	28.000	0	0.375	0.625	0.232
EX-02.15-02T	TEE	14	A691/EFW/22	26	2.25	0.00	0.70	15000.0	28.000	0	0.375	0.656	0.232

Line Name : EX-02.16 HDR 35 to FWH 35A

EX-02.19-01P	STRAIGHT PIPE	64	A691/EFW/22	26	2.25	0.00	0.70	15000.0	28.000	0	0.375	0.375	0.232
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EX-01.5B-01P	STRAIGHT PIPE	64	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.363	0.194
EX-01.5B-02E	90-DEG ELBOW	2	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.477	0.194
EX-01.5B-03P	STRAIGHT PIPE	52	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.330	0.194
EX-01.5B-14L	TEE	12	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.330	0.194
EX-01.5B-04L	TEE	12	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.330	0.194
EX-01.5B-05P	STRAIGHT PIPE	62	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.330	0.194
EX-01.5B-06E	45-DEG ELBOW	1	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.330	0.194
EX-01.5B-07E	90-DEG ELBOW	4	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.330	0.194
EX-01.5B-08P	STRAIGHT PIPE	54	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.330	0.194
EX-01.5B-09V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.330	0.330	0.202
EX-01.5B-10P	STRAIGHT PIPE	58	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.374	0.194
EX-01.5B-11E	90-DEG ELBOW	2	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.452	0.194
EX-01.5B-15P	STRAIGHT PIPE	52	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.386	0.194
EX-01.5B-12E	90-DEG ELBOW	4	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.543	0.194
EX-01.5B-13N	INLET NOZZLE	30	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.309	0.194

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

EX-01.5C-01P	STRAIGHT PIPE	64	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.450	0.194
EX-01.5C-02E	90-DEG ELBOW	2	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.423	0.194
EX-01.5C-03P	STRAIGHT PIPE	52	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.377	0.194
EX-01.5C-14L	TEE	12	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.373	0.194
EX-01.5C-04L	TEE	12	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.364	0.194
EX-01.5C-05P	STRAIGHT PIPE	62	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.373	0.194
EX-01.5C-06E	45-DEG ELBOW	1	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.431	0.194
EX-01.5C-07E	90-DEG ELBOW	4	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.416	0.194
EX-01.5C-08P	STRAIGHT PIPE	54	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.356	0.194
EX-01.5C-09V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.330	0.330	0.202
EX-01.5C-10P	STRAIGHT PIPE	58	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.358	0.194
EX-01.5C-11E	90-DEG ELBOW	2	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.448	0.194
EX-01.5C-15P	STRAIGHT PIPE	52	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.337	0.194
EX-01.5C-12E	90-DEG ELBOW	4	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.485	0.194
EX-01.5C-13N	INLET NOZZLE	30	A-213/TP304L/TP3	63	18.00	0.00	0.00	14600.0	12.750	0	0.330	0.309	0.194

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

EX-02.1-01N	EXIT NOZZLE	31	A240/TP321/	0	18.00	0.00	0.00	17300.0	10.750	40	0.365	0.365	0.077
EX-02.1-02P	STRAIGHT PIPE	61	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.378	0.090
EX-02.1-03E	90-DEG ELBOW	4	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.425	0.090
EX-02.1-04P	STRAIGHT PIPE	54	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.1-05O	ORIFICE	6	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.1-06T	TEE	10	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	18.000	XS	0.500	0.500	0.151
EX-02.5-01P	STRAIGHT PIPE	60	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	18.000	XS	0.500	0.500	0.151

Line Name : EX-02.11 PSEP1B 14" to 35 HDR

EX-02.11-02P	STRAIGHT PIPE	64	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	14.000	0	0.375	0.375	0.117
EX-02.11-03E	90-DEG ELBOW	4	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	14.000	0	0.375	0.375	0.117
EX-02.11-04P	STRAIGHT PIPE	54	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	14.000	0	0.375	0.375	0.117
EX-02.11-06O	ORIFICE	6	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	14.000	0	0.375	0.375	0.117

Line Name : EX-02.12 PSEP 1B&2B to 35 HDR

EX-02.9-10T	TEE	12	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	18.000	XS	0.500	0.500	0.151
EX-02.12-01P	STRAIGHT PIPE	62	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	18.000	XS	0.500	0.500	0.151

EX-02.7-01P	STRAIGHT PIPE	62	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	18.000	XS	0.500	0.500	0.151
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Line Name : EX-02.8 PSEP 2B 10" to 35 HDR

EX-02.8-01N	EXIT NOZZLE	31	A240/TP321/	0	18.00	0.00	0.00	17300.0	10.750	40	0.365	0.365	0.077
EX-02.8-02E	45-DEG ELBOW	3	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.8-03P	STRAIGHT PIPE	53	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.8-04E	45-DEG ELBOW	1	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.8-05P	STRAIGHT PIPE	51	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.8-06E	45-DEG ELBOW	1	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.8-07O	ORIFICE	6	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.8-08T	TEE	10	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	18.000	XS	0.500	0.500	0.151

Line Name : EX-02.9 PSEP 1B 10" to 35 HDR

EX-02.9-01N	EXIT NOZZLE	31	A240/TP321/	0	18.00	0.00	0.00	17300.0	10.750	40	0.365	0.365	0.077
EX-02.9-02P	STRAIGHT PIPE	61	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.9-03E	90-DEG ELBOW	2	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.9-04P	STRAIGHT PIPE	52	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.9-05E	90-DEG ELBOW	2	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.9-06P	STRAIGHT PIPE	52	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.9-07P	STRAIGHT PIPE	52	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.000	0.090
EX-02.9-07E	90-DEG ELBOW	2	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.9-08P	STRAIGHT PIPE	52	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.9-09E	90-DEG ELBOW	4	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.9-10P	STRAIGHT PIPE	54	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.000	0.090
EX-02.9-11O	ORIFICE	6	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090

Line Name : EX-03.1A LP EXT 12 to FWH 34A

EX-03.1A-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.400	0.066
EX-03.1A-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-42X	ORIFICE	6	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-04P	STRAIGHT PIPE	56	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-05T	TEE	15	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-06E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-07E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-40P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-08V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	20.000	0	0.250	0.250	0.071
EX-03.1A-09P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-10V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	20.000	0	0.250	0.250	0.071
EX-03.1A-11P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-12E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-13P	STRAIGHT PIPE	51	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-14E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-15P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-16E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-17P	STRAIGHT PIPE	51	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-18E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-20E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-21P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-22T	TEE	15	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-23P	STRAIGHT PIPE	65	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-24E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-25P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066

EX-02.16-01R	CON. REDUCER	7	A234/WP22/WP2	18	1.90	0.00	0.87	15000.0	28.000	0	0.375	0.000	0.232
EX-02.16-02P	STRAIGHT PIPE	57	A335/P22/P22	26	1.90	0.00	0.87	15000.0	18.000	0	0.375	0.284	0.149
EX-02.16-03E	90-DEG ELBOW	2	A234/WP22/WP2	18	1.90	0.00	0.87	15000.0	18.000	0	0.375	0.455	0.149
EX-02.16-04P	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	18.000	0	0.375	0.346	0.149
EX-02.16-05V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	20	0.312	0.312	0.160
EX-02.16-06E	90-DEG ELBOW	4	A234/WP22/WP2	18	1.90	0.00	0.87	15000.0	18.000	0	0.375	0.000	0.149
EX-02.16-07P	STRAIGHT PIPE	54	A335/P22/P22	26	1.90	0.00	0.87	15000.0	18.000	0	0.375	0.380	0.149
EX-02.16-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	20	0.312	0.924	0.149
EX-02.16-09N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	20	0.312	0.293	0.149

Line Name : EX-02.17 HDR 35 to FWH 35B

EX-02.17-01P	STRAIGHT PIPE	64	A691/EFW/22	26	2.25	0.00	0.70	15000.0	18.000	0	0.375	0.375	0.149
EX-02.17-02V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	20	0.312	0.312	0.160
EX-02.17-03E	90-DEG ELBOW	4	A234/WP22/WP2	18	1.90	0.00	0.87	15000.0	18.000	0	0.375	0.375	0.149
EX-02.17-04P	STRAIGHT PIPE	54	A335/P22/P22	26	1.90	0.00	0.87	15000.0	18.000	0	0.375	0.378	0.149
EX-02.17-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	20	0.312	0.968	0.149
EX-02.17-06N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	20	0.312	0.293	0.149

Line Name : EX-02.18 HDR 35 to FWH 35C

EX-02.18-01P	STRAIGHT PIPE	64	A691/EFW/22	26	2.25	0.00	0.70	15000.0	18.000	0	0.375	0.375	0.149
EX-02.18-02V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	20	0.312	0.312	0.160
EX-02.18-03E	90-DEG ELBOW	4	A234/WP22/WP2	18	1.90	0.00	0.87	15000.0	18.000	0	0.375	0.375	0.149
EX-02.18-04P	STRAIGHT PIPE	54	A691/EFW/22	26	2.25	0.00	0.70	15000.0	18.000	0	0.375	0.375	0.149
EX-02.18-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	20	0.312	0.312	0.149
EX-02.18-06N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	20	0.312	0.293	0.149

Line Name : EX-02.2 PSEP 1A 10" to 35 HDR

EX-02.2-01N	EXIT NOZZLE	31	A240/TP321/	0	18.00	0.00	0.00	17300.0	10.750	40	0.365	0.365	0.077
EX-02.2-02P	STRAIGHT PIPE	61	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.2-03E	90-DEG ELBOW	2	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.2-04P	STRAIGHT PIPE	52	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.2-05E	90-DEG ELBOW	2	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.2-06P	STRAIGHT PIPE	52	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090
EX-02.2-08O	ORIFICE	6	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	10.750	40	0.365	0.365	0.090

Line Name : EX-02.4 PSEP2A 14" to 35 HDR

EX-02.4-02P	STRAIGHT PIPE	64	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	14.000	0	0.375	0.375	0.117
EX-02.4-03E	90-DEG ELBOW	4	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	14.000	0	0.375	0.375	0.117
EX-02.4-04P	STRAIGHT PIPE	54	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	14.000	0	0.375	0.375	0.117
EX-02.4-06O	ORIFICE	6	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	14.000	0	0.375	0.375	0.117

Line Name : EX-02.6 PSEP 1A&2A to 35 HDR

EX-02.2-07T	TEE	12	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	18.000	XS	0.500	0.500	0.151
EX-02.6-01P	STRAIGHT PIPE	62	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	18.000	XS	0.500	0.500	0.151

Line Name : EX-02.7 PSEP 1A&2A to 35 HDR

EX-02.4-05T	TEE	12	SA-213/TP304L/TP3	79	18.00	0.00	0.00	14800.0	18.000	XS	0.500	0.500	0.151
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EX-03.1C-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.400	0.066
EX-03.1C-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-41X	ORIFICE	6	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-04P	STRAIGHT PIPE	56	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-05T	TEE	15	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-06E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-07E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-08P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-09V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	20.000	0	0.250	0.250	0.071
EX-03.1C-10P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-11V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	20.000	0	0.250	0.250	0.071
EX-03.1C-12P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-13E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-14P	STRAIGHT PIPE	51	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-15E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-16P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-17E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-18P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-19E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-20P	STRAIGHT PIPE	51	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-21E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-22E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-23P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-24T	TEE	15	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-25P	STRAIGHT PIPE	65	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-26E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-27E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-28P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-29E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-30P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-31E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-32P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-33T	TEE	15	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-34P	STRAIGHT PIPE	65	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-35E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-36P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.263	0.066
EX-03.1C-37E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.439	0.066
EX-03.1C-38P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.259	0.066
EX-03.1C-39E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1C-40N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066

Line Name : EX-04.1 LPEX14 to FWH33A HDR

EX-04.1-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.400	0.033
EX-04.1-08X	ORIFICE	6	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.000	0.033
EX-04.1-02E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.1-03E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.1-04P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.1-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.1-07P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.1-06T	TEE	10	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.3-01P	STRAIGHT PIPE	60	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063

Line Name : EX-04.11 LPEX FWH 33B IN HDR

EX-03.1A-26E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-27P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-41P	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-28E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-29P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-30E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-31P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-32T	TEE	15	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-33P	STRAIGHT PIPE	65	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-34E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-35P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.249	0.066
EX-03.1A-36E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.461	0.066
EX-03.1A-37P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.253	0.066
EX-03.1A-38E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1A-39N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066

Line Name : EX-03.1B LP EXT 12 to FWH 34B

EX-03.1B-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.400	0.066
EX-03.1B-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-37X	ORIFICE	6	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-04P	STRAIGHT PIPE	56	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-05T	TEE	15	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-06E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-07E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-08P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-09V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	20.000	0	0.250	0.250	0.071
EX-03.1B-10P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-11V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	20.000	0	0.250	0.250	0.071
EX-03.1B-12P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-13E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-14P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-15E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-16P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-17E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-18P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-19T	TEE	15	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-20P	STRAIGHT PIPE	65	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-21E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-22P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-23E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-24P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-25E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-26P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-27E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-28P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-29T	TEE	15	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-30P	STRAIGHT PIPE	65	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-31E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-32P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.263	0.066
EX-03.1B-33E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.431	0.066
EX-03.1B-34P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.263	0.066
EX-03.1B-35E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066
EX-03.1B-36N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.066

Line Name : EX-03.1C LP EXT 12 to FWH 34C

EX-04.9-09T	TEE	12	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.11-01P	STRAIGHT PIPE	62	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.11-02T	TEE	15	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.11-03P	STRAIGHT PIPE	65	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.11-04V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	28.000	0	0.313	0.313	0.050
EX-04.11-05P	STRAIGHT PIPE	58	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.11-06V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	28.000	0	0.313	0.313	0.050
EX-04.11-07P	STRAIGHT PIPE	58	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.11-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.11-09E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.11-10P	STRAIGHT PIPE	53	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.11-11E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.11-12P	STRAIGHT PIPE	53	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.11-13E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.11-14P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.11-15E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.11-16P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.11-17T	TEE	15	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.11-18P	STRAIGHT PIPE	65	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.11-20P	STRAIGHT PIPE	9	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.11-19T	TEE	14	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063

Line Name : EX-04.13 LP EXT 32 to FWH 33B

EX-04.12-01P	STRAIGHT PIPE	64	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.13-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.000	0.047
EX-04.13-02P	STRAIGHT PIPE	57	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.255	0.033
EX-04.13-07T	TEE	15	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.13-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.13-04P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.13-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.13-06N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033

Line Name : EX-04.14 LP EXT 32 to FWH 33B

EX-04.14-01P	STRAIGHT PIPE	64	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.276	0.033
EX-04.14-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.14-03N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033

Line Name : EX-04.15 LPEX14 to FWH33C HDR

EX-04.15-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.400	0.033
EX-04.15-08X	ORIFICE	6	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.000	0.033
EX-04.15-02E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.15-03E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.15-04P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.15-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.15-07P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.15-06T	TEE	10	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.17-01P	STRAIGHT PIPE	60	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063

Line Name : EX-04.16 LPEX13 to FWH33C HDR

EX-04.16-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.400	0.033
EX-04.16-10X	ORIFICE	6	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.000	0.033

EX-04.16-02E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.16-03E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.16-04P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.16-05E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.16-06P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.16-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.16-08P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033

Line Name : EX-04.18 LPEX FWH 33C IN HDR

EX-04.16-09T	TEE	12	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.18-01P	STRAIGHT PIPE	62	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.18-02T	TEE	15	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.18-03P	STRAIGHT PIPE	65	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.18-04V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	28.000	0	0.313	0.313	0.050
EX-04.18-05P	STRAIGHT PIPE	58	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.18-06V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	28.000	0	0.313	0.313	0.050
EX-04.19-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.000	0.047
EX-04.19-02V	BUTTERFLY VALVE	23	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	24.000	0	0.313	0.313	0.043
EX-04.19-03R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.000	0.047
EX-04.20-01P	STRAIGHT PIPE	68	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.20-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.20-03P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.20-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.20-05P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.20-06E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.20-07P	STRAIGHT PIPE	54	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.20-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.20-09P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.20-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.20-11P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.20-12E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.20-13P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.20-14T	TEE	15	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.20-15P	STRAIGHT PIPE	65	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.20-16T	TEE	14	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.384	0.063

Line Name : EX-04.2 LPEX13 to FWH33A HDR

EX-04.2-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.400	0.033
EX-04.2-10X	ORIFICE	6	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.000	0.033
EX-04.2-02E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.2-03E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.2-04P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.2-05E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.2-06P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.2-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.2-08P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033

Line Name : EX-04.21 LP EXT 31 to FWH 33C

EX-04.20-17P	STRAIGHT PIPE	64	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.21-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.000	0.047
EX-04.21-02P	STRAIGHT PIPE	57	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.267	0.033
EX-04.21-07T	TEE	15	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.21-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033

EX-04.21-04P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.21-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.21-06N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033

Line Name : EX-04.22 LP EXT 31 to FWH 33C

EX-04.22-01P	STRAIGHT PIPE	64	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.271	0.033
EX-04.22-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.22-03N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033

Line Name : EX-04.4 LPEX FWH 33A IN HDR

EX-04.2-09T	TEE	12	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.4-01P	STRAIGHT PIPE	62	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.4-02T	TEE	15	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.4-03P	STRAIGHT PIPE	65	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.4-04V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	28.000	0	0.313	0.313	0.050
EX-04.4-05P	STRAIGHT PIPE	58	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.4-06V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	28.000	0	0.313	0.313	0.050
EX-04.4-07P	STRAIGHT PIPE	58	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.4-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.4-09P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.4-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.4-11P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.4-12E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.4-13P	STRAIGHT PIPE	54	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.4-14E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.4-15P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.4-16E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.4-17P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.4-18E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.313	0.047
EX-04.4-19P	STRAIGHT PIPE	52	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.4-20T	TEE	15	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.4-21P	STRAIGHT PIPE	65	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.4-23P	STRAIGHT PIPE	9	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.4-22T	TEE	14	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.352	0.063

Line Name : EX-04.6 LP EXT to FWH 33A

EX-04.5-01P	STRAIGHT PIPE	64	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.6-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	28.000	0	0.313	0.000	0.047
EX-04.6-02P	STRAIGHT PIPE	57	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.264	0.033
EX-04.6-07T	TEE	15	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.262	0.033
EX-04.6-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.461	0.033
EX-04.6-04P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.279	0.033
EX-04.6-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.6-06N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033

Line Name : EX-04.7 LP EXT to FWH 33A

EX-04.7-01P	STRAIGHT PIPE	64	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.264	0.033
EX-04.7-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.7-03N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033

Line Name : EX-04.8 LPEX14 to FWH33B HDR

EX-04.8-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.400	0.033
EX-04.8-08X	ORIFICE	6	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.000	0.033
EX-04.8-02E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.8-03E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.8-04P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.8-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.8-07P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.8-06T	TEE	10	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063
EX-04.10-01P	STRAIGHT PIPE	60	A155/C55/2	8	0.00	0.00	0.00	11160.0	28.000	0	0.313	0.313	0.063

Line Name : EX-04.9 LPEX13 to FWH33B HDR

EX-04.9-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.400	0.033
EX-04.9-10X	ORIFICE	6	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.000	0.033
EX-04.9-02E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.9-03E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.9-04P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.9-05E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.9-06P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.9-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033
EX-04.9-08P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	0	0.250	0.250	0.033

Line Name : EX-05.1A LP EXT 16 to FWH 32A

EX-05.1A-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.400	0.037
EX-05.1A-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.1A-03E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.1A-04N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.375	0.037

Line Name : EX-05.1B LP EXT 16 to FWH 32B

EX-05.1B-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.400	0.037
EX-05.1B-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.1B-03E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.1B-04N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.375	0.037

Line Name : EX-05.1C LP EXT 16 to FWH 32C

EX-05.1C-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.400	0.037
EX-05.1C-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.1C-03E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.1C-04N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.375	0.037

Line Name : EX-05.2A LP EXT 15 to FWH 32A

EX-05.2A-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.400	0.037
EX-05.2A-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.2A-03E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.2A-04P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.2A-05E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.2A-06N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.375	0.037

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Line Name : EX-05.2B LP EXT 15 to FWH 32B

EX-05.2B-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.400	0.037
EX-05.2B-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.2B-03E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.2B-04P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.2B-05E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.2B-06N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.375	0.037

Line Name : EX-05.2C LP EXT 15 to FWH 32C

EX-05.2C-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.400	0.037
EX-05.2C-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.2C-03E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.2C-04P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.2C-05E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.250	0.037
EX-05.2C-06N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	22.000	0	0.250	0.375	0.037

Line Name : EX-06.1A LP EXT 19 to FWH 31A

EX-06.1A-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.400	0.043
EX-06.1A-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.1A-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.1A-04N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.375	0.043

Line Name : EX-06.1B LP EXT 19 to FWH 31B

EX-06.1B-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.400	0.043
EX-06.1B-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.1B-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.1B-04N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.375	0.043

Line Name : EX-06.1C LP EXT 19 to FWH 31C

EX-06.1C-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.400	0.043
EX-06.1C-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.1C-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.1C-04N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.375	0.043

Line Name : EX-06.2A LP EXT 17 to FWH 31A

EX-06.2A-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.400	0.043
EX-06.2A-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.2A-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.2A-04N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.375	0.043

Line Name : EX-06.2B LP EXT 17 to FWH 31B

EX-06.2B-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.400	0.043
EX-06.2B-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.2B-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.2B-04N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.375	0.043

Line Name : EX-06.2C LP EXT 17 to FWH 31C

EX-06.2C-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.400	0.043
EX-06.2C-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.2C-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.2C-04N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.375	0.043

Line Name : EX-06.3A LP EXT 20 to FWH 31A

EX-06.3A-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.400	0.043
EX-06.3A-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.3A-03P	STRAIGHT PIPE	54	A155/C55/2	8	0.00	0.00	0.00	11160.0	26.000	0	0.313	0.313	0.058
EX-06.3A-04E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.3A-05N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.375	0.043

Line Name : EX-06.3B LP EXT 20 to FWH 31B

EX-06.3B-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.400	0.043
EX-06.3B-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.3B-03P	STRAIGHT PIPE	54	A155/C55/2	8	0.00	0.00	0.00	11160.0	26.000	0	0.313	0.313	0.058
EX-06.3B-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.3B-05N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.375	0.043

Line Name : EX-06.3C LP EXT 20 to FWH 31C

EX-06.3C-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.400	0.043
EX-06.3C-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.3C-03P	STRAIGHT PIPE	54	A155/C55/2	8	0.00	0.00	0.00	11160.0	26.000	0	0.313	0.313	0.058
EX-06.3C-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.3C-05N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.375	0.043

Line Name : EX-06.4A LP EXT 18 to FWH 31A

EX-06.4A-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.400	0.043
EX-06.4A-02E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.4A-03P	STRAIGHT PIPE	53	A155/C55/2	8	0.00	0.00	0.00	11160.0	26.000	0	0.313	0.313	0.058
EX-06.4A-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.4A-05N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.375	0.043

Line Name : EX-06.4B LP EXT 18 to FWH 31B

EX-06.4B-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.400	0.043
EX-06.4B-02E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.4B-03P	STRAIGHT PIPE	53	A155/C55/2	8	0.00	0.00	0.00	11160.0	26.000	0	0.313	0.313	0.058
EX-06.4B-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.4B-05N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.375	0.043

Line Name : EX-06.4C LP EXT 18 to FWH 31C

EX-06.4C-01N	EXIT NOZZLE	31	A516/60/60	34	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.400	0.043
EX-06.4C-02E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043

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EX-06.4C-03P	STRAIGHT PIPE	53	A155/C55/2	8	0.00	0.00	0.00	11160.0	26.000	0	0.313	0.313	0.058
EX-06.4C-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.313	0.043
EX-06.4C-05N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	26.000	0	0.313	0.375	0.043

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

FW-01.1A-01N	EXIT NOZZLE	31	A-217/C5/	0	5.00	0.00	0.50	35200.0	16.000	1	1.031	1.031	0.322
FW-01.1A-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	16.000	100	1.031	1.075	0.740
FW-01.1A-03R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
FW-01.2A-01E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-02P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	1.043	0.797
FW-01.2A-03T	TEE	15	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	1.039	0.797

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

FW-01.1B-01N	EXIT NOZZLE	31	A-217/C5/	0	5.00	0.00	0.50	35200.0	16.000	1	1.031	1.031	0.322
FW-01.1B-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	16.000	100	1.031	1.176	0.740
FW-01.1B-03R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
FW-01.2B-01E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-02P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-03E	45-DEG ELBOW	1	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	80	1.031	1.251	0.797
FW-01.2B-04P	STRAIGHT PIPE	51	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	1.032	0.797
FW-01.2B-05T	TEE	15	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	1.036	0.797

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

FW-01.2A-04P	STRAIGHT PIPE	65	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	1.039	0.797
FW-01.2A-05V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	20.000	1	1.031	1.031	0.988
FW-01.2A-06V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	20.000	1	1.031	1.031	0.988
FW-01.2A-07E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-08T	TEE	15	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-09P	STRAIGHT PIPE	65	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-10E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-11P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-12E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-13P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-14E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-15P_1	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-15P_2	STRAIGHT PIPE	9	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-16E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-17P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-18E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-19P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-20E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-21P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-22E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2A-23P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	1.053	0.797

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

FW-01.2B-06P	STRAIGHT PIPE	65	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	1.057	0.797
FW-01.2B-07V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	20.000	1	1.031	1.031	0.988
FW-01.2B-08V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	20.000	1	1.031	1.031	0.988
FW-01.2B-09E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-10P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797

FW-01.2B-11T	TEE	15	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-12P	STRAIGHT PIPE	65	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-13E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-14P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-15E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-16P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-17E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-18P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-19E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-20P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-21E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-22P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-23E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-24P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-25E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-26P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	20.000	1	1.031	1.031	0.797
FW-01.2B-27R	CON. EXPANDER	18	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	0.000	1.195

Line Name : FW-01.3 BFP DISCHARGE HDR

FW-01.3-01T	TEE	12	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.375	1.195
FW-01.3-02P	STRAIGHT PIPE	62	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.371	1.195
FW-01.3-03E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.514	1.195
FW-01.3-04E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.638	1.195
FW-01.3-05P	STRAIGHT PIPE	54	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-01.3-06E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-01.3-07P	STRAIGHT PIPE	52	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-01.3-08E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-01.3-09P	STRAIGHT PIPE	54	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-01.3-10E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-01.3-11P	STRAIGHT PIPE	52	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-01.3-12E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-01.3-13P	STRAIGHT PIPE	52	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-01.3-14E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-01.3-15E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-01.3-16P	STRAIGHT PIPE	54	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-01.3-17T	TEE	15	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-01.3-18P	STRAIGHT PIPE	65	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.348	1.195
FW-01.4-01T	TEE	14	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.351	1.195

Line Name : FW-01.4 BFP DISCHARGE HDR

FW-01.4-02P	STRAIGHT PIPE	63	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.341	1.195
FW-01.5-01T	TEE	14	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.385	1.195

Line Name : FW-01.6A BFP HDR to FWH 36A

FW-01.6A-01R	CON. REDUCER	7	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	0.000	1.195
FW-01.6A-02P	STRAIGHT PIPE	57	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	1.009	0.717
FW-01.6A-03E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6A-04P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6A-05E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6A-06P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6A-07V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.938	0.938	0.889
FW-01.6A-08E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6A-09P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717

FW-01.6A-10E	45-DEG ELBOW	3	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6A-11P	STRAIGHT PIPE	53	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6A-12N	INLET NOZZLE	30	A105/A105/A10	3	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717

Line Name : FW-01.6B BFP HDR to FWH 36B

FW-01.6B-02P	STRAIGHT PIPE	64	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.930	0.717
FW-01.6B-03E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6B-04P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6B-05V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.938	0.938	0.889
FW-01.6B-06E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6B-07P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6B-08E	45-DEG ELBOW	3	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6B-10N	INLET NOZZLE	30	A105/A105/A10	3	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717

Line Name : FW-01.6C BFP HDR to FWH 36C

FW-01.6C-02P	STRAIGHT PIPE	64	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6C-03E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6C-04P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6C-05V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.938	0.938	0.889
FW-01.6C-06E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6C-08E	45-DEG ELBOW	3	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-01.6C-10N	INLET NOZZLE	30	A105/A105/A10	3	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717

Line Name : FW-02.1A FWH 36A to SG HDR

FW-02.1A-01N	EXIT NOZZLE	31	A105/A105/A10	3	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1A-02E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1A-03P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1A-04E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1A-05V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.938	0.938	0.889
FW-02.1A-06P	STRAIGHT PIPE	58	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1A-07E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1A-08P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1A-09E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1A-10P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1A-11E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1A-12P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1A-13R	CON. EXPANDER	18	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	0.000	1.195

Line Name : FW-02.1B FWH 36B to SG HDR

FW-02.1B-01N	EXIT NOZZLE	31	A105/A105/A10	3	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1B-02E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1B-03P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1B-04E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1B-05V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.938	0.938	0.889
FW-02.1B-06P	STRAIGHT PIPE	58	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1B-07E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1B-08P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1B-09E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1B-10P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.965	0.717

Line Name : FW-02.1C FWH 36C to SG HDR

FW-02.1C-01N	EXIT NOZZLE	31	A105/A105/A10	3	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1C-02E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1C-03P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1C-04E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1C-05V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.938	0.938	0.889
FW-02.1C-06P	STRAIGHT PIPE	58	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1C-07E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1C-08P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1C-09E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.1C-10P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.998	0.717

Line Name : FW-02.3 SG INLET HEADER

FW-02.1B-11T	TEE	12	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.398	1.195
FW-02.3-01P	STRAIGHT PIPE	62	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.380	1.195

Line Name : FW-02.4 SG INLET HEADER

FW-02.1C-11T	TEE	12	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.375	1.195
FW-02.4-02T	TEE	15	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-03P	STRAIGHT PIPE	65	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-04E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-05E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-06P	STRAIGHT PIPE	54	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-07E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-08P	STRAIGHT PIPE	52	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-09E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-10P	STRAIGHT PIPE	52	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-11E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-12F_1	STRAIGHT PIPE	52	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-12F_2	STRAIGHT PIPE	9	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-13E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-14P	STRAIGHT PIPE	52	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-15E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-16P	STRAIGHT PIPE	52	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-17E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.4-18P	STRAIGHT PIPE	52	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.365	1.195
FW-02.4-19T	TEE	14	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.368	1.195

Line Name : FW-02.5 SG INLET HEADER

FW-02.5-01T	TEE	15	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.372	1.195
FW-02.5-02P	STRAIGHT PIPE	65	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.5-03T	TEE	15	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.5-06P	STRAIGHT PIPE	65	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.365	1.195
FW-02.5-04T	TEE	14	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.368	1.195

Line Name : FW-02.6 SG INLET HEADER

FW-02.6-01P	STRAIGHT PIPE	63	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.361	1.195
FW-02.6-03T	TEE	14	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.361	1.195

Line Name : FW-02.8A SG HDR to SG 31

FW-02.8A-01P	STRAIGHT PIPE	64	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.968	0.717
FW-02.8A-02E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-03T	TEE	15	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-04V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.938	0.938	0.889
FW-02.8A-25R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
FW-02.8A-05V	CONTROL VALVE	24	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	100	0.844	1.312	0.630
FW-02.8A-26R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
FW-02.8A-06E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-07P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-08T	TEE	15	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-09P	STRAIGHT PIPE	65	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-10E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-11P_1	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-11P_2	STRAIGHT PIPE	9	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-12F	ORIFICE	6	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-13P	STRAIGHT PIPE	56	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-14E	45-DEG ELBOW	1	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-15P	STRAIGHT PIPE	51	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-16E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-17P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-18V	CHECK VALVE	25	A105/A105/A10	3	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-19V	GATE VALVE	22	A105/A105/A10	3	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8A-20P	STRAIGHT PIPE	58	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-02.8A-21T	TEE	15	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-02.8A-22E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-02.8A-23E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-02.8A-24P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1A-01P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1A-02E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1A-03P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1A-04B	45-DEG ELBOW	1	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1A-05B	45-DEG ELBOW	3	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1A-06P_1	STRAIGHT PIPE	53	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1A-06P_2	STRAIGHT PIPE	9	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1A-07B	45-DEG ELBOW	1	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1A-08B	90-DEG ELBOW	4	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1A-09N	INLET NOZZLE	30	SA508//3	0	0.50	0.00	0.50	17500.0	18.000	0	0.750	0.750	0.544

Line Name : FW-02.8B SG HDR to SG 32

FW-02.8B-01P	STRAIGHT PIPE	64	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8B-02E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8B-03P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8B-04T	TEE	15	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8B-05V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.938	0.938	0.889
FW-02.8B-25R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
FW-02.8B-06V	CONTROL VALVE	24	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	100	0.844	1.312	0.630
FW-02.8B-26R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
FW-02.8B-07E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8B-08P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8B-09T	TEE	15	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8B-10P	STRAIGHT PIPE	65	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8B-11E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8B-12P_1	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.998	0.717
FW-02.8B-12P_2	STRAIGHT PIPE	9	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8B-13F	ORIFICE	6	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717

FW-02.8B-14P	STRAIGHT PIPE	56	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.990	0.717
FW-02.8B-15E	45-DEG ELBOW	1	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8B-16P	STRAIGHT PIPE	51	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8B-17E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8B-18P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8B-19V	CHECK VALVE	25	A105/A105/A10	3	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8B-20V	GATE VALVE	22	A105/A105/A10	3	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8B-21P	STRAIGHT PIPE	58	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-02.8B-22T	TEE	15	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
FW-02.8B-23E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.924	0.544
FW-02.8B-24P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1B-01P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1B-02E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1B-03P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1B-04B	45-DEG ELBOW	1	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1B-05B	45-DEG ELBOW	3	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1B-06P	STRAIGHT PIPE	53	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1B-07B	45-DEG ELBOW	1	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1B-08E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1B-09P	STRAIGHT PIPE	53	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1B-10E	45-DEG ELBOW	1	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1B-11E	45-DEG ELBOW	3	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1B-12N	INLET NOZZLE	30	SA508//3	0	0.50	0.00	0.50	17500.0	18.000	0	0.750	0.750	0.544

Line Name : FW-02.8C SG HDR to SG 34

FW-02.8C-01P	STRAIGHT PIPE	64	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.946	0.717
FW-02.8C-02E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-03P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-04T	TEE	15	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-05V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.938	0.938	0.889
FW-02.8C-24R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
FW-02.8C-06V	CONTROL VALVE	24	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	100	0.844	1.312	0.630
FW-02.8C-25R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
FW-02.8C-07E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-08P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-09T	TEE	15	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-10P	STRAIGHT PIPE	65	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-11E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-12P_1	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-12P_2	STRAIGHT PIPE	9	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-13F	ORIFICE	6	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-14P	STRAIGHT PIPE	56	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-15E	45-DEG ELBOW	1	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-16E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-17P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-18V	CHECK VALVE	25	A105/A105/A10	3	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-19V	GATE VALVE	22	A105/A105/A10	3	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8C-20P	STRAIGHT PIPE	58	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-02.8C-21T	TEE	15	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-02.8C-22E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-02.8C-23P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1C-01P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1C-02E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1C-03P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1C-04B	45-DEG ELBOW	1	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1C-16P_1	STRAIGHT PIPE	51	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1C-16P_2	STRAIGHT PIPE	9	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544

FW-03.1C-05B	90-DEG ELBOW	2	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1C-06P_1	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1C-06P_2	STRAIGHT PIPE	9	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1C-07B	45-DEG ELBOW	1	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1C-09P	STRAIGHT PIPE	51	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1C-10E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1C-11P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1C-12E	45-DEG ELBOW	1	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1C-13P	STRAIGHT PIPE	51	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1C-14E	45-DEG ELBOW	1	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1C-15N	INLET NOZZLE	30	SA508//3	0	0.50	0.00	0.50	17500.0	18.000	0	0.750	0.750	0.544

Line Name : FW-02.8D SG HDR to SG 33

FW-02.6-02T	TEE	15	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.7-01P	STRAIGHT PIPE	63	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.372	1.195
FW-02.7-02T	TEE	15	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.260	1.195
FW-02.7-03P	STRAIGHT PIPE	65	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.372	1.195
FW-02.7-04T	TEE	14	A155/KC70/1	9	0.00	0.00	0.00	17500.0	30.000	1	1.260	1.395	1.195
FW-02.8D-01P	STRAIGHT PIPE	64	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.964	0.717
FW-02.8D-02E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8D-03P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8D-04T	TEE	15	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8D-05V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.938	0.938	0.889
FW-02.8D-24R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
FW-02.8D-06V	CONTROL VALVE	24	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	100	0.844	1.312	0.630
FW-02.8D-25R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
FW-02.8D-07E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8D-08P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8D-09T	TEE	15	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8D-10P	STRAIGHT PIPE	65	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8D-11E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8D-12P_1	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8D-12P_2	STRAIGHT PIPE	9	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8D-13F	ORIFICE	6	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8D-14P	STRAIGHT PIPE	56	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8D-15E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8D-16P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8D-17V	CHECK VALVE	25	A105/A105/A10	3	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8D-18V	GATE VALVE	22	A105/A105/A10	3	0.00	0.00	0.00	17500.0	18.000	0	0.938	0.938	0.717
FW-02.8D-19P	STRAIGHT PIPE	58	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-02.8D-20T	TEE	15	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-02.8D-21E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-02.8D-22E	90-DEG ELBOW	4	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-02.8D-23P	STRAIGHT PIPE	54	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1D-01P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1D-02E	90-DEG ELBOW	2	A234/WPC/WPC	22	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1D-03P	STRAIGHT PIPE	52	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1D-04B	45-DEG ELBOW	1	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1D-05B	45-DEG ELBOW	3	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1D-06P_1	STRAIGHT PIPE	53	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1D-06P_2	STRAIGHT PIPE	9	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1D-07B	45-DEG ELBOW	1	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1D-08B	45-DEG ELBOW	3	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1D-09P	STRAIGHT PIPE	53	A106/C/C	6	0.00	0.00	0.00	17500.0	18.000	0	0.750	0.750	0.544
FW-03.1D-10N	INLET NOZZLE	30	SA508//3	0	0.50	0.00	0.50	17500.0	18.000	0	0.750	0.750	0.544

Line Name : FW-04.1A BFP 31 RECIRC

FW-04.1A-10P	STRAIGHT PIPE	64	A335/P22/P22	26	1.90	0.00	0.87	15000.0	6.625	0	0.864	0.864	0.306
FW-04.1A-01E	90-DEG ELBOW	4	A182/F22/F22	16	1.90	0.00	0.87	17800.0	6.625	0	0.864	0.954	0.260
FW-04.1A-02P	STRAIGHT PIPE	54	A335/P22/P22	26	1.90	0.00	0.87	15000.0	6.625	0	0.864	0.864	0.306
FW-04.1A-03E	90-DEG ELBOW	2	A182/F22/F22	16	1.90	0.00	0.87	17800.0	6.625	0	0.864	0.864	0.260
FW-04.1A-04P_1	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	6.625	0	0.864	0.864	0.306
FW-04.1A-04P_2	STRAIGHT PIPE	9	A335/P22/P22	26	1.90	0.00	0.87	15000.0	6.625	0	0.864	0.864	0.306
FW-04.1A-05E	90-DEG ELBOW	2	A182/F22/F22	16	1.90	0.00	0.87	17800.0	6.625	0	0.864	0.864	0.260
FW-04.1A-06P_1	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	6.625	0	0.864	0.864	0.306
FW-04.1A-06P_2	STRAIGHT PIPE	9	A335/P22/P22	26	1.90	0.00	0.87	15000.0	6.625	0	0.864	0.864	0.306
FW-04.1A-07E	90-DEG ELBOW	2	A182/F22/F22	16	1.90	0.00	0.87	17800.0	6.625	0	0.864	0.864	0.260
FW-04.1A-08E	90-DEG ELBOW	4	A182/F22/F22	16	1.90	0.00	0.87	17800.0	6.625	0	0.864	0.864	0.260
FW-04.1A-09P	STRAIGHT PIPE	54	A335/P22/P22	26	1.90	0.00	0.87	15000.0	6.625	0	0.864	0.896	0.306
FW-04.2A-01R	CON. REDUCER	17	A182/F22/F22	16	1.90	0.00	0.87	17800.0	6.625	0	0.864	0.000	0.260
FW-04.2A-02P	STRAIGHT PIPE	67	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.709	0.208
FW-04.2A-03B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-04E	45-DEG ELBOW	3	A182/F22/F22	16	1.90	0.00	0.87	17800.0	4.500	0	0.674	0.674	0.176
FW-04.2A-05P	STRAIGHT PIPE	53	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-06E	45-DEG ELBOW	1	A182/F22/F22	16	1.90	0.00	0.87	17800.0	4.500	0	0.674	0.674	0.176
FW-04.2A-07P_1	STRAIGHT PIPE	51	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-07P_2	STRAIGHT PIPE	9	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-08B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-09P_1	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-09P_2	STRAIGHT PIPE	9	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-10B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-11P	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-12B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-13P	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-14B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-15P	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-16B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-17P	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-18B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-19P	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-20B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2A-21P	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.700	0.208
FW-04.2A-22B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.782	0.208
FW-04.2A-23P	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.724	0.208
FW-04.2A-24R	CON. EXPANDER	18	A182/F22/F22	16	1.90	0.00	0.87	17800.0	6.625	0	0.864	0.000	0.260
FW-05.1A-01V	CONTROL VALVE	24	A217/WC6/WC6	95	1.00	0.00	0.44	14000.0	6.625	0	0.864	0.864	0.327
FW-05.1A-02P	STRAIGHT PIPE	58	A335/P22/P22	26	1.90	0.00	0.87	15000.0	6.625	0	0.864	0.886	0.306
FW-05.1A-03V	GATE VALVE	22	A217/WC6/WC6	95	1.00	0.00	0.44	14000.0	6.625	0	0.864	0.864	0.327
FW-05.1A-04R	CON. EXPANDER	18	A234/WP22/WP22	18	1.90	0.00	0.87	15000.0	8.625	0	0.875	0.000	0.399
FW-05.2A-01N	INLET NOZZLE	30	A335/P22/P22	26	1.90	0.00	0.87	15000.0	8.625	0	0.875	0.875	0.399

Line Name : FW-04.1B BFP 32 RECIRC

FW-04.1B-10P	STRAIGHT PIPE	64	A335/P22/P22	26	1.90	0.00	0.87	15000.0	6.625	0	0.864	0.864	0.306
FW-04.1B-01E	90-DEG ELBOW	4	A182/F22/F22	16	1.90	0.00	0.87	17800.0	6.625	0	0.864	0.979	0.260
FW-04.1B-02P	STRAIGHT PIPE	54	A335/P22/P22	26	1.90	0.00	0.87	15000.0	6.625	0	0.864	0.912	0.306
FW-04.1B-03E	90-DEG ELBOW	4	A182/F22/F22	16	1.90	0.00	0.87	17800.0	6.625	0	0.864	1.083	0.260
FW-04.1B-04P_1	STRAIGHT PIPE	54	A335/P22/P22	26	1.90	0.00	0.87	15000.0	6.625	0	0.864	0.864	0.306
FW-04.1B-04P_2	STRAIGHT PIPE	9	A335/P22/P22	26	1.90	0.00	0.87	15000.0	6.625	0	0.864	0.864	0.306
FW-04.1B-05E	90-DEG ELBOW	2	A182/F22/F22	16	1.90	0.00	0.87	17800.0	6.625	0	0.864	0.864	0.260
FW-04.1B-06P_1	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	6.625	0	0.864	0.864	0.306
FW-04.1B-06P_2	STRAIGHT PIPE	9	A335/P22/P22	26	1.90	0.00	0.87	15000.0	6.625	0	0.864	0.864	0.306
FW-04.1B-07E	90-DEG ELBOW	2	A182/F22/F22	16	1.90	0.00	0.87	17800.0	6.625	0	0.864	0.864	0.260

FW-04.1B-08E	90-DEG ELBOW	4	A182/F22/F22	16	1.90	0.00	0.87	17800.0	6.625	0	0.864	0.864	0.260
FW-04.1B-09P	STRAIGHT PIPE	54	A335/P22/P22	26	1.90	0.00	0.87	15000.0	6.625	0	0.864	0.864	0.306
FW-04.2B-01R	CON. REDUCER	17	A182/F22/F22	16	1.90	0.00	0.87	17800.0	6.625	0	0.864	0.000	0.260
FW-04.2B-02P	STRAIGHT PIPE	67	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-03B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-04P	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-05E	45-DEG ELBOW	1	A182/F22/F22	16	1.90	0.00	0.87	17800.0	4.500	0	0.674	0.674	0.176
FW-04.2B-06P	STRAIGHT PIPE	51	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-07E	45-DEG ELBOW	1	A182/F22/F22	16	1.90	0.00	0.87	17800.0	4.500	0	0.674	0.674	0.176
FW-04.2B-08P_1	STRAIGHT PIPE	51	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-08P_2	STRAIGHT PIPE	9	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-09B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-10P_1	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-10P_2	STRAIGHT PIPE	9	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-11B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-12P	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-13B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-14P	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-15B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-16P	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-17B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-18P	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-19B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-20P	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-21B	90-DEG ELBOW	2	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.674	0.208
FW-04.2B-22P	STRAIGHT PIPE	52	A335/P22/P22	26	1.90	0.00	0.87	15000.0	4.500	0	0.674	0.716	0.208
FW-04.2B-23R	CON. EXPANDER	18	A182/F22/F22	16	1.90	0.00	0.87	17800.0	6.625	0	0.864	0.962	0.260
FW-05.1B-01V	CONTROL VALVE	24	A217/WC6/WC6	95	1.00	0.00	0.44	14000.0	6.625	0	0.864	0.864	0.327
FW-05.1B-02P	STRAIGHT PIPE	58	A335/P22/P22	26	1.90	0.00	0.87	15000.0	6.625	0	0.864	0.864	0.306
FW-05.1B-03V	GATE VALVE	22	A217/WC6/WC6	95	1.00	0.00	0.44	14000.0	6.625	0	0.864	0.864	0.327
FW-05.1B-04R	CON. EXPANDER	18	A234/WP22/WP2	18	1.90	0.00	0.87	15000.0	8.625	0	0.875	0.000	0.399
FW-05.2B-01N	INLET NOZZLE	30	A335/P22/P22	26	1.90	0.00	0.87	15000.0	8.625	0	0.875	0.875	0.399

Line Name : HD-01.1A FWH 36A to HD TK

HD-01.1A-01N	EXIT NOZZLE	31	A105/A105/A10	3	0.00	0.00	0.00	17500.0	10.750	0	0.307	0.288	0.137
HD-01.1A-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1A-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1A-04P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1A-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1A-06P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1A-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1A-08P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1A-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1A-10P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.2A-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.000	0.159
HD-02.1A 01V	CONTROL VALVE	24	A217/WC6/WC6	95	1.00	0.00	0.44	14000.0	6.625	0	0.280	0.280	0.105
HD-02.1A-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.159
HD-02.2A-01V	GATE VALVE	22	A217/WC6/WC6	95	1.00	0.00	0.44	14000.0	10.750	0	0.365	0.365	0.171
HD-02.2A-02N	INLET NOZZLE	30	A105/A105/A10	3	0.00	0.00	0.00	17500.0	10.750	0	0.365	0.365	0.137

Line Name : HD-01.1B FWH 36B to HD TK

HD-01.1B-01N	EXIT NOZZLE	31	A105/A105/A10	3	0.00	0.00	0.00	17500.0	10.750	0	0.307	0.288	0.137
HD-01.1B-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1B-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1B-04P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159

HD-01.1B-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1B-06P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1B-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.2B-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.000	0.159
HD-02.1B-01V	CONTROL VALVE	24	A217/WC6/WC6	95	1.00	0.00	0.44	14000.0	6.625	0	0.280	0.280	0.105
HD-02.1B-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.159
HD-02.2B-01V	GATE VALVE	22	A217/WC6/WC6	95	1.00	0.00	0.44	14000.0	10.750	0	0.365	0.365	0.171
HD-02.2B-02N	INLET NOZZLE	30	A105/A105/A10	3	0.00	0.00	0.00	17500.0	10.750	0	0.365	0.365	0.137

Line Name : HD-01.1C FWH 36C to HD TK

HD-01.1C-01N	EXIT NOZZLE	31	A105/A105/A10	3	0.00	0.00	0.00	17500.0	10.750	0	0.307	0.288	0.137
HD-01.1C-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1C-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1C-04P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1C-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1C-06P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1C-07E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1C-08P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1C-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1C-10P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.307	0.159
HD-01.1C-11E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.421	0.421	0.159
HD-01.2C-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.307	0.000	0.159
HD-02.1C-01V	CONTROL VALVE	24	A217/WC6/WC6	95	1.00	0.00	0.44	14000.0	6.625	0	0.280	0.280	0.105
HD-02.1C-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.159
HD-02.2C-01V	GATE VALVE	22	A217/WC6/WC6	95	1.00	0.00	0.44	14000.0	10.750	40	0.365	0.000	0.171
HD-02.2C-02N	INLET NOZZLE	30	A105/A105/A10	3	0.00	0.00	0.00	17500.0	10.750	40	0.365	0.000	0.137

Line Name : HD-03.1A FWH 35A to HD TK

HD-03.1A-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.240	0.089
HD-03.1A-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1A-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1A-04P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1A-05E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1A-06P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1A-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1A-08P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1A-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1A-10P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1A-11E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1A-12E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1A-13P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1A-14E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1A-15V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	10.750	0	0.250	0.250	0.095
HD-03.1A-16N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089

Line Name : HD-03.1B FWH 35B to HD TK

HD-03.1B-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.240	0.089
HD-03.1B-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1B-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1B-04P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1B-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1B-06P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1B-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089

HD-03.1B-08P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1B-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1B-10E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1B-11P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1B-12E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1B-13V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	10.750	0	0.250	0.250	0.095
HD-03.1B-14N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089

Line Name : HD-03.1C FWH 35C to HD TK

HD-03.1C-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.240	0.089
HD-03.1C-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1C-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1C-04P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1C-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1C-06P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1C-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1C-08P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1C-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1C-10P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1C-11E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1C-12P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1C-13E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1C-14E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1C-15P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1C-16E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089
HD-03.1C-17V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	10.750	0	0.250	0.250	0.095
HD-03.1C-18N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.250	0.250	0.089

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

HD-4.1A-01N	EXIT NOZZLE	31	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1A-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1A-03T	TEE	15	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1A-04P	STRAIGHT PIPE	65	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1A-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1A-06E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1A-07P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1A-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1A-09P_1	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1A-09P_2	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1A-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1A-11P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1A-12E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1A-13P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1A-14E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1A-15P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.2A-01E	90-DEG RED. ELBOW	16	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
HD-4.2A-02V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	4.500	0	0.237	0.237	0.016
HD-4.3A-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.015
HD-05.1A-01V	CONTROL VALVE	24	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	3.500	0	0.216	0.216	0.012
HD-05.1A-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
HD-05.2A-01T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-05.2A-02P	STRAIGHT PIPE	63	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-05.2A-03E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-05.2A-04E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-05.2A-05P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022

HD-05.2A-06N	INLET NOZZLE	30	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
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Line Name : HD-04.1B FWH 34B to FWH 33B

HD-4.1B-01N	EXIT NOZZLE	31	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-03E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-04P	STRAIGHT PIPE	51	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-05T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-06P	STRAIGHT PIPE	60	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-08P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-10E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-11P_1	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-11P_2	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-12E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-13P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-14E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-15P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-16E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1B-17P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.2B-01E	90-DEG RED. ELBOW	16	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
HD-4.2B-02V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	4.500	0	0.237	0.237	0.016
HD-4.3B-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.015
HD-05.1B-01V	CONTROL VALVE	24	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	3.500	0	0.216	0.216	0.012
HD-05.1B-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
HD-05.2B-01T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-05.2B-02P	STRAIGHT PIPE	63	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-05.2B-03E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-05.2B-04E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-05.2B-05P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-05.2B-06N	INLET NOZZLE	30	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022

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

HD-4.1C-01N	EXIT NOZZLE	31	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-04P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-06T	TEE	15	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-07P	STRAIGHT PIPE	65	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-08E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-09P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-11P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-12E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-13P_1	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-13P_2	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-14E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-15P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-16E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-17P_1	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-17P_2	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-18E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-19P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022

HD-4.1C-20E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-21P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-22E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.1C-23P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-4.2C-01E	90-DEG RED. ELBOW	16	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
HD-4.2C-02V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	4.500	0	0.237	0.237	0.016
HD-4.3C-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.015
HD-05.1C-01V	CONTROL VALVE	24	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	3.500	0	0.216	0.216	0.012
HD-05.1C-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
HD-05.2C-01T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-05.2C-02P	STRAIGHT PIPE	63	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-05.2C-03E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-05.2C-04E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-05.2C-05P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022
HD-05.2C-06N	INLET NOZZLE	30	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.022

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

HD-6.1A-01N	EXIT NOZZLE	31	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-04P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-06P_1	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-06P_2	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-08P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-09E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-10P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-11E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-12P_1	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-12P_2	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-13E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-13P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-14E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-15P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-16E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-17P_1	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-17P_2	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-18E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-19P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-20E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-21P_1	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-21P_2	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-22E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-23P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-24E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-25P_1	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-25P_2	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-26E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-27P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-28T	TEE	15	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-29P	STRAIGHT PIPE	65	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-44T	TEE	15	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-30E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-31P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-32E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-33P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014

HD-6.1A-34E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-37E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-38P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-39E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-40P	STRAIGHT PIPE	51	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-41E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1A-42P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.2A-01E	90-DEG RED. ELBOW	16	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
HD-07.1A-01V	CONTROL VALVE	24	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	6.625	0	0.280	0.280	0.012
HD-07.1A 02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
HD-07.2A-01V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	8.625	0	0.250	0.250	0.015
HD-07.2A-02P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-07.2A-03T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-07.2A-04P	STRAIGHT PIPE	63	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-07.2A-05R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.018
HD-07.3A-01N	INLET NOZZLE	30	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.365	0.018

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

HD-6.1B-01N	EXIT NOZZLE	31	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-04E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-05P_1	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-05P_2	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-07P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-08E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-09P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-10E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-11P_1	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-11P_2	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-12E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-13E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-14P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-15E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-16P_1	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-16P_2	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-17E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-18P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-19E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-20P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-21E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-22P_1	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-22P_2	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-23T	TEE	15	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-24P	STRAIGHT PIPE	65	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-38T	TEE	15	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-25E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-26P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-27E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-28P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-29E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-32E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-33P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-34E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-35P	STRAIGHT PIPE	51	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1B-36E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014

HD-6.1B-37P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.2B-01E	90-DEG RED. ELBOW	16	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
HD-07.1B-01V	CONTROL VALVE	24	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	6.625	0	0.280	0.280	0.012
HD-07.1B-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
HD-07.2B-01V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	8.625	0	0.250	0.250	0.015
HD-07.2B-02P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-07.2B-03T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-07.2B-04P	STRAIGHT PIPE	63	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-07.2B-05R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.018
HD-07.3B-01N	INLET NOZZLE	30	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.365	0.018

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

HD-6.1C-01N	EXIT NOZZLE	31	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-04P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-06P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-07E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-08P_1	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-08P_2	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-10P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-11E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-12P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-13E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-14P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-15E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-16P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-17E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-18P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-19T	TEE	15	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-20P	STRAIGHT PIPE	65	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-34T	TEE	15	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-35P	STRAIGHT PIPE	65	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-21E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-22P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-23E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-24P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-25E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-28E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-29P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-30E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-31P	STRAIGHT PIPE	51	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-32E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.1C-33P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-6.2C-01E	90-DEG RED. ELBOW	16	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
HD-07.1C-01V	CONTROL VALVE	24	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	6.625	0	0.280	0.280	0.012
HD-07.1C-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
HD-07.2C-01V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	8.625	0	0.250	0.250	0.015
HD-07.2C-02P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-07.2C-03T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-07.2C-04P	STRAIGHT PIPE	63	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	0	0.250	0.250	0.014
HD-07.2C-05R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.018
HD-07.3C-01N	INLET NOZZLE	30	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.365	0.018

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

HD-8.1A-01N	EXIT NOZZLE	31	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.375	0.021
HD-8.1A-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1A-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1A-04P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1A-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1A-06P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1A-07T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1A-08P	STRAIGHT PIPE	60	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1A-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1A-10V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.023
HD-8.2A-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.021
HD-09.1A-01V	CONTROL VALVE	24	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	10.750	0	0.250	0.250	0.019
HD-09.1A-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.021
HD-09.2A-01V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.023
HD-09.2A-02P	STRAIGHT PIPE	58	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017
HD-09.2A-03E	45-DEG ELBOW	3	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017
HD-09.2A-04T	TEE	13	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017

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

HD-8.1B-01N	EXIT NOZZLE	31	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.375	0.021
HD-8.1B-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1B-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1B-04P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1B-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1B-06P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1B-07T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1B-08P	STRAIGHT PIPE	60	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1B-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1B-10V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.023
HD-8.2B-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.021
HD-09.1B-01V	CONTROL VALVE	24	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	10.750	0	0.250	0.250	0.019
HD-09.1B-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.021
HD-09.2B-01V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.023
HD-09.2B-02P	STRAIGHT PIPE	58	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017
HD-09.2B-03E	45-DEG ELBOW	3	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017
HD-09.2B-04T	TEE	13	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017

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

HD-8.1C-01N	EXIT NOZZLE	31	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.375	0.375	0.021
HD-8.1C-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1C-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1C-04P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1C-05E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1C-06P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1C-07T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1C-08P	STRAIGHT PIPE	60	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1C-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.021
HD-8.1C-10V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.023
HD-8.2C-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.021
HD-09.1C-01V	CONTROL VALVE	24	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	10.750	0	0.250	0.250	0.019
HD-09.1C-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.021
HD-09.2C-01V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.023
HD-09.2C-02P	STRAIGHT PIPE	58	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017

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HD-09.2C-03E	45-DEG ELBOW	3	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017
HD-09.2C-04T	TEE	13	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017

Line Name : HD-09.3A FWH 32A to FWH 31A

HD-09.3A-01P	STRAIGHT PIPE	64	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	40	0.406	0.409	0.017
HD-09.3A-02N	INLET NOZZLE	30	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017

Line Name : HD-09.3B FWH 32B to FWH 31B

HD-09.3B-01P	STRAIGHT PIPE	64	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017
HD-09.3B-02N	INLET NOZZLE	30	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017

Line Name : HD-09.3C FWH 32C to FWH 31C

HD-09.3C-01P	STRAIGHT PIPE	64	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017
HD-09.3C-02N	INLET NOZZLE	30	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017

Line Name : HD-09.4A FWH 32A to FWH 31A

HD-09.4A-01P	STRAIGHT PIPE	63	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017
HD-09.4A-02E	90-DEG ELBOW	4	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	40	0.406	0.462	0.017
HD-09.4A-03P	STRAIGHT PIPE	54	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017
HD-09.4A-04N	INLET NOZZLE	30	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	40	0.406	0.375	0.017

Line Name : HD-09.4B FWH 32B to FWH 31B

HD-09.4B-01P	STRAIGHT PIPE	63	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017
HD-09.4B-02E	90-DEG ELBOW	4	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017
HD-09.4B-03P	STRAIGHT PIPE	54	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017
HD-09.4B-04N	INLET NOZZLE	30	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	40	0.406	0.375	0.017

Line Name : HD-09.4C FWH 32C to FWH 31C

HD-09.4C-01P	STRAIGHT PIPE	63	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017
HD-09.4C-02E	90-DEG ELBOW	4	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017
HD-09.4C-03P	STRAIGHT PIPE	54	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	0	0.406	0.406	0.017
HD-09.4C-04N	INLET NOZZLE	30	A-403/WP316L/WP3	73	16.00	0.00	2.00	19200.0	12.750	40	0.406	0.375	0.017

Line Name : HD-10.1A HD TK to HD PMP 31

HD-10.1A-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	20	0.375	0.562	0.199
HD-10.1A-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	24.000	0	0.375	0.375	0.199
HD-10.2A-01E	90-DEG RED. ELBOW	16	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	20	0.375	0.000	0.199
HD-10.2A-02E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	0	0.312	0.312	0.149
HD-10.2A-03P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	18.000	0	0.312	0.312	0.149
HD-10.2A-04V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.312	0.312	0.160
HD-10.2A-05P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	18.000	0	0.312	0.312	0.149
HD-10.2A-07X	ORIFICE	6	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	0	0.312	0.312	0.149
HD-10.2A-06N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	0	0.312	0.312	0.149

Line Name : HD-10.1B HD TK to HD PMP 32

HD-10.1B-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	24.000	20	0.375	0.562	0.199
HD-10.1B-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	24.000	0	0.375	0.375	0.199
HD-10.2B-01E	90-DEG RED. ELBOW	16	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	24.000	20	0.375	0.000	0.199
HD-10.2B-02P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	18.000	0	0.312	0.312	0.149
HD-10.2B-03V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	18.000	0	0.312	0.312	0.160
HD-10.2B-04P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	18.000	0	0.312	0.312	0.149
HD-10.2B-06X	ORIFICE	6	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	0	0.312	0.312	0.149
HD-10.2B-05N	INLET NOZZLE	30	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	18.000	0	0.312	0.312	0.149

Line Name : HD-11.1A HD PMP 31 to HDR

HD-11.1A-01N	EXIT NOZZLE	31	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.500	0.304
HD-11.1A-02V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.500	0.500	0.326
HD-11.2A-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.000	0.304
HD-12.1A-01V	CONTROL VALVE	24	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	8.625	40	0.322	0.500	0.220
HD-12.1A-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.000	0.304
HD-12.2A-01V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.500	0.500	0.326
HD-12.2A-02P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.500	0.304
HD-12.2A-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.500	0.304
HD-12.2A-04T	TEE	15	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.500	0.304
HD-12.2A-05P	STRAIGHT PIPE	65	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.664	0.304
HD-12.2A-06O	ORIFICE	6	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.500	0.304
HD-12.2A-07P	STRAIGHT PIPE	56	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.569	0.304

Line Name : HD-11.1B HD PMP 32 to HDR

HD-11.1B-01N	EXIT NOZZLE	31	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.500	0.304
HD-11.1B-02V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.500	0.500	0.326
HD-11.2B-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.000	0.304
HD-12.1B-01V	CONTROL VALVE	24	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	8.625	0	0.322	0.322	0.220
HD-12.1B-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.000	0.304
HD-12.2B-01V	GATE VALVE	22	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.500	0.500	0.326
HD-12.2B-02P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.539	0.304
HD-12.2B-03E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.535	0.304
HD-12.2B-04T	TEE	15	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.500	0.304
HD-12.2B-05P	STRAIGHT PIPE	65	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.516	0.304
HD-12.2B-06O	ORIFICE	6	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.500	0.304
HD-12.2B-07P	STRAIGHT PIPE	56	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.500	0.527	0.304
HD-12.2B-08T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.669	0.382
HD-12.3-01P	STRAIGHT PIPE	60	A106/B/B	5	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.654	0.382

Line Name : HD-12.2A HD PMP HDR to CD SYS

HD-12.2A-08T	TEE	12	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.700	0.382
HD-12.4-01E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.789	0.382
HD-12.4-02P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382
HD-12.4-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382
HD-12.4-04P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382
HD-12.4-05E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382
HD-12.4-06P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382
HD-12.4-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382
HD-12.4-08P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382
HD-12.4-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382
HD-12.4-10P_1	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382

HD-12.4-10P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382
HD-12.4-11E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382
HD-12.4-12P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382
HD-12.4-13E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382
HD-12.4-14P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382
HD-12.4-15T	TEE	15	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382
HD-12.4-16P	STRAIGHT PIPE	65	A106/B/B	5	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382
HD-12.4-17E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382
HD-12.4-18P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	16.000	0	0.656	0.656	0.382

Line Name : MSD-01.11A_1 MSEP 33A to HDR

MSD-01.11A-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.11A-02T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.11A-03P	STRAIGHT PIPE	60	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.11A_2 MSEP 33A to HDR

MSD-01.11A-04N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.11A-08P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.11A_3 MSEP 33A to HDR

MSD-01.11A-05N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.11A-06T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.11A-07P	STRAIGHT PIPE	60	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.11B_1 MSEP 33B to HDR

MSD-01.11B-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.11B-02T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.11B-03P	STRAIGHT PIPE	60	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.11B_2 MSEP 33B to HDR

MSD-01.11B-04N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.11B-08P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.11B_3 MSEP 33B to HDR

MSD-01.11B-05N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.11B-06T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.11B-07P	STRAIGHT PIPE	60	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.12A MSEP 33A DR HDR

MSD-01.12A-01T	TEE	12	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.12A-02P	STRAIGHT PIPE	62	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.12B MSEP 33B DR HDR

MSD-01.12B-01T	TEE	12	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.12B-02P	STRAIGHT PIPE	62	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

MSD-01.12B-01T	TEE	12	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.12B-02P	STRAIGHT PIPE	62	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.13A HDR to MSEP TK 33A

MSD-01.13A-01T	TEE	11	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.13A-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.13A-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.13A-04V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.113
MSD-01.13A-05P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.13A-06V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.113
MSD-01.13A-07P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.268	0.106
MSD-01.13A-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.437	0.106
MSD-01.13A-09P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.382	0.106
MSD-01.13A-10N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.13B HDR to MSEP TK 33B

MSD-01.13B-01T	TEE	11	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.13B-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.13B-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.13B-04V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.113
MSD-01.13B-05P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.13B-06V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.113
MSD-01.13B-07P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.13B-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.13B-09P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.13B-10N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.14A TK 33A to HD TK

MSD-01.14A-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.14A-02P	STRAIGHT PIPE	61	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.14A-03T	TEE	15	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.14A-04P	STRAIGHT PIPE	65	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	40	0.322	0.324	0.071
MSD-01.15A-01E	90-DEG RED. ELBOW	16	A182/F11/F11	15	1.00	0.00	0.44	17500.0	8.625	40	0.322	0.000	0.061
MSD-01.15A-02V	CHECK VALVE	25	A217/WC6/WC6	95	1.00	0.00	0.44	14000.0	6.625	0	0.280	0.280	0.059
MSD-01.15A-03P	STRAIGHT PIPE	58	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15A-04E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	40	0.280	0.341	0.047
MSD-01.15A-05E	90-DEG ELBOW	4	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	40	0.280	0.322	0.047
MSD-01.15A-06P	STRAIGHT PIPE	54	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.285	0.055
MSD-01.15A-07E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.15A-08P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15A-21P	STRAIGHT PIPE	9	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.000	0.055
MSD-01.15A-09E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	40	0.280	0.302	0.047
MSD-01.15A-10P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.306	0.055
MSD-01.15A-11E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	40	0.280	0.290	0.047
MSD-01.15A-12P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.272	0.055
MSD-01.15A-13E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	40	0.280	0.334	0.047
MSD-01.15A-14P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.281	0.055
MSD-01.15A-22P	STRAIGHT PIPE	9	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.281	0.055
MSD-01.15A-15E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	40	0.280	0.331	0.047
MSD-01.15A-16P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.284	0.055
MSD-01.15A-17E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.15A-18P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15A-19E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047

MSD-01.15A-20N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
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Line Name : MSD-01.14B TK 33B to HD TK

MSD-01.14B-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.14B-02P	STRAIGHT PIPE	61	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.14B-03T	TEE	15	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.14B-04P	STRAIGHT PIPE	65	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.15B-01E	90-DEG RED. ELBOW	16	A182/F11/F11	15	1.00	0.00	0.44	17500.0	8.625	40	0.322	0.000	0.061
MSD-01.15B-02E	90-DEG ELBOW	4	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.15B-03P	STRAIGHT PIPE	54	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15B-04E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.15B-05V	CHECK VALVE	25	A217/WC6/WC6	95	1.00	0.00	0.44	14000.0	6.625	0	0.280	0.280	0.059
MSD-01.15B-06P	STRAIGHT PIPE	58	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.265	0.055
MSD-01.15B-07E	90-DEG ELBOW	4	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	40	0.280	0.309	0.047
MSD-01.15B-08P	STRAIGHT PIPE	54	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.299	0.055
MSD-01.15B-09E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.15B-10P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15B-11E	45-DEG ELBOW	1	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.15B-12P_1	STRAIGHT PIPE	51	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15B-12P_2	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15B-30P	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15B-13E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15B-14P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15B-15E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15B-16P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15B-31P_1	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15B-31P_2	STRAIGHT PIPE	9	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15B-17E	45-DEG ELBOW	1	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.15B-18P	STRAIGHT PIPE	51	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15B-19E	45-DEG ELBOW	1	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.15B-20P	STRAIGHT PIPE	51	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15B-21E	45-DEG ELBOW	1	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.15B-22P	STRAIGHT PIPE	51	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15B-23E	45-DEG ELBOW	1	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.15B-24P	STRAIGHT PIPE	51	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15B-32P	STRAIGHT PIPE	9	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.15B-25E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.15B-26P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.278	0.055
MSD-01.15B-27E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	40	0.280	0.341	0.047
MSD-01.15B-28P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.282	0.055
MSD-01.15B-29N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055

Line Name : MSD-01.1A_1 MSEP 31A to HDR

MSD-01.1A-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.1A-02T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.1A-03P	STRAIGHT PIPE	60	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.1A_2 MSEP 31A to HDR

MSD-01.1A-04N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.1A-08P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.1A_3 MSEP 31A to HDR

MSD-01.1A-05N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.1A-06T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.1A-07P	STRAIGHT PIPE	60	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.1B_1 MSEP 31B to HDR

MSD-01.1B-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.1B-02T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.1B-03P	STRAIGHT PIPE	60	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.1B_2 MSEP 31B to HDR

MSD-01.1B-04N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.1B-08P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.1B_3 MSEP 31B to HDR

MSD-01.1B-05N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.1B-06T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.1B-07P	STRAIGHT PIPE	60	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.2A MSEP 31A DR HDR

MSD-01.2A-01T	TEE	12	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
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Line Name : MSD-01.2B MSEP 31B DR HDR

MSD-01.2B-01T	TEE	12	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
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Line Name : MSD-01.3A HDR to MSEP TK 31A

MSD-01.3A-01T	TEE	11	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.3A-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.3A-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.3A-04V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.113
MSD-01.3A-05P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.3A-06V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.113
MSD-01.3A-07P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.3A-08N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.3B HDR to MSEP TK 31B

MSD-01.3B-01T	TEE	11	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.3B-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.3B-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.3B-04V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.113
MSD-01.3B-05P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.3B-06V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.113
MSD-01.3B-07P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.3B-08N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

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

MSD-01.4A-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.4A-02P	STRAIGHT PIPE	61	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.4A-03T	TEE	15	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.4A-04P	STRAIGHT PIPE	65	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	40	0.322	0.349	0.071
MSD-01.5A-01E	90-DEG RED. ELBOW	16	A182/F11/F11	15	1.00	0.00	0.44	17500.0	8.625	40	0.322	0.000	0.061
MSD-01.5A-02P	STRAIGHT PIPE	66	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.314	0.055
MSD-01.5A-03E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5A-04P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.349	0.055
MSD-01.5A-05E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	40	0.280	0.319	0.047
MSD-01.5A-06V	CHECK VALVE	25	A217/WC6/WC6	95	1.00	0.00	0.44	14000.0	6.625	0	0.280	0.280	0.059
MSD-01.5A-07P	STRAIGHT PIPE	58	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.289	0.055
MSD-01.5A-08E	90-DEG ELBOW	4	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	40	0.280	0.319	0.047
MSD-01.5A-09P	STRAIGHT PIPE	54	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.317	0.055
MSD-01.5A-10E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5A-11P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5A-12E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5A-13P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5A-14E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5A-15P_1	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5A-15P_2	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5A-28P_1	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5A-28P_2	STRAIGHT PIPE	9	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5A-16E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5A-17P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5A-18E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5A-19P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5A-20E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5A-21P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5A-29P	STRAIGHT PIPE	9	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5A-22E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5A-23P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.314	0.055
MSD-01.5A-24E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	40	0.280	0.302	0.047
MSD-01.5A-25P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.318	0.055
MSD-01.5A-26E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5A-27N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055

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

MSD-01.4B-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.4B-02P	STRAIGHT PIPE	61	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.4B-03E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	8.625	0	0.322	0.322	0.061
MSD-01.4B-04P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.4B-05E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	8.625	0	0.322	0.322	0.061
MSD-01.4B-07P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.4B-06T	TEE	15	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.4B-08P	STRAIGHT PIPE	65	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.5B-01R	CON. REDUCER	7	A182/F11/F11	15	1.00	0.00	0.44	17500.0	8.625	40	0.322	0.000	0.061
MSD-01.5B-02P	STRAIGHT PIPE	57	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5B-03E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5B-04V	CHECK VALVE	25	A217/WC6/WC6	95	1.00	0.00	0.44	14000.0	6.625	0	0.280	0.280	0.059
MSD-01.5B-05P	STRAIGHT PIPE	58	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.307	0.055
MSD-01.5B-06E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	40	0.280	0.303	0.047
MSD-01.5B-07P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.313	0.055
MSD-01.5B-08E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5B-09P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055

MSD-01.5B-10E	90-DEG ELBOW	4	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5B-11P_1	STRAIGHT PIPE	54	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5B-11P_2	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5B-29P	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5B-12E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5B-13P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5B-14E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5B-15P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5B-30P_1	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5B-30P_2	STRAIGHT PIPE	9	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5B-16E	45-DEG ELBOW	1	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5B-17P	STRAIGHT PIPE	51	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5B-18E	45-DEG ELBOW	1	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5B-19P	STRAIGHT PIPE	51	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5B-20E	45-DEG ELBOW	1	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5B-21P	STRAIGHT PIPE	51	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5B-22E	45-DEG ELBOW	1	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5B-23P	STRAIGHT PIPE	51	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5B-31P	STRAIGHT PIPE	9	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.5B-24E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5B-25P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.302	0.055
MSD-01.5B-32P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.302	0.055
MSD-01.5B-26E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.5B-27P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.311	0.055
MSD-01.5B-28N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055

Line Name : MSD-01.6A_1 MSEP 32A to HDR

MSD-01.6A-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.6A-02T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.6A-03P	STRAIGHT PIPE	60	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.6A_2 MSEP 32A to HDR

MSD-01.6A-04N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	1	1.125	1.125	0.106
MSD-01.6A-08P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.6A_3 MSEP 32A to HDR

MSD-01.6A-05N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.6A-06T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.6A-07P	STRAIGHT PIPE	60	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.6B_1 MSEP 32B to HDR

MSD-01.6B-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.6B-02T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.6B-03P	STRAIGHT PIPE	60	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.312	0.106

Line Name : MSD-01.6B_2 MSEP 32B to HDR

MSD-01.6B-04N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	1	1.125	1.125	0.106
MSD-01.6B-08P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.312	0.106

Line Name : MSD-01.6B_3 MSEP 32B to HDR

MSD-01.6B-05N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.6B-06T	TEE	10	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.6B-07P	STRAIGHT PIPE	60	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.264	0.106

Line Name : MSD-01.7A MSEP 32A DR HDR

MSD-01.7A-01T	TEE	12	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.7A-02P	STRAIGHT PIPE	62	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.7B MSEP 32B DR HDR

MSD-01.7B-01T	TEE	12	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.7B-02P	STRAIGHT PIPE	62	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.304	0.106

Line Name : MSD-01.8A HDR to MSEP TK 32A

MSD-01.8A-01T	TEE	11	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.8A-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.8A-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.8A-04V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.113
MSD-01.8A-05P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.8A-06V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.113
MSD-01.8A-07P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.8A-08N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.8B HDR to MSEP TK 32B

MSD-01.8B-01T	TEE	11	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.8B-02P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.285	0.106
MSD-01.8B-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.8B-04V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.113
MSD-01.8B-05P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.8B-06V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	12.750	0	0.250	0.250	0.113
MSD-01.8B-07P	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106
MSD-01.8B-08N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	12.750	0	0.250	0.250	0.106

Line Name : MSD-01.9A TK 32A to HD TK

MSD-01.9A-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.9A-02P	STRAIGHT PIPE	61	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.9A-03T	TEE	15	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.9A-04P	STRAIGHT PIPE	65	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.10A-01E	90-DEG RED. ELBOW	16	A182/F11/F11	15	1.00	0.00	0.44	17500.0	8.625	40	0.322	0.000	0.061
MSD-01.10A-02P	STRAIGHT PIPE	66	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.304	0.055
MSD-01.10A-03E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	40	0.280	0.309	0.047
MSD-01.10A-04P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10A-05E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.10A-06V	CHECK VALVE	25	A217/WC6/WC6	95	1.00	0.00	0.44	14000.0	6.625	0	0.280	0.280	0.059
MSD-01.10A-07P	STRAIGHT PIPE	58	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.293	0.055
MSD-01.10A-08E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	40	0.280	0.307	0.047
MSD-01.10A-09P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.293	0.055

MSD-01.10A-10E	45-DEG ELBOW	1	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.10A-11P	STRAIGHT PIPE	51	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10A-12E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.10A-13P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10A-26P_1	STRAIGHT PIPE	9	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10A-26P_2	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10A-26P_3	STRAIGHT PIPE	9	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10A-14E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.10A-15P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10A-16E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.10A-17P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10A-18E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.10A-19P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10A-27P	STRAIGHT PIPE	9	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10A-20E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.10A-21P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.294	0.055
MSD-01.10A-22E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.317	0.047
MSD-01.10A-23P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.289	0.055
MSD-01.10A-24E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.10A-25N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055

Line Name : MSD-01.9B TK 32B to HD TK

MSD-01.9B-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.9B-02P	STRAIGHT PIPE	61	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.9B-03T	TEE	15	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.9B-04P	STRAIGHT PIPE	65	A335/P11/P11	25	1.00	0.00	0.44	15000.0	8.625	0	0.322	0.322	0.071
MSD-01.10B-01E	90-DEG RED. ELBOW	16	A182/F11/F11	15	1.00	0.00	0.44	17500.0	8.625	40	0.322	0.000	0.061
MSD-01.10B-02E	90-DEG ELBOW	4	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.10B-03P	STRAIGHT PIPE	54	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10B-04E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.10B-05V	CHECK VALVE	25	A217/WC6/WC6	95	1.00	0.00	0.44	14000.0	6.625	0	0.280	0.280	0.059
MSD-01.10B-06P	STRAIGHT PIPE	58	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.299	0.055
MSD-01.10B-07E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	40	0.280	0.328	0.047
MSD-01.10B-08P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.289	0.055
MSD-01.10B-09E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.10B-10P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10B-28P	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10B-11E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10B-12P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10B-13E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10B-14P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10B-29P_1	STRAIGHT PIPE	9	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10B-29P_2	STRAIGHT PIPE	9	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10B-15E	45-DEG ELBOW	1	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.10B-16P	STRAIGHT PIPE	51	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10B-17E	45-DEG ELBOW	1	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.10B-18P	STRAIGHT PIPE	51	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10B-19E	45-DEG ELBOW	1	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.10B-20P	STRAIGHT PIPE	51	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10B-21E	45-DEG ELBOW	1	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.10B-22P	STRAIGHT PIPE	51	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10B-30P	STRAIGHT PIPE	9	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	0	0.280	0.280	0.055
MSD-01.10B-23E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	0	0.280	0.280	0.047
MSD-01.10B-24P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.285	0.055
MSD-01.10B-25E	90-DEG ELBOW	2	A182/F11/F11	15	1.00	0.00	0.44	17500.0	6.625	40	0.280	0.316	0.047
MSD-01.10B-26P	STRAIGHT PIPE	52	A335/P11/P11	25	1.00	0.00	0.44	15000.0	6.625	40	0.280	0.290	0.055
MSD-01.10B-27N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.280	0.280	0.055

Line Name : PD-01.1 PRESEP 1B DR to HDR

PD-01.1-01N	EXIT NOZZLE	31	A240/TP321/	0	18.00	0.00	0.00	17300.0	14.000	0	0.375	0.375	0.101
PD-01.2-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.375	0.000	0.116
PD-01.2-02B	45-DEG ELBOW	3	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.2-03P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.2-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.2-05P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.2-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.2-07P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.2-08E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.2-09V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	10.750	0	0.365	0.365	0.095
PD-01.2-100	ORIFICE	6	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-02.1-01T	TEE	10	A53/B/S	38	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132

Line Name : PD-01.3 PRESEP 1A DR to HDR

PD-01.3-01N	EXIT NOZZLE	31	A240/TP321/	0	18.00	0.00	0.00	17300.0	14.000	0	0.375	0.375	0.101
PD-01.4-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.375	0.000	0.116
PD-01.4-02B	45-DEG ELBOW	3	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.4-03P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.4-04E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.4-05P	STRAIGHT PIPE	51	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.4-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.4-07P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.4-08E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.4-09V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	10.750	0	0.365	0.365	0.095
PD-01.4-100	ORIFICE	6	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.380	0.089

Line Name : PD-01.5 PRESEP 2B DR to HDR

PD-01.5-01N	EXIT NOZZLE	31	A240/TP321/	0	18.00	0.00	0.00	17300.0	14.000	0	0.375	0.375	0.101
PD-01.6-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.375	0.000	0.116
PD-01.6-02B	45-DEG ELBOW	3	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.6-03P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.6-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.6-05P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.6-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.6-07P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.6-08E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.6-09P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.6-10E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.6-11P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.6-12E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.6-13V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	10.750	0	0.365	0.365	0.095
PD-01.6-140	ORIFICE	6	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089

Line Name : PD-01.7 PRESEP 2A DR to HDR

PD-01.7-01N	EXIT NOZZLE	31	A240/TP321/	0	18.00	0.00	0.00	17300.0	14.000	0	0.375	0.375	0.101
PD-01.8-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	14.000	0	0.375	0.000	0.116
PD-01.8-02B	45-DEG ELBOW	3	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.8-03P	STRAIGHT PIPE	53	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.8-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089

PD-01.8-05P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.8-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.8-07P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.8-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.8-09P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.8-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.8-11P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.8-12E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089
PD-01.8-13V	CHECK VALVE	25	A216/WCB/WCB	93	0.00	0.00	0.00	14000.0	10.750	0	0.365	0.365	0.095
PD-01.8-14O	ORIFICE	6	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	0	0.365	0.365	0.089

Line Name : PD-02.2 PRESEP HDR to HD TK

PD-02.2-01T	TEE	12	A53/B/S	38	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-22T	TEE	15	A53/B/S	38	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132

Line Name : PD-02.3 PRESEP HDR to HD TK

PD-02.3-01T	TEE	12	A53/B/S	38	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
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Line Name : PD-02.4 PRESEP HDR to HD TK

PD-02.4-01T	TEE	12	A53/B/S	38	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-03P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-05P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-22E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.000	0.132
ED-02.4-23R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	30.000	0	0.625	0.000	0.248
PD-02.4-24P	STRAIGHT PIPE	68	A516/60/60	34	0.00	0.00	0.00	15000.0	30.000	0	0.625	0.000	0.248
PD-02.4-25T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	30.000	0	0.625	0.000	0.248
PD-02.4-26P	STRAIGHT PIPE	63	A516/60/60	34	0.00	0.00	0.00	15000.0	30.000	0	0.625	0.000	0.248
PD-02.4-27P	STRAIGHT PIPE	63	A106/B/B	5	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.000	0.132
PD-02.4-28E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.000	0.132
ED-02.4-06E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-07P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-08E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-09P	STRAIGHT PIPE	51	A53/B/S	38	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-10E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-11P	STRAIGHT PIPE	51	A53/B/S	38	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-12E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-13P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-14E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-15P	STRAIGHT PIPE	51	A53/B/S	38	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
ED-02.4-16E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-17P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-18E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-19P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.375	0.132
PD-02.4-29R	CON. REDUCER	17	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	16.000	40	0.500	0.000	0.132
ED-02.4-30V	GLOBE VALVE	21	A216/WCC/WCC	94	0.00	0.00	0.00	14000.0	8.625	40	0.322	0.000	0.076
ED-02.4-31R	CON. EXPANDER	18	A234/WP22/WP2	18	1.90	0.00	0.87	15000.0	16.000	0	0.375	0.000	0.132
PD-02.4-32P	STRAIGHT PIPE	68	A335/P22/P22	26	1.90	0.00	0.87	15000.0	16.000	0	0.375	0.000	0.132
PD-02.4-20O	ORIFICE	6	A53/B/S	38	0.00	0.00	0.00	15000.0	16.000	0	0.375	0.421	0.132
PD-02.4-21N	INLET NOZZLE	30	A106/C/C	6	0.00	0.00	0.00	17500.0	16.000	0	0.375	0.899	0.114

Line Name : RHD-01.10A_1 RH 33A to TK 33A

RHD01.10A-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-03N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233

Line Name : RHD-01.10A_2 TK 33A to A HDR

RHD01.10A-04N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-05P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-06E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-07P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-08E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-09P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-11P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-12E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-13P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-14E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-15P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-16E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-17P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-18F	ORIFICE	6	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-19P	STRAIGHT PIPE	56	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10A-20R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
RHD01.11A-01E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.11A-02P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.11A-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.11A-04P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.12A-01T	TEE	14	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
RHD01.12A-02P	STRAIGHT PIPE	64	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.12A-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.12A-04E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.12A-05P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.12A-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.12A-07P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.12A-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.13A-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
RHD02.5A-01V	CONTROL VALVE	24	A-217/C5/	0	5.00	0.00	0.50	28300.0	4.500	0	0.337	0.337	0.085
RHD02.5A-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
RHD02.6A-01P	STRAIGHT PIPE	57	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.6A-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.6A-03P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.6A-04E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.6A-05P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233

Line Name : RHD-01.10B_1 RH 33B to TK 33B

RHD01.10B-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10B-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10B-03N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233

Line Name : RHD-01.10B_2 TK 33B to B HDR

RHD01.10B-04N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10B-05P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233

RHD01.10B-60E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10B-61P_1	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10B-61P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10B-62E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10B-63E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.10B-64R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
RHD01.11B-01P_1	STRAIGHT PIPE	68	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.11B-01P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.11B-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.11B-03P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.11B-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.11B-05P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.12B-01R	CON. REDUCER	17	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
RHD02.5B-01V	CONTROL VALVE	24	A-217/C5/	0	5.00	0.00	0.50	28300.0	4.500	0	0.337	0.337	0.085
RHD02.5B-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
RHD02.6B-01E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.559	0.303
RHD02.6B-02P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.528	0.303

Line Name : RHD-01.1A_1 RH 31A to TK 31A

RHD01.1A-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-03N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233

Line Name : RHD-01.1A_2 TK 31A to A HDR

RHD01.1A-04N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-05P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-07P_1	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-07P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-09P_1	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-09P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-11P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-12E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-13P_1	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-13P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-14E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-15P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-16E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-17P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-18E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-19P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-20E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-21P_1	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-21P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-22E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-23P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-24E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-25E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-26P	STRAIGHT PIPE	53	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-27E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-28P_1	STRAIGHT PIPE	53	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-28P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-29E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233

RHD01.1A-30P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-31E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-32P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-33E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-34P_1	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.475	0.233
RHD01.1A-34P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.475	0.233
RHD01.1A-35F	ORIFICE	6	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-36P	STRAIGHT PIPE	56	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.462	0.233
RHD01.1A-37T	TEE	15	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-38P	STRAIGHT PIPE	65	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-39E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-40P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-41E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-42P_1	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-42P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-43E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-44P_1	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-44P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-45E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-46P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-47E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1A-48P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.2A-01R	CON. REDUCER	17	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
RHD02.1A-01V	CONTROL VALVE	24	A-217/C5/	0	5.00	0.00	0.50	28300.0	4.500	0	0.337	0.337	0.085
RHD02.1A-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
RHD02.2A-01P	STRAIGHT PIPE	68	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.2A-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.473	0.233
RHD02.2A-03P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.2A-04E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.2A-05P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233

Line Name : RHD-01.1B_1 RH 31B to TK 31B

RHD01.1B-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-03N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233

Line Name : RHD-01.1B_2 TK 31B to B HDR

RHD01.1B-04N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-05P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-07P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-09P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-10E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-11P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-12E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-13P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-14F	ORIFICE	6	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-15P	STRAIGHT PIPE	56	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-16E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-17P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-18E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-19P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-20E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-21P_1	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233

RHD01.1B-21P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-22E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-23P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-24E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-25P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-26E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-27P_1	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-27P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-28E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-29P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.473	0.233
RHD01.1B-30E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.473	0.233
RHD01.1B-31P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.469	0.233
RHD01.1B-32E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-33P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-34T	TEE	15	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-35E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-36P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-37E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-38P_1	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-38P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-39E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-40P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-41E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-42P_1	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-42P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-43E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-44P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-45E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-46P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-47E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-48P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-49E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-50P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-51E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.1B-52P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.476	0.233
RHD01.2B-01R	CON. REDUCER	17	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
RHD02.1B-01V	CONTROL VALVE	24	A-217/C5/	0	5.00	0.00	0.50	28300.0	4.500	0	0.337	0.337	0.085
RHD02.1B-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
RHD02.2B-01P	STRAIGHT PIPE	68	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.2B-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.2B-03P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.2B-04E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.2B-05P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233

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

RHD01.3A-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3A-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3A-03N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233

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

RHD01.3A-04N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3A-05P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3A-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3A-07P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3A-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233

RHD01.3A-09P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3A-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3A-11P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3A-12E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3A-13P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3A-14E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3A-15R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
RHD01.4A-01P_1	STRAIGHT PIPE	68	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.4A-01P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.5A-01R	CON. REDUCER	17	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
RHD01.5A-02P	STRAIGHT PIPE	67	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.5A-03F	ORIFICE	6	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.5A-04P	STRAIGHT PIPE	56	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.5A-05R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
RHD01.6A-01P	STRAIGHT PIPE	68	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.6A-02T	TEE	15	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.6A-03P_1	STRAIGHT PIPE	65	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.6A-03P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.6A-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.6A-05P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.6A-06E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.6A-07P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.6A-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.6A-09P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.6A-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.6A-11P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.6A-12E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.6A-13P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.6A-14E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.6A-15P_1	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.6A-15P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD01.7A-01R	CON. REDUCER	17	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
RHD01.7A-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.7A-03P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.7A-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.458	0.233
RHD01.8A-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
RHD01.8A-02P	STRAIGHT PIPE	57	A106/B/B	5	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.376	0.158
RHD02.3A-01V	CONTROL VALVE	24	A-217/C5/	0	5.00	0.00	0.50	28300.0	4.500	0	0.337	0.337	0.085
RHD02.3A-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
RHD02.4A-01P	STRAIGHT PIPE	68	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.4A-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.473	0.233
RHD02.4A-03P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.4A-04E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.4A-05P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.4A-06L	TEE	10	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.7A-01P	STRAIGHT PIPE	60	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378

Line Name : RHD-01.3B_1 RH 32B to TK 32B

RHD01.3B-01N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-02P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-03N	INLET NOZZLE	30	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233

Line Name : RHD-01.3B_2 TK 32B to B HDR

RHD01.3B-04N	EXIT NOZZLE	31	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-05P	STRAIGHT PIPE	61	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233

RHD01.3B-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-07P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-09P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-11P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-12E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-13P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-14E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-15P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-16E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-17P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-18E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-19P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.3B-20R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
RHD01.4B-01P_1	STRAIGHT PIPE	68	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.4B-01P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.5B-01R	CON. REDUCER	17	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
RHD01.5B-02P	STRAIGHT PIPE	67	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.458	0.233
RHD01.5B-03F	ORIFICE	6	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.5B-04P	STRAIGHT PIPE	56	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.475	0.233
RHD01.5B-05R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
RHD01.6B-01P	STRAIGHT PIPE	68	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.634	0.378
RHD01.6B-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-03P_1	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-03P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-04E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-05P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-07P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-09P_1	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-09P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-11E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-12P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-13E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-14P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-15E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-16P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-17T	TEE	15	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-18P	STRAIGHT PIPE	65	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-19E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-20P_1	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-20P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-21T	TEE	15	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-22P_1	STRAIGHT PIPE	65	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.6B-22P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.7B-01R	CON. REDUCER	17	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
RHD01.7B-02P	STRAIGHT PIPE	67	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD01.7B-03R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
RHD01.8B-01P_1	STRAIGHT PIPE	68	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.8B-01P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.8B-02E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.8B-03P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.8B-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.8B-05P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.8B-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD01.9B-01R	CON. REDUCER	17	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378

RHD02.3B-01V	CONTROL VALVE	24	A-217/C5/	0	5.00	0.00	0.50	28300.0	4.500	0	0.337	0.337	0.085
RHD02.3B-02R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
RHD02.4B-01P	STRAIGHT PIPE	68	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.4B-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
RHD02.4B-03P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.4B-04E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.4B-05P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.4B-06E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.4B-07P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.609	0.378

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

RHD02.10A-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
RHD02.10A-02P	STRAIGHT PIPE	57	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD02.10A-03E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD02.10A-04P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD02.10A-05E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD02.10A-06P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD02.10A-07E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD02.10A-08P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD02.10A-09E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD02.10A-10P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD02.10A-11T	TEE	14	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303

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

RHD02.10B-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
RHD02.10B-02P_1	STRAIGHT PIPE	57	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.10B-02P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.10B-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.10B-04P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.10B-05E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.10B-06P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.10B-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.10B-08P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.10B-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.10B-10P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.10B-11E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.10B-12V	GATE VALVE	22	A105/A105/A10	3	0.00	0.00	0.00	17500.0	6.625	0	0.432	0.432	0.200
RHD02.10B-13P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.10B-14T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.10B-15P	STRAIGHT PIPE	63	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.10B-16T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.10B-17R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
RHD02.11B-01N	INLET NOZZLE	30	A105/A105/A10	3	0.00	0.00	0.00	17500.0	8.625	0	0.500	0.500	0.261

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

RHD02.11A-01R	CON. REDUCER	7	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
RHD02.11A-02P_1	STRAIGHT PIPE	57	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.11A-02P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.11A-03E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.11A-04P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.11A-05E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.11A-06P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.11A-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233

RHD02.11A-08E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.11A-09P_1	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.11A-09P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.11A-10E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.11A-11P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.11A-12E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.11A-13P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.11A-14E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.11A-15V	GATE VALVE	22	A105/A105/A10	3	0.00	0.00	0.00	17500.0	6.625	0	0.432	0.432	0.200
RHD02.11A-16P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.489	0.233
RHD02.11A-17T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.11A-18P	STRAIGHT PIPE	63	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.473	0.233
RHD02.11A-19T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.11A-20R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
RHD02.12A-01N	INLET NOZZLE	30	A105/A105/A10	3	0.00	0.00	0.00	17500.0	8.625	0	0.500	0.500	0.261

Line Name : RHD-02.12B B HDR to FWH 36B

RHD02.12B-01P	STRAIGHT PIPE	64	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.12B-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.12B-03P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.12B-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.12B-05P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.12B-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.12B-07P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.12B-08E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.12B-09V	GATE VALVE	22	A105/A105/A10	3	0.00	0.00	0.00	17500.0	6.625	0	0.432	0.432	0.200
RHD02.12B-10P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.12B-11T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.12B-12P	STRAIGHT PIPE	63	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.12B-13T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.12B-14R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
RHD02.13B-01N	INLET NOZZLE	30	A105/A105/A10	3	0.00	0.00	0.00	17500.0	8.625	0	0.500	0.500	0.261

Line Name : RHD-02.13A A HDR to FWH 36B

RHD02.13A-01P	STRAIGHT PIPE	64	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.13A-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.13A-03P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.13A-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.13A-05E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.13A-06P_1	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.13A-06P_2	STRAIGHT PIPE	9	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.13A-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.13A-08P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.13A-09E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.13A-10P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.13A-11E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.13A-12V	GATE VALVE	22	A105/A105/A10	3	0.00	0.00	0.00	17500.0	6.625	0	0.432	0.432	0.200
RHD02.13A-13P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.13A-14T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.13A-15P	STRAIGHT PIPE	63	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.13A-16T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.13A-17R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
RHD02.14A-01N	INLET NOZZLE	30	A105/A105/A10	3	0.00	0.00	0.00	17500.0	8.625	0	0.500	0.500	0.261

Line Name : RHD-02.14B B HDR to FWH 36C

RHD02.14B-01P	STRAIGHT PIPE	64	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.14B-02E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.14B-03P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.14B-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.14B-05E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.14B-06P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.14B-07E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.14B-08V	GATE VALVE	22	A105/A105/A10	3	0.00	0.00	0.00	17500.0	6.625	0	0.432	0.432	0.200
RHD02.14B-09P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.14B-10T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.14B-11P	STRAIGHT PIPE	63	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.14B-12T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.14B-13R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
RHD02.15B-01N	INLET NOZZLE	30	A105/A105/A10	3	0.00	0.00	0.00	17500.0	8.625	80	0.500	0.432	0.261

Line Name : RHD-02.15A A HDR to FWH 36C

RHD02.15A-01P	STRAIGHT PIPE	64	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.15A-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.15A-03P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.15A-04E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.15A-05P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.15A-06E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.15A-07V	GATE VALVE	22	A105/A105/A10	3	0.00	0.00	0.00	17500.0	6.625	0	0.432	0.432	0.200
RHD02.15A-08P	STRAIGHT PIPE	58	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.15A-09T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.15A-10P	STRAIGHT PIPE	63	A106/B/B	5	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.15A-11T	TEE	13	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	6.625	0	0.432	0.432	0.233
RHD02.15A-12R	CON. EXPANDER	18	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
RHD02.16A-01N	INLET NOZZLE	30	A105/A105/A10	3	0.00	0.00	0.00	17500.0	8.625	0	0.500	0.500	0.261

Line Name : RHD-02.7B TK B HDR to FWH 36

RHD02.2B-06L	TEE	12	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD02.7B-01P	STRAIGHT PIPE	62	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD02.7B-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD02.7B-03P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD02.7B-04E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD02.7B-05P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD02.7B-06E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	8.625	0	0.500	0.500	0.303
RHD02.7B-07P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.543	0.303

Line Name : RHD-02.8A TK A HDR to FWH 36

RHD02.6A-06L	TEE	12	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.8A-01P	STRAIGHT PIPE	62	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.8A-02E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.8A-03P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378

Line Name : RHD-02.8B TK B HDR to FWH 36

RHD02.7B-08L	TEE	12	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.605	0.378
RHD02.8B-01P	STRAIGHT PIPE	62	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.609	0.378

RHD02.8B-02E	90-DEG ELBOW	2	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.8B-03P	STRAIGHT PIPE	52	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.8B-04E	90-DEG ELBOW	4	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.8B-05P	STRAIGHT PIPE	54	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.8B-06T	TEE	14	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378

Line Name : RHD-02.9A TK A HDR to FWH 36

RHD02.2A-06L	TEE	12	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.9A-01P	STRAIGHT PIPE	62	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.9A-02E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.9A-03P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.9A-04E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.9A-05P	STRAIGHT PIPE	51	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.9A-06E	45-DEG ELBOW	1	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.9A-07E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.9A-08P	STRAIGHT PIPE	53	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.9A-09E	45-DEG ELBOW	3	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.9A-10P	STRAIGHT PIPE	53	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.9A-11T	TEE	14	A234/WPB/WPB	21	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378

Line Name : RHD-02.9B TK B HDR to FWH 36

RHD02.9B-01P	STRAIGHT PIPE	64	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378
RHD02.9B-02T	TEE	14	A106/B/B	5	0.00	0.00	0.00	15000.0	10.750	0	0.594	0.594	0.378

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 06-SEP-2005 Time: 12:54:49
 CHECWORKS FAC Version 1.0G (Build 75)

 *** FAC Database: Component History Summary Report ***

SELECTION CRITERIA:

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

Line Name : EX-01.1 HP EXT to FWH 36 HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-01.1-02E	EX-01.1-02E	RO9	05-14-1997
EX-01.1-03P	EX-01.1-03P	RO9	05-14-1997
EX-01.1-04E	EX-01.1-04E	RO9	05-14-1997
EX-01.1-05P	EX-01.1-05P	RO9	05-14-1997
EX-01.1-06E	EX-01.1-06E	RO9	05-14-1997
EX-01.1-07P	EX-01.1-07P	RO9	05-14-1997
EX-01.1-08R	EX-01.1-08R	RO9	05-14-1997
EX-01.6-01P	EX-01.6-01P	RO9	05-14-1997
	EX-01.6-01P	RO8	01-01-1994

Line Name : EX-01.2 HP EXT to FWH 36 HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-01.2-02E	EX-01.2-02E	RO9	05-14-1997
EX-01.2-03P	EX-01.2-03P	RO9	05-14-1997
EX-01.2-04E	EX-01.2-04E	RO9	05-14-1997
EX-01.2-05P	EX-01.2-05P	RO9	05-14-1997
EX-01.2-06E	EX-01.2-06E	RO9	05-14-1997
EX-01.2-07P	EX-01.2-07P	RO9	05-14-1997
EX-01.2-08E	EX-01.2-08E	RO9	05-14-1997
EX-01.2-09P	EX-01.2-09P	RO9	05-14-1997
	EX-01.2-09P	RO8	01-01-1994

Line Name : EX-01.3 HP EXT FWH 36 HEADER

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-01.2-10L	EX-01.2-10L	RO9	05-14-1997
	EX-01.2-10L	RO8	01-01-1994
EX-01.3-01P	EX-01.3-01P	RO9	05-14-1997

IP3C00029120

REPLACEMENTS

EX-01.3-02E	EX-01.3-02E	RO9	05-14-1997
EX-01.3-03P	EX-01.3-03P	RO9	05-14-1997
EX-01.3-04T	EX-01.3-04T	RO9	05-14-1997
EX-01.3-05P	EX-01.3-05P	RO9	05-14-1997
EX-01.3-09E	EX-01.3-09E	RO9	05-14-1997
EX-01.3-10P	EX-01.3-10P	RO9	05-14-1997
EX-01.3-11T	EX-01.3-11T	RO9	05-14-1997
EX-01.3-12P	EX-01.3-12P	RO9	05-14-1997
EX-01.3-13E	EX-01.3-13E	RO9	05-14-1997
EX-01.3-14P	EX-01.3-14P	RO9	05-14-1997
EX-01.3-15E	EX-01.3-15E	RO9	05-14-1997
EX-01.3-16P	EX-01.3-16P	RO9	05-14-1997
EX-01.3-17T	EX-01.3-17T	RO9	05-14-1997
EX-01.3-19E	EX-01.3-19E	RO9	05-14-1997
EX-01.3-20P	EX-01.3-20P	RO9	05-14-1997
EX-01.3-21E	EX-01.3-21E	RO9	05-14-1997
EX-01.3-22P	EX-01.3-22P	RO9	05-14-1997
EX-01.3-23T	EX-01.3-23T	RO9	05-14-1997

Line Name : EX-01.4 HP EXT FWH 36 HEADER

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-01.4-01P	EX-01.4-01P	RO9	05-14-1997
EX-01.4-02T	EX-01.4-02T	RO9	05-14-1997

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

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-01.7-01P	EX-01.7-01P	RO9	05-14-1997
EX-01.5A-01R	EX-01.5A-01R	RO9	05-14-1997
EX-01.5A-02P	EX-01.5A-02P	RO9	05-14-1997
EX-01.5A-03E	EX-01.5A-03E	RO9	05-14-1997
	EX-01.5A-03E	RO8	04-18-1992
EX-01.5A-04P	EX-01.5A-04P	RO9	05-14-1997
	EX-01.5A-04P	RO8	04-18-1992
EX-01.5A-05E	EX-01.5A-05E	RO9	05-14-1997
	EX-01.5A-05E	RO8	04-18-1992
EX-01.5A-06P	EX-01.5A-06P	RO9	05-14-1997
	EX-01.5A-06P	RO8	04-18-1992
EX-01.5A-16L	EX-01.5A-16L	RO9	05-14-1997
	EX-01.5A-16L	RO8	04-18-1992
EX-01.5A-07L	EX-01.5A-07L	RO9	05-14-1997
	EX-01.5A-07L	RO8	04-18-1992
EX-01.5A-08P	EX-01.5A-08P	RO9	05-14-1997
	EX-01.5A-08P	RO8	04-18-1992
EX-01.5A-09E	EX-01.5A-09E	RO9	05-14-1997
	EX-01.5A-09E	RO8	04-18-1992
EX-01.5A-10P	EX-01.5A-10P	RO9	05-14-1997
EX-01.5A-12P	EX-01.5A-12P	RO9	05-14-1997
EX-01.5A-13E	EX-01.5A-13E	RO9	05-14-1997
EX-01.5A-17P	EX-01.5A-17P	RO9	05-14-1997

EX-01.5A-14E	EX-01.5A-14E	RO9	05-14-1997
EX-01.5A-15N	EX-01.5A-15N	RO9	05-14-1997

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

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-01.5B-01P	EX-01.5B-01P	RO9	05-14-1997
EX-01.5B-02E	EX-01.5B-02E	RO9	05-14-1997
EX-01.5B-03P	EX-01.5B-03P	RO9	05-14-1997
EX.01.5B-14L	EX.01.5B-14L	RO9	05-14-1997
EX-01.5B-04L	EX-01.5B-04L	RO9	05-14-1997
EX-01.5B-05P	EX-01.5B-05P	RO9	05-14-1997
EX-01.5B-06E	EX-01.5B-06E	RO9	05-14-1997
EX-01.5B-07E	EX-01.5B-07E	RO9	05-14-1997
EX-01.5B-08P	EX-01.5B-08P	RO9	05-14-1997
EX-01.5B-10P	EX-01.5B-10P	RO9	05-14-1997
EX-01.5B-11E	EX-01.5B-11E	RO9	05-14-1997
EX-01.5B-15P	EX-01.5B-15P	RO9	05-14-1997
EX-01.5B-12E	EX-01.5B-12E	RO9	05-14-1997
EX-01.5B-13N	EX-01.5B-13N	RO9	05-14-1997

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

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-01.5C-01P	EX-01.5C-01P	RO9	05-14-1997
EX-01.5C-02E	EX-01.5C-02E	RO9	05-14-1997
EX-01.5C-03P	EX-01.5C-03P	RO9	05-14-1997
EX.01.5C-14L	EX.01.5C-14L	RO9	05-14-1997
EX-01.5C-04L	EX-01.5C-04L	RO9	05-14-1997
EX-01.5C-05P	EX-01.5C-05P	RO9	05-14-1997
EX-01.5C-06E	EX-01.5C-06E	RO9	05-14-1997
EX-01.5C-07E	EX-01.5C-07E	RO9	05-14-1997
EX-01.5C-08P	EX-01.5C-08P	RO9	05-14-1997
EX-01.5C-10P	EX-01.5C-10P	RO9	05-14-1997
EX-01.5C-11E	EX-01.5C-11E	RO9	05-14-1997
EX-01.5C-15P	EX-01.5C-15P	RO9	05-14-1997
EX-01.5C-12E	EX-01.5C-12E	RO9	05-14-1997
EX-01.5C-13N	EX-01.5C-13N	RO9	05-14-1997

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

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-02.1-02P	EX-02.1-02P	RO13	03-13-2005
EX-02.1-03E	EX-02.1-03E	RO13	03-13-2005
EX-02.1-04P	EX-02.1-04P	RO13	03-13-2005
EX-02.1-05O	EX-02.1-05O	RO13	03-13-2005
EX-02.1-06T	EX-02.1-06T	RO13	03-13-2005

IPEC00029123

3R13 CHECWORKS MODELED PIPE REPLACEMENTS

Component I.D.	Component Type	Component Size (in.)	Component Location and Notes	Drawing	Material Note	Note				
			Transport steam from Preseparator 1A							
EX-02.2-02P	PIPE	10	gml	EC-H-50071	1					
EX-02.2-03E	ELBOW	10	gml	EC-H-50071	1					
EX-02.2-04P	PIPE	10	gml	EC-H-50071	1					
EX-02.2-05E	ELBOW	10	gml	EC-H-50071	1					
EX-02.2-06P	PIPE	10	gml	EC-H-50071	1					
EX-02.2-08O	ORIFICE	10	gml	EC-H-50071	1					
EX-02.2-07T	TEE	10 / 18	gml	EC-H-50071	1					
			Transport steam from Preseparator 2A							
EX-02.1-02P	PIPE	10	gml	EC-H-50071	1					
EX-02.1-03E	ELBOW	10	gml	EC-H-50071	1					
EX-02.1-04P	PIPE	10	gml	EC-H-50071	1					
EX-02.1-05O	ORIFICE	10	gml	EC-H-50071	1					
EX-02.1-06T	TEE	10 / 18	gml	EC-H-50071	1					
			Transport steam from Preseparator 2A Xunder							
EX-02.4-02P	PIPE	14	gml	EC-H-50071	1					
EX-02.4-03E	ELBOW	14	gml	EC-H-50071	1					
EX-02.4-04P	PIPE	14	gml	EC-H-50071	1					
EX-02.4-06O	ORIFICE	14	gml	EC-H-50071	1	FLOW ORDER				
EX-02.4-07P	PIPE	14	gml	EC-H-50071	1	NEW				
EX-02.4-05T	TEE	14 / 18	gml	EC-H-50071	1	FLOW ORDER				
			Transport steam from Preseparator 1B							
EX-02.9-02P	PIPE	10	gml	EC-H-50081	1					
EX-02.9-03E	ELBOW	10	gml	EC-H-50081	1					
EX-02.9-04P	PIPE	10	gml	EC-H-50081	1					
EX-02.9-05E	ELBOW	10	gml	EC-H-50081	1					
EX-02.9-06P	PIPE	10	gml	EC-H-50081	1					
EX-02.9-11O	ORIFICE	10	gml	EC-H-50081	1	FLOW ORDER				
EX-02.9-07E	ELBOW	10	gml	EC-H-50081	1					
EX-02.9-08P	PIPE	10	gml	EC-H-50081	1					
EX-02.9-09E	ELBOW	10	gml	EC-H-50081	1					
EX-02.9-10P	PIPE	10	Not on replacement list			FLOW ORDER				
EX-02.9-10T	TEE	10 / 18	gml	EC-H-50081	1					
EX-02.9-7P	PIPE	10	Not on replacement list Transport steam from Preseparator 2B			COMPONENT DOES NOT EXIST				
EX-02.8-02E	ELBOW	10	gml	EC-H-50081	1					
EX-02.8-03P	PIPE	10	gml	EC-H-50081	1					
EX-02.8-04E	ELBOW	10	gml	EC-H-50081	1					
EX-02.8-05P	PIPE	10	gml	EC-H-50081	1					
EX-02.8-07O	ORIFICE	10	gml	EC-H-50081	1	FLOW ORDER				
EX-02.8-06E	ELBOW	10	gml	EC-H-50081	1	FLOW ORDER				
EX-02.8-09P	PIPE	10	gml	EC-H-50081	1	NEW				
EX-02.8-06T	TEE	10 / 18	gml	EC-H-50081	1					
			Transport steam from Preseparator 1B Xunder							
EX-02.11-02P	PIPE	14	gml	EC-H-50081	1					
EX-02.11-03E	ELBOW	14	gml	EC-H-50081	1					
EX-02.11-04P	PIPE	14	gml	EC-H-50081	1					
EX-02.11-06O	ORIFICE	14	gml	EC-H-50081	1	FLOW ORDER				
EX-02.11-07P	PIPE	14	gml	EC-H-50081	1	NEW				
EX-02.11-05T	TEE	14 / 18	gml	EC-H-50081	1	FLOW ORDER				
			Steam from Preseparator 1B and 2B							
EX-02.12-01P	PIPE	18	gml	EC-H-50082	1					
EX-02.13-01P	PIPE	18	gml	EC-H-50082	1					
EX-02.13-02B	BEND	18	gml	EC-H-50082	1					
EX-02.13-03E	ELBOW	18	gml	EC-H-50082	1					
EX-02.13-03P	ELBOW	18	Not on the replacement list	EC-H-50082	1	SHOULD BE PIPE				
EX-02.13-04E	ELBOW	18	gml	EC-H-50082	1					
EX-02.13-05P	PIPE	18	gml	EC-H-50082	1					
EX-02.13-06R	ELBOW	18	Not on the replacement list Steam from Preseparator 1A and 2A			SHOULD BE REDUCER, NOT REPLACED IN 3R13				

3R13 CHECWORKS MODELED PIPE REPLACEMENTS

Component I.D.	Component Type	Component Size (In.)	Component Location and Notes	Drawing	Material Note	Note				
EX-02.5-01P	PIPE	18	gml	EC-H-50082	1					
EX-02.6-01P	PIPE	18	gml	EC-H-50082	1					
EX-02.7-01P	PIPE	18	gml	EC-H-50082	1					
			Reheater Drain Piping from LCV-1105, 1105A and 1105B to FWH 36A, B & C							
RHD-02.3B-02R	REDUCER	4 x 10	Also replaced ~12" of RHD-02.4B-01P gml	EC-H-50010	2					
RHD-02.6B-01E	ELBOW	8	gml	EC-H-50010	2					
Material Notes										
1	Clad Carbon Steel pipe with A-240 Type 304/304L Stainless Steel Cladding									
2	A-234 Carbon Steel, Schedule 80									

EX-02.5-01P EX-02.5-01P R013 03-13-2005

Line Name : EX-02.11 PSEP1B 14" to 35 HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-02.11-02P	EX-02.11-02P	R013	03-13-2005
EX-02.11-03E	EX-02.11-03E	R013	03-13-2005
EX-02.11-04P	EX-02.11-04P	R013	03-13-2005
EX-02.11-06O	EX-02.11-06O	R013	03-13-2005

Line Name : EX-02.12 PSEP 1B&2B to 35 HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-02.9-10T	EX-02.9-10T	R013	03-13-2005
EX-02.12-01P	EX-02.12-01P	R013	03-13-2005

Line Name : EX-02.13 PSEP 1B&2B to 35 HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-02.11-05T	EX-02.11-05T	R013	03-13-2005
EX-02.13-01P	EX-02.13-01P	R013	03-13-2005
EX-02.13-02B	EX-02.13-02B	R013	03-13-2005
EX-02.13-03E	EX-02.13-03E	R013	03-13-2005
EX-02.13-04E	EX-02.13-04E	R013	03-13-2005
EX-02.13-05P	EX-02.13-05P	R013	03-13-2005

Line Name : EX-02.14 FWH 35 HEADER

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-02.7-02T	EX-02.7-02T	R08	01-01-1994
EX-02.14-02E	EX-02.14-02E	R05	05-03-1987
EX-02.14-06E	EX-02.14-06E	R05	05-03-1987
EX-02.14-08E	EX-02.14-08E	R05	05-03-1987
EX-02.14-33P	EX-02.14-33P	R08	01-01-1994
EX-02.14-22T	EX-02.14-22T	R08	01-01-1994
EX-02.14-23P	EX-02.14-23P	R08	01-01-1994
EX-02.14-28P	EX-02.14-28P	R08	01-01-1994
EX-02.14-29T	EX-02.14-29T	R08	01-01-1994

Line Name : EX-02.15 FWH 35 HEADER

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
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Component Name	Component Name	Replaced	Date
EX-02.15-01P	EX-02.15-01P	RO8	01-01-1994
EX-02.15-02T	EX-02.15-02T	RO8	01-01-1994

Line Name : EX-02.16 HDR 35 to FWH 35A

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-02.19-01P	EX-02.19-01P	RO8	01-01-1994
EX-02.16-01R	EX-02.16-01R	RO8	01-01-1994
EX-02.16-02P	EX-02.16-02P	RO11	04-28-2001
EX-02.16-03E	EX-02.16-03E	RO11	04-28-2001
EX-02.16-04P	EX-02.16-04P	RO11	04-28-2001
EX-02.16-06E	EX-02.16-06E	RO11	04-28-2001
EX-02.16-07P	EX-02.16-07P	RO11	04-28-2001
EX-02.16-08E	EX-02.16-08E	RO4	06-08-1985

Line Name : EX-02.17 HDR 35 to FWH 35B

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-02.17-01P	EX-02.17-01P	RO8	01-01-1994
EX-02.17-03E	EX-02.17-03E	RO11	04-28-2001
EX-02.17-04P	EX-02.17-04P	RO11	04-28-2001
	EX-02.17-04P	RO8	01-01-1994
EX-02.17-05E	EX-02.17-05E	RO4	06-08-1985

Line Name : EX-02.18 HDR 35 to FWH 35C

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-02.18-01P	EX-02.18-01P	RO8	01-01-1994
EX-02.18-03E	EX-02.18-03E	RO8	01-01-1994
EX-02.18-04P	EX-02.18-04P	RO8	01-01-1994
EX-02.18-05E	EX-02.18-05E	RO4	06-08-1985

Line Name : EX-02.2 PSEP 1A 10" to 35 HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-02.2-02P	EX-02.2-02P	RO13	03-13-2005
EX-02.2-03E	EX-02.2-03E	RO13	03-13-2005
EX-02.2-04P	EX-02.2-04P	RO13	03-13-2005
EX-02.2-05E	EX-02.2-05E	RO13	03-13-2005
EX-02.2-06P	EX-02.2-06P	RO13	03-13-2005

EX-02.2-080 EX-02.2-080 R013 03-13-2005

Line Name : EX-02.4 PSEP2A 14" to 35 HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-02.4-02P	EX-02.4-02P	R013	03-13-2005
EX-02.4-03E	EX-02.4-03E	R013	03-13-2005
EX-02.4-04P	EX-02.4-04P	R013	03-13-2005
EX-02.4-06O	EX-02.4-06O	R013	03-13-2005

Line Name : EX-02.6 PSEP 1A&2A to 35 HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-02.2-07T	EX-02.2-07T	R013	03-13-2005
EX-02.6-01P	EX-02.6-01P	R013	03-13-2005

Line Name : EX-02.7 PSEP 1A&2A to 35 HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-02.4-05T	EX-02.4-05T	R013	03-13-2005
EX-02.7-01P	EX-02.7-01P	R013	03-13-2005

Line Name : EX-02.8 PSEP 2B 10" to 35 HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-02.8-02E	EX-02.8-02E	R013	03-13-2005
EX-02.8-03P	EX-02.8-03P	R013	03-13-2005
EX-02.8-04E	EX-02.8-04E	R013	03-13-2005
EX-02.8-05P	EX-02.8-05P	R013	03-13-2005
EX-02.8-06E	EX-02.8-06E	R013	03-13-2005
EX-02.8-07O	EX-02.8-07O	R013	03-13-2005
EX-02.8-08T	EX-02.8-08T	R013	03-13-2005

Line Name : EX-02.9 PSEP 1B 10" to 35 HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EX-02.9-02P	EX-02.9-02P	R013	03-13-2005
	EX-02.9-02P	R012	04-15-2003
EX-02.9-03E	EX-02.9-03E	R013	03-13-2005

EX-02.9-04P	EX-02.9-03E	RO12	04-15-2003
	EX-02.9-04P	RO13	03-13-2005
	EX-02.9-04P	RO13	03-13-2005
	EX-02.9-04P	RO12	04-15-2003
EX-02.9-05E	EX-02.9-05E	RO13	03-13-2005
	EX-02.9-05E	RO12	04-15-2003
EX-02.9-06P	EX-02.9-06P	RO13	03-13-2005
	EX-02.9-06P	RO12	04-15-2003
EX-02.9-07P	EX-02.9-07P	RO13	03-13-2005
EX-02.9-07E	EX-02.9-07E	RO13	03-13-2005
EX-02.9-08P	EX-02.9-08P	RO13	03-13-2005
EX-02.9-09E	EX-02.9-09E	RO13	03-13-2005
EX-02.9-10P	EX-02.9-10P	RO13	03-13-2005
EX-02.9-110	EX-02.9-110	RO13	03-13-2005

Line Name : MSD-01.14A TK 33A to HD TK

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MSD-01.14A-02P	MSD-01.14A-02P	RO10	10-01-1999
MSD-01.14A-03T	MSD-01.14A-03T	RO10	10-01-1999
MSD-01.14A-04P	MSD-01.14A-04P	RO10	10-01-1999
MSD-01.15A-01E	MSD-01.15A-01E	RO10	10-01-1999
MSD-01.15A-02V	MSD-01.15A-02V	RO10	10-01-1999
MSD-01.15A-03P	MSD-01.15A-03P	RO10	10-01-1999
MSD-01.15A-04E	MSD-01.15A-04E	RO10	10-01-1999
MSD-01.15A-05E	MSD-01.15A-05E	RO10	10-01-1999
MSD-01.15A-06P	MSD-01.15A-06P	RO10	10-01-1999
MSD-01.15A-07E	MSD-01.15A-07E	RO10	10-01-1999
MSD-01.15A-08P	MSD-01.15A-08P	RO10	10-01-1999
MSD-01.15A-21P	MSD-01.15A-21P	RO10	10-01-1999
MSD-01.15A-09E	MSD-01.15A-09E	RO10	10-01-1999
MSD-01.15A-10P	MSD-01.15A-10P	RO10	10-01-1999
MSD-01.15A-11E	MSD-01.15A-11E	RO10	10-01-1999
MSD-01.15A-12P	MSD-01.15A-12P	RO10	10-01-1999
MSD-01.15A-13E	MSD-01.15A-13E	RO10	10-01-1999
MSD-01.15A-14P	MSD-01.15A-14P	RO10	10-01-1999
MSD-01.15A-22P	MSD-01.15A-22P	RO10	10-01-1999
MSD-01.15A-15E	MSD-01.15A-15E	RO10	10-01-1999
MSD-01.15A-16P	MSD-01.15A-16P	RO10	10-01-1999
MSD-01.15A-17E	MSD-01.15A-17E	RO10	10-01-1999
MSD-01.15A-18P	MSD-01.15A-18P	RO10	10-01-1999
	MSD-01.15A-18P	RO8	04-19-1992
MSD-01.15A-19E	MSD-01.15A-19E	RO10	10-01-1999
	MSD-01.15A-19E	RO8	04-19-1992

Line Name : MSD-01.14B TK 33B to HD TK

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MSD-01.14B-02P	MSD-01.14B-02P	RO10	10-01-1999
MSD-01.14B-03T	MSD-01.14B-03T	RO10	10-01-1999
MSD-01.14B-04P	MSD-01.14B-04P	RO10	10-01-1999

MSD-01.15B-01E	MSD-01.15B-01E	RO10	10-01-1999
MSD-01.15B-02E	MSD-01.15B-02E	RO10	10-01-1999
MSD-01.15B-03P	MSD-01.15B-03P	RO10	10-01-1999
MSD-01.15B-04E	MSD-01.15B-04E	RO10	10-01-1999
MSD-01.15B-05V	MSD-01.15B-05V	RO10	10-01-1999
MSD-01.15B-06P	MSD-01.15B-06P	RO10	10-01-1999
MSD-01.15B-07E	MSD-01.15B-07E	RO10	10-01-1999
MSD-01.15B-08P	MSD-01.15B-08P	RO10	10-01-1999
MSD-01.15B-09E	MSD-01.15B-09E	RO10	10-01-1999
MSD-01.15B-10P	MSD-01.15B-10P	RO10	10-01-1999
MSD-01.15B-11E	MSD-01.15B-11E	RO10	10-01-1999
MSD-01.15B-12P_1	MSD-01.15B-12P	RO10	10-01-1999
MSD-01.15B-31P_2	MSD-01.15B-31P	RO10	10-01-1999
MSD-01.15B-17E	MSD-01.15B-17E	RO10	10-01-1999
MSD-01.15B-18P	MSD-01.15B-18P	RO10	10-01-1999
MSD-01.15B-19E	MSD-01.15B-19E	RO10	10-01-1999
MSD-01.15B-20P	MSD-01.15B-20P	RO10	10-01-1999
MSD-01.15B-21E	MSD-01.15B-21E	RO10	10-01-1999
MSD-01.15B-22P	MSD-01.15B-22P	RO10	10-01-1999
MSD-01.15B-23E	MSD-01.15B-23E	RO10	10-01-1999
MSD-01.15B-24P	MSD-01.15B-24P	RO10	10-01-1999
MSD-01.15B-32P	MSD-01.15B-32P	RO10	10-01-1999
MSD-01.15B-25E	MSD-01.15B-25E	RO10	10-01-1999
MSD-01.15B-26P	MSD-01.15B-26P	RO10	10-01-1999
MSD-01.15B-27E	MSD-01.15B-27E	RO10	10-01-1999
MSD-01.15B-28P	MSD-01.15B-28P	RO10	10-01-1999

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

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MSD-01.4A-02P	MSD-01.4A-02P	RO10	10-01-1999
MSD-01.4A-03T	MSD-01.4A-03T	RO10	10-01-1999
MSD-01.4A-04P	MSD-01.4A-04P	RO10	10-01-1999
MSD-01.5A-01E	MSD-01.5A-01E	RO10	10-01-1999
MSD-01.5A-02P	MSD-01.5A-02P	RO10	10-01-1999
MSD-01.5A-03E	MSD-01.5A-03E	RO10	10-01-1999
MSD-01.5A-04P	MSD-01.5A-04P	RO10	10-01-1999
MSD-01.5A-05E	MSD-01.5A-05E	RO10	10-01-1999
MSD-01.5A-06V	MSD-01.5A-06V	RO10	10-01-1999
MSD-01.5A-07P	MSD-01.5A-07P	RO10	10-01-1999
MSD-01.5A-08E	MSD-01.5A-08E	RO10	10-01-1999
MSD-01.5A-09P	MSD-01.5A-09P	RO10	10-10-1999
MSD-01.5A-10E	MSD-01.5A-10E	RO10	10-01-1999
MSD-01.5A-11P	MSD-01.5A-11P	RO10	10-01-1999
MSD-01.5A-12E	MSD-01.5A-12E	RO10	10-01-1999
MSD-01.5A-13P	MSD-01.5A-13P	RO10	10-01-1999
MSD-01.5A-14E	MSD-01.5A-14E	RO10	10-01-1999
MSD-01.5A-15P_1	MSD-01.5A-15P	RO10	10-01-1999
MSD-01.5A-28P_2	MSD-01.5A-28P_2	RO10	10-01-1999
MSD-01.5A-16E_1	MSD-01.5A-16E	RO10	10-01-1999
MSD-01.5A-17P	MSD-01.5A-17P	RO10	10-01-1999
MSD-01.5A-18E	MSD-01.5A-18E	RO10	10-01-1999
MSD-01.5A-19P	MSD-01.5A-19P	RO10	10-01-1999
MSD-01.5A-20E	MSD-01.5A-20E	RO10	10-01-1999
MSD-01.5A-21P	MSD-01.5A-21P	RO10	10-01-1999

MSD-01.5A-29P	MSD-01.5A-29P	RO10	10-01-1999
MSD-01.5A-22E	MSD-01.5A-22E	RO10	10-01-1999
MSD-01.5A-23P	MSD-01.5A-23P	RO10	10-01-1999
MSD-01.5A-24E	MSD-01.5A-24E	RO10	10-01-1999
MSD-01.5A-25P	MSD-01.5A-25P	RO10	10-01-1999
MSD-01.5A-26E	MSD-01.5A-26E	RO10	10-01-1999

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

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MSD-01.4B-02P	MSD-01.4B-02P	RO10	10-01-1999
MSD-01.4B-03E	MSD-01.4B-03E	RO10	10-01-1999
MSD-01.4B-04P	MSD-01.4B-04P	RO10	10-01-1999
MSD-01.4B-05E	MSD-01.4B-05E	RO10	10-01-1999
MSD-01.4B-07P	MSD-01.4B-07P	RO10	10-01-1999
MSD-01.4B-06T	MSD-01.4B-06T	RO10	10-01-1999
MSD-01.4B-08P	MSD-01.4B-08P	RO10	10-01-1999
MSD-01.5B-01R	MSD-01.5B-01R	RO10	10-01-1999
MSD-01.5B-02P	MSD-01.5B-02P	RO10	10-01-1999
MSD-01.5B-03E	MSD-01.5B-03E	RO10	10-01-1999
MSD-01.5B-04V	MSD-01.5B-04V	RO10	10-01-1999
MSD-01.5B-05P	MSD-01.5B-05P	RO10	10-01-1999
MSD-01.5B-06E	MSD-01.5B-06E	RO10	10-01-1999
MSD-01.5B-07P	MSD-01.5B-07P	RO10	10-01-1999
MSD-01.5B-08E	MSD-01.5B-08E	RO10	10-01-1999
MSD-01.5B-09P	MSD-01.5B-09P	RO10	10-01-1999
MSD-01.5B-10E	MSD-01.5B-10E	RO10	10-01-1999
MSD-01.5B-11P_1	MSD-01.5B-11P	RO10	10-01-1999
MSD-01.5B-30P_2	MSD-01.5B-30P_2	RO10	10-01-1999
MSD-01.5B-16E	MSD-01.5B-16E	RO10	10-01-1999
MSD-01.5B-17P	MSD-01.5B-17P	RO10	10-01-1999
MSD-01.5B-18E	MSD-01.5B-18E	RO10	10-01-1999
MSD-01.5B-19P	MSD-01.5B-19P	RO10	10-01-1999
MSD-01.5B-20E	MSD-01.5B-20E	RO10	10-01-1999
MSD-01.5B-21P	MSD-01.5B-21P	RO10	10-01-1999
MSD-01.5B-22E	MSD-01.5B-22E	RO10	10-01-1999
MSD-01.5B-23P	MSD-01.5B-23P	RO10	10-01-1999
MSD-01.5B-31P	MSD-01.5B-31P	RO10	10-01-1999
MSD-01.5B-24E	MSD-01.5B-24E	RO10	10-01-1999
MSD-01.5B-25P	MSD-01.5B-25P	RO10	10-01-1999
MSD-01.5B-32P	MSD-01.5B-32P	RO10	10-01-1999
MSD-01.5B-26E	MSD-01.5B-26E	RO10	10-01-1999
	MSD-01.5B-26E	RO8	04-19-1992
MSD-01.5B-27P	MSD-01.5B-27P	RO10	10-01-1999

Line Name : MSD-01.9A TK 32A to HD TK

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MSD-01.9A-02P	MSD-01.9A-02P	RO10	10-01-1999
MSD-01.9A-03T	MSD-01.9A-03T	RO10	10-01-1999
MSD-01.9A-04P	MSD-01.9A-04P	RO10	10-01-1999

MSD-01.10A-01E	MSD-01.10A-01E	RO10	10-01-1999
MSD-01.10A-02P	MSD-01.10A-02P	RO10	10-01-1999
MSD-01.10A-03E	MSD-01.10A-03E	RO10	10-01-1999
MSD-01.10A-04P	MSD-01.10A-04P	RO10	10-01-1999
MSD-01.10A-05E	MSD-01.10A-05E	RO10	10-01-1999
MSD-01.10A-06V	MSD-01.10A-06V	RO10	10-01-1999
MSD-01.10A-07P	MSD-01.10A-07P	RO10	10-01-1999
MSD-01.10A-08E	MSD-01.10A-08E	RO10	10-01-1999
MSD-01.10A-09P	MSD-01.10A-09P	RO10	10-01-1999
MSD-01.10A-10E	MSD-01.10A-10E	RO10	10-01-1999
MSD-01.10A-11P	MSD-01.10A-11P	RO10	10-01-1999
MSD-01.10A-12E	MSD-01.10A-12E	RO10	10-01-1999
MSD-01.10A-13P	MSD-01.10A-13P	RO10	10-01-1999
MSD-01.10A-26P_1	MSD-01.10A-26P_1	RO10	10-01-1999
MSD-01.10A-26P_3	MSD-01.10A-26P_3	RO10	10-01-1999
MSD-01.10A-14E	MSD-01.10A-14E	RO10	10-01-1999
MSD-01.10A-15P	MSD-01.10A-15P	RO10	10-01-1999
MSD-01.10A-16E	MSD-01.10A-16E	RO10	10-01-1999
MSD-01.10A-17P	MSD-01.10A-17P	RO10	10-01-1999
MSD-01.10A-18E	MSD-01.10A-18E	RO10	10-01-1999
MSD-01.10A-19P	MSD-01.10A-19P	RO10	10-01-1999
MSD-01.10A-27P	MSD-01.10A-27P	RO10	10-01-1999
MSD-01.10A-20E	MSD-01.10A-20E	RO10	10-01-1999
MSD-01.10A-21P	MSD-01.10A-21P	RO10	10-01-1999
MSD-01.10A-22E	MSD-01.10A-22E	RO10	10-01-1999
MSD-01.10A-23P	MSD-01.10A-23P	RO10	10-01-1999
MSD-01.10A-24E	MSD-01.10A-24E	RO10	10-01-1999
	MSD-01.10A-24E	RO8	04-19-1992

Line Name : MSD-01.9B TK 32B to HD TK

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MSD-01.9B-02P	MSD-01.9B-02P	RO10	10-01-1999
MSD-01.9B-03T	MSD-01.9B-03T	RO10	10-01-1999
MSD-01.9B-04P	MSD-01.9B-04P	RO10	10-01-1999
MSD-01.10B-01E	MSD-01.10B-01E	RO10	10-01-1999
MSD-01.10B-02E	MSD-01.10B-02E	RO10	10-01-1999
MSD-01.10B-03P	MSD-01.10B-03P	RO10	10-01-1999
	MSD-01.10B-03P	RO10	10-01-1999
MSD-01.10B-04E	MSD-01.10B-04E	RO10	10-01-1999
MSD-01.10B-05V	MSD-01.10B-05V	RO10	10-01-1999
MSD-01.10B-06P	MSD-01.10B-06P	RO10	10-01-1999
MSD-01.10B-07E	MSD-01.10B-07E	RO10	10-01-1999
MSD-01.10B-08P	MSD-01.10B-08P	RO10	10-01-1999
MSD-01.10B-09E	MSD-01.10B-09E	RO10	10-01-1999
MSD-01.10B-10P	MSD-01.10B-10P	RO10	10-01-1999
MSD-01.10B-29P_2	MSD-01.10B-29P	RO10	10-01-1999
MSD-01.10B-15E	MSD-01.10B-15E	RO10	10-01-1999
MSD-01.10B-16P	MSD-01.10B-16P	RO10	10-01-1999
MSD-01.10B-17E	MSD-01.10B-17E	RO10	10-01-1999
	MSD-01.10B-17E	RO10	10-01-1999
MSD-01.10B-18P	MSD-01.10B-18P	RO10	10-01-1999
	MSD-01.10B-18P	RO10	10-01-1999
MSD-01.10B-19E	MSD-01.10B-19E	RO10	10-01-1999
MSD-01.10B-20P	MSD-01.10B-20P	RO10	10-01-1999

MSD-01.10B-21E	MSD-01.10B-21E	RO10	10-01-1999
MSD-01.10B-22P	MSD-01.10B-22P	RO10	10-01-1999
MSD-01.10B-30P	MSD-01.10B-30P	RO10	10-01-1999
MSD-01.10B-23E	MSD-01.10B-23E	RO10	10-01-1999
MSD-01.10B-24P	MSD-01.10B-24P	RO10	10-01-1999
MSD-01.10B-25E	MSD-01.10B-25E	RO10	10-01-1999
MSD-01.10B-26P	MSD-01.10B-26P	RO10	10-01-1999

Line Name : PD-02.4 PRESEP HDR to HD TK

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
PD-02.4-02E	PD-02.4-02E	RO12	03-29-2003
PD-02.4-03P	PD-02.4-03P	RO12	03-29-2003
PD-02.4-04E	PD-02.4-04E	RO12	03-29-2003
PD-02.4-05P	PD-02.4-05P	RO12	03-29-2003
PD-02.4-06E	PD-02.4-06E	RO12	03-29-2003

Line Name : RHD-01.10A_2 TK 33A to A HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
RHD02.5A-02R	RHD02.5A-02R	RO7	09-16-1990
RHD02.6A-01P	RHD02.6A-01P	RO7	09-16-1990

Line Name : RHD-01.10B_2 TK 33B to B HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
RHD02.5B-02R	RHD02.5B-02R	RO10	10-18-1999
RHD02.6B-01E	RHD02.6B-01E	RO13	03-13-2005

Line Name : RHD-01.1A_2 TK 31A to A HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
RHD02.1A-02R	RHD02.1A-02R	RO7	09-16-1990
RHD02.2A-01P	RHD02.2A-01P	RO7	09-16-1990

Line Name : RHD-01.1B_2 TK 31B to B HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date

IPEC00029133

RHD02.1B-02R	RHD02.1B-02R	RO11	05-10-2001
	RHD02.1B-02R	RO7	09-16-1990
RHD02.2B-01P	RHD02.2B-01P	RO7	09-16-1990

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

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
RHD02.3A-02R	RHD02.3A-02R	RO7	09-16-1990
RHD02.4A-01P	RHD02.4A-01P	RO7	09-16-1990

Line Name : RHD-01.3B_2 TK 32B to B HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
RHD02.3B-02R	RHD02.3B-02R	RO13	03-13-2005
	RHD02.3B-02R	RO7	09-16-1990
RHD02.4B-01P	RHD02.4B-01P	RO7	09-16-1990

Appendix F
UT Inspection Data



215-643-6900
HANDOUTS

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Thom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-02P	Entered as U/S Ext. of CD-02.11-03E	RO8		0.322	0.028	Band	No (1)
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-02P	Entered as U/S Ext. of CD-02.11-03E	RO9	97UT070	0.322	0.033	Band	No (1)
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-03E	Main	RO8		0.322	0.068	Blanket	Yes
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-03E	Main	RO9	97UT070	0.322	0.060	Blanket	Yes
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-04P	Entered as D/S Ext. of CD-02.11-03E	RO8		0.322	0.088	Band	Yes
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-04P	Entered as D/S Ext. of CD-02.11-03E	RO9	97UT070	0.322	0.087	Band	Yes
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-05E	Main	RO8		0.322	0.056	Blanket	Yes
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-05E	Main	RO9	97UT070	0.322	0.062	Blanket	Yes
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-06P	Main	Cycle 13	05UT013	0.322	0.081	Band	Yes
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-07E	Main	Cycle 13	05UT013	0.322	0.045	Blanket	Yes
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-08P	Main	Cycle 13	05UT013	0.322	0.082	Band	Yes
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-09P	Entered as U/S Ext of CD-02.11-10E	RO12	03UT041	0.322	0.069	Band	No (2)
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-10E	Main	RO12	03UT041	0.322	0.064	Blanket	Yes
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-11P	Entered as D/S Ext of CD-02.11-10E	RO12	03UT041	0.322	0.094	Band	Yes
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-11P	Entered as U/S Ext of CD-02.11-12E	RO12	03UT041	0.322	0.117	Band	Yes
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-12E	Main	RO12	03UT041	0.322	0.061	Blanket	No (8)
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-13T	U/S Main	RO12	03UT041	0.562	0.039	Band	No (6)
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-13T	D/S Main	RO12	03UT041	0.562	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)
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-13T	Branch	RO12	03UT041	0.322	0.030	Band	No (1)
CD-02.11 SGBD HX3 to FWH HDR	CD-02.11-13T	N/A	RO9	97UT100	0.562	N/A	N/A	No (8)
CD-02.11 SGBD HX3 to 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-02.11 SGBD HX3 to FWH HDR	CD-02.12-06E	Main	RO9	97UT101	0.562	0.074	Blanket	Yes
CD-02.1A FWH 32A to HDR	CD-02.1A-13R	U/S Main	RO12	03UT037	0.438	0.063	Band	Yes
CD-02.1A FWH 32A to HDR	CD-02.1A-13R	D/S Main	RO12	03UT037	0.594	0.039	Band	Yes
CD-02.1A FWH 32A to HDR	CD-02.1A-13R	D/S Main	RO9	97UT053	0.594	0.039	Band	Yes
CD-02.1A FWH 32A to HDR	CD-02.1A-13R	U/S Main	RO9	97UT053	0.438	0.088	Band	Yes
CD-02.1B FWH 32B to HDR	CD-02.1B-09E	Main	RO8		0.438	0.065	Blanket	Yes
CD-02.1B FWH 32B to HDR	CD-02.1B-09E	Main	RO9	97UT053	0.438	0.065	Blanket	Yes
CD-02.1B FWH 32B to HDR	CD-02.1B-10P	Entered as Branch of CD-02.1B-11T	RO12	03UT037	0.438	0.095	Band	Yes
CD-02.1C FWH 32C to HDR	CD-02.1C-10E	Main	Cycle 10B	99UT074	0.575	0.060	Blanket	Yes
CD-02.1C FWH 32C to HDR	CD-02.1C-10E	Main	RO8		0.575	0.055	T DAT	Yes
CD-02.1C FWH 32C to HDR	CD-02.1C-10E	Main	RO9	97UT054	0.575	0.057	Blanket	Yes
CD-02.2 FWH 32 OUT HDR	CD-02.1B-11T	U/S Main	RO12	03UT037	0.624	0.054	Band	Yes
CD-02.2 FWH 32 OUT HDR	CD-02.1B-11T	D/S Main	RO12	03UT037	0.624	0.052	Band	Yes
CD-02.2 FWH 32 OUT HDR	CD-02.1B-11T	U/S Main	RO8		0.624	0.041	Band	Yes
CD-02.2 FWH 32 OUT HDR	CD-02.1B-11T	D/S Main	RO8		0.624	0.037	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-02.2 FWH 32 OUT HDR	CD-02.1B-11T	Branch	RO8		0.438	0.103	Band	Yes
CD-02.2 FWH 32 OUT HDR	CD-02.1B-11T	U/S Main	RO9	97UT053	0.624	0.050	Band	Yes
CD-02.2 FWH 32 OUT HDR	CD-02.1B-11T	D/S Main	RO9	97UT053	0.624	0.044	Band	Yes
CD-02.2 FWH 32 OUT HDR	CD-02.1B-11T	Branch	RO9	97UT053	0.438	0.098	Band	Yes
CD-02.2 FWH 32 OUT HDR	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 OUT HDR	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 OUT HDR	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 OUT HDR	CD-02.2-02R	U/S Main	Cycle 10B	99UT074	0.594	0.105	Band	Yes
CD-02.2 FWH 32 OUT HDR	CD-02.2-02R	D/S Main	Cycle 10B	99UT074	0.688	0.074	Band	Yes
CD-02.2 FWH 32 OUT HDR	CD-02.2-02R	U/S Main	RO9	97UT054	0.594	0.043	Band	Yes
CD-02.2 FWH 32 OUT HDR	CD-02.2-02R	D/S Main	RO9	97UT054	0.688	0.015	Band	No (1)
CD-02.3 FWH 32 OUT HDR	CD-02.1C-12T	U/S Main	Cycle 10B	99UT074	0.692	0.032	Band	Yes
CD-02.3 FWH 32 OUT HDR	CD-02.1C-12T	D/S Main	Cycle 10B	99UT074	0.692	0.034	Band	Yes
CD-02.3 FWH 32 OUT HDR	CD-02.1C-12T	Branch	Cycle 10B	99UT074	0.438	0.078	Band	Yes
CD-02.3 FWH 32 OUT HDR	CD-02.1C-12T	U/S Main	RO11	01UT051	0.692	0.044	Band	Yes
CD-02.3 FWH 32 OUT HDR	CD-02.1C-12T	D/S Main	RO11	01UT051	0.692	0.033	Band	No (1)
CD-02.3 FWH 32 OUT HDR	CD-02.1C-12T	Branch	RO11	01UT051	0.438	0.071	Band	Yes
CD-02.3 FWH 32 OUT HDR	CD-02.1C-12T	U/S Main	RO8		0.692	0.043	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)
CD-02.3 FWH 32 OUT HDR	CD-02.1C-12T	Branch	RO8		0.438	0.082	T DAT	Yes
CD-02.3 FWH 32 OUT HDR	CD-02.1C-12T	U/S Main	RO9	97UT054	0.692	0.030	Band	No (1)
CD-02.3 FWH 32 OUT HDR	CD-02.1C-12T	D/S Main	RO9	97UT054	0.692	0.037	Band	Yes
CD-02.3 FWH 32 OUT HDR	CD-02.1C-12T	Branch	RO9	97UT054	0.438	0.093	Band	Yes
CD-02.3 FWH 32 OUT HDR	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 OUT HDR	CD-02.3-01P	Entered as D/S Ext. of CD-02.1C-12T	RO11	01UT051	0.736	0.090	Band	Yes
CD-02.3 FWH 32 OUT HDR	CD-02.3-01P	Entered as D/S Ext. of CD-02.1C-12T	RO8		0.736	0.044	Band	Yes
CD-02.3 FWH 32 OUT HDR	CD-02.3-01P	Entered as D/S Ext. of CD-02.1C-12T	RO9	97UT054	0.736	0.086	T DAT	Yes
CD-02.4 FWH 32 OUT HDR	CD-02.4-04E	U/S Main	RO8		0.864	0.125	T DAT	No (17)
CD-02.4 FWH 32 OUT HDR	CD-02.5-01P	Main	RO8		0.754	0.125	T DAT	Yes
CD-02.4 FWH 32 OUT HDR	CD-02.5-02E	Main	RO8		0.994	0.279	T DAT	No (3)
CD-02.5 FWH 32 OUT HDR	CD-02.5-03T	U/S Main	RO8		0.688	0.046	Band	Yes
CD-02.5 FWH 32 OUT HDR	CD-02.5-03T	D/S Main	RO8		0.688	0.038	Band	Yes
CD-02.5 FWH 32 OUT HDR	CD-02.5-04T	Branch	Cycle 10B	99UT078	0.438	0.250	Band	No (3)
CD-02.5 FWH 32 OUT HDR	CD-02.5-04T	U/S Main	RO12	03UT039	0.730	0.076	Band	Yes
CD-02.5 FWH 32 OUT HDR	CD-02.5-04T	D/S Main	RO12	03UT039	0.730	0.081	Band	Yes
CD-02.5 FWH 32 OUT HDR	CD-02.5-04T	U/S Main	RO8		0.730	0.070	Band	Yes
CD-02.5 FWH 32 OUT HDR	CD-02.5-04T	D/S Main	RO8		0.730	0.066	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-02.5 FWH 32 OUT HDR	CD-02.5-04T	Branch	RO8		0.438	0.252	Band	No (3)
CD-02.5 FWH 32 OUT HDR	CD-02.5-04T	U/S Main	RO9	97UT045	0.730	0.077	Band	Yes
CD-02.5 FWH 32 OUT HDR	CD-02.5-04T	D/S Main	RO9	97UT045	0.730	0.080	Band	Yes
CD-02.5 FWH 32 OUT HDR	CD-02.5-04T	Branch	RO9	97UT047	0.438	0.245	Band	No (3)
CD-02.6 FWH 32 OUT HDR	CD-02.6-01T	U/S Main	RO12	03UT038	0.693	0.077	Max P-P	Yes
CD-02.6 FWH 32 OUT HDR	CD-02.6-01T	D/S Main	RO12	03UT038	0.693	0.067	Max P-P	Yes
CD-02.6 FWH 32 OUT HDR	CD-02.6-01T	Branch	RO12	03UT038	0.406	0.062	Band	Yes
CD-02.6 FWH 32 OUT HDR	CD-02.6-01T	U/S Main	RO8		0.693	0.054	Band	Yes
CD-02.6 FWH 32 OUT HDR	CD-02.6-01T	D/S Main	RO8		0.693	0.039	Band	Yes
CD-02.6 FWH 32 OUT HDR	CD-02.6-01T	N/A	RO8		0.693	0.056	T DAT	No (13)
CD-02.6 FWH 32 OUT HDR	CD-02.6-01T	U/S Main	RO9	97UT045	0.693	0.059	Band	Yes
CD-02.6 FWH 32 OUT HDR	CD-02.6-01T	D/S Main	RO9	97UT045	0.693	0.044	Band	Yes
CD-02.6 FWH 32 OUT HDR	CD-02.6-01T	Branch	RO9	97UT045	0.406	0.053	Band	No (6)
CD-02.6 FWH 32 OUT HDR	CD-02.6-02P	N/A	RO8		0.693	0.052	T DAT	No (13)
CD-02.6 FWH 32 OUT HDR	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 OUT HDR	CD-02.6-02P	Entered as D/S Ext. of CD-02.6-01T	RO9	97UT045	0.693	0.063	Band	Yes
CD-02.6 FWH 32 OUT HDR	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 OUT HDR	CD-02.6-03T	U/S Main	RO11	01UT071	0.694	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)
CD-02.6 FWH 32 OUT HDR	CD-02.6-03T	D/S Main	RO11	01UT071	0.694	0.094	Band	Yes
CD-02.6 FWH 32 OUT HDR	CD-02.6-03T	Branch	RO11	01UT071	0.438	0.095	Band	Yes
CD-02.6 FWH 32 OUT HDR	CD-02.6-03T	U/S Main	RO8		0.694	0.061	T DAT	Yes
CD-02.6 FWH 32 OUT HDR	CD-02.6-03T	Branch	RO8		0.438	0.073	T DAT	Yes
CD-02.6 FWH 32 OUT HDR	CD-02.6-03T	U/S Main	RO9	97UT044	0.694	0.032	Band	Yes
CD-02.6 FWH 32 OUT HDR	CD-02.6-03T	D/S Main	RO9	97UT044	0.694	0.063	Band	Yes
CD-02.6 FWH 32 OUT HDR	CD-02.6-03T	Branch	RO9	97UT044	0.438	0.084	Band	Yes
CD-02.8A HDR to FWH 33A	CD-02.7-01P	Entered as D/S Ext. of CD-02.6-03T	RO11	01UT071	0.675	0.071	Band	No (17)
CD-02.8A HDR to FWH 33A	CD-02.7-01P	Entered as U/S Ext. of CD-02.7-02T	RO8		0.675	0.035	Band	No (2)
CD-02.8A HDR to FWH 33A	CD-02.7-01P	Entered as D/S Ext. of CD-02.6-03T	RO8		0.675	0.034	T DAT	Yes
CD-02.8A HDR to FWH 33A	CD-02.7-01P	Entered as U/S Ext. of CD-02.7-02T	RO9	97UT048	0.675	0.052	Band	No (2)
CD-02.8A HDR to FWH 33A	CD-02.7-01P	Entered as D/S Ext. of CD-02.6-03T	RO9	97UT044	0.675	0.047	Band	Yes
CD-02.8A HDR to FWH 33A	CD-02.7-02T	U/S Main	RO8		0.688	0.035	Band	Yes
CD-02.8A HDR to FWH 33A	CD-02.7-02T	D/S Main	RO8		0.688	0.016	Band	No (1)
CD-02.8A HDR to FWH 33A	CD-02.7-02T	Branch	RO8		0.438	0.082	Band	Yes
CD-02.8A HDR to FWH 33A	CD-02.7-02T	U/S Main	RO9	97UT048	0.688	0.045	Band	Yes
CD-02.8A HDR to FWH 33A	CD-02.7-02T	D/S Main	RO9	97UT048	0.688	0.019	Band	No (1)
CD-02.8A HDR to FWH 33A	CD-02.7-02T	Branch	RO9	97UT048	0.438	0.087	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 to FWH 33A	CD-02.7-02T	D/S Ext.	RO9	97UT048	0.688	0.064	Band	No (14)
CD-02.8A HDR to FWH 33A	CD-02.8A-02E	Main	RO8		0.438	0.231	Blanket	Yes
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	RO11	01UT059	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	Point to Point	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-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	Main	RO11	01UT130	0.438	0.079	Blanket	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-02.8B HDR to FWH 33B	CD-02.8B-01P	Main	RO8		0.445	0.081	T DAT	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-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-03P	Entered as D/S Ext. of CD-02.8B-02E	RO11	01UT071	0.438	0.083	Band	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-02.8C HDR to FWH 33C	CD-02.8C-01P	Entered as U/S Ext. of CD-02.8C-02E	RO11	01UT052	0.629	0.248	Band	No (2)
CD-02.8C HDR to FWH 33C	CD-02.8C-01P	Entered as Branch of CD-02.5-04T	RO12	03UT039	0.438	0.248	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)
CD-02.8C HDR to FWH 33C	CD-02.8C-02E	Main	Cycle 10B	99UT078	0.438	0.182	Blanket	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-02E	Main	RO11	01UT052	0.438	0.145	Blanket	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-02E	Main	RO12	03UT039	0.438	0.184	Band	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-02E	Main	RO8		0.438	0.163	Blanket	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-02E	Main	RO9	97UT047	0.438	0.119	Blanket	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-03P	Entered as D/S Ext. of CD-02.8C-02E	Cycle 10B	99UT076	0.594	0.229	Band	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-03P	Entered as D/S Ext. of CD-02.8C-02E	RO11	01UT052	0.594	0.245	Band	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-03P	Entered as D/S Ext. of CD-02.8C-02E	RO12	03UT040	0.594	0.236	Band	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-03P	Entered as D/S Ext. of CD-02.8C-02E	RO8		0.594	0.245	Band	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-03P	Entered as D/S Ext. of CD-02.8C-02E	RO9	97UT046	0.594	0.277	Band	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-05E	Main	Cycle 10B	01126-04.DAT	0.438	0.158	Blanket	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-06P	Entered as D/S Ext. of CD-2.8C-05E	RO10	01126-06.DAT	0.438	0.088	Band	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-06P	Main	RO11	01UT055	0.438	0.085	Band	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-07E	Main	Cycle 10B	01126-05.DAT	0.438	0.132	Blanket	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-07E	U/S Ext.	Cycle 10B	99UT089	0.438	0.083	Band	No (2)
CD-02.8C HDR to FWH 33C	CD-02.8C-07E	Main	RO11	01UT055	0.438	0.081	Blanket	Yes
CD-02.8C HDR to FWH 33C	CD-02.8C-08N	Main	RO11	01UT055	0.438	0.068	Band	Yes
CD-02.9 FWH HDR to SGBD HX3	CD-02.10-01P	Entered as U/S Ext. of CD-02.10-02O	RO9	97UT072	0.322	0.079	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-02.9 FWH HDR to SGBD HX3	CD-02.10-02O	Main	RO9	97UT072	0.322	0.147	Band	No (10)
CD-02.9 FWH HDR to SGBD HX3	CD-02.10-03P	Entered as D/S Ext. of CD-02.10-02O	RO9	97UT071	0.322	0.097	Band	Yes
CD-02.9 FWH HDR to SGBD HX3	CD-02.10-04E	Main	RO9	97UT071	0.322	0.053	Blanket	Yes
CD-02.9 FWH HDR to SGBD HX3	CD-02.10-07P	Entered as U/S Ext. of CD-02.10-08E	RO8		0.322	0.098	Band	No (2)
CD-02.9 FWH HDR to SGBD HX3	CD-02.10-08E	Main	RO8		0.322	0.035	Blanket	Yes
CD-02.9 FWH HDR to SGBD HX3	CD-02.10-09P	Entered as D/S Ext. of CD-02.10-08E	RO8		0.322	0.059	Band	Yes
CD-02.9 FWH HDR to SGBD HX3	CD-02.10-10E	Main	RO8		0.322	0.050	Blanket	Yes
CD-03.1A FWH 33A to FWH 34A	CD-03.1A-01N	Main	RO12	03UT077	0.438	0.108	Band	Yes
CD-03.1A FWH 33A to FWH 34A	CD-03.1A-02E	Main	RO12	03UT077	0.438	0.100	Blanket	Yes
CD-03.1A FWH 33A to FWH 34A	CD-03.1A-03E	Main	RO12	03UT077	0.438	0.070	Blanket	Yes
CD-03.1A FWH 33A to FWH 34A	CD-03.1A-04P	Entered as D/S Ext of CD-03.1A-03E	RO12	03UT077	0.438	0.850	Band	Yes
CD-03.1B FWH 33B to FWH 34B	CD-03.1B-02E	Main	RO9	97UT094	0.438	0.041	Blanket	Yes
CD-03.1B FWH 33B to FWH 34B	CD-03.1B-03E	Main	RO9	97UT094	0.438	0.052	Blanket	Yes
CD-03.1B FWH 33B to FWH 34B	CD-03.1B-04P	Entered as D/S Ext. of CD-03.1B-03E	RO9	97UT094	0.438	0.074	Band	Yes
CD-03.1B FWH 33B to FWH 34B	CD-03.1B-05E	Main	RO8		0.547	0.066	Blanket	Yes
CD-03.1B FWH 33B to FWH 34B	CD-03.1B-06E	Main	RO8		0.555	0.095	Blanket	Yes
CD-03.1B FWH 33B to FWH 34B	CD-03.1B-07P	Entered as D/S Ext. of CD-03.1B-06E	RO8		0.477	0.066	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)

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 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)
CD-04.1A FWH 34A to FWH 35A	CD-04.1A-02E	Main	Cycle 10B	01126-13.DAT	0.438	0.070	Blanket	Yes
CD-04.1A FWH 34A to FWH 35A	CD-04.1A-02E	Main	RO11	01UT073	0.438	0.117	Blanket	Yes
CD-04.1A FWH 34A to FWH 35A	CD-04.1A-03E	Main	Cycle 10B	01126-14.DAT	0.438	0.083	Blanket	Yes
CD-04.1A FWH 34A to FWH 35A	CD-04.1A-03E	Main	RO11	01UT073	0.438	0.067	Blanket	Yes
CD-04.1A FWH 34A to FWH 35A	CD-04.1A-04P	Entered as D/S Ext. of CD-04.1A-03E	RO10	01126-14A.DAT	0.438	0.044	Band	Yes
CD-04.1A FWH 34A to FWH 35A	CD-04.1A-04P	Entered as D/S Ext. of CD-04.1A-03E	RO11	01UT073	0.438	0.094	Band	Yes
CD-04.1B FWH 34B to FWH 35B	CD-04.1B-01N	Main	RO12	03UT100	0.438	0.117	Band	Yes
CD-04.1B FWH 34B to FWH 35B	CD-04.1B-02E	Main	RO12	03UT099	0.438	0.067	Blanket	Yes
CD-04.1B FWH 34B to FWH 35B	CD-04.1B-03E	Main	RO12	03UT099	0.438	0.140	Blanket	Yes
CD-04.1B 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-04.1C FWH 34C to FWH 35C	CD-04.1C-02E	Main	RO8		0.594	0.094	Blanket	Yes
CD-04.1C FWH 34C to FWH 35C	CD-04.1C-03E	Main	RO8		0.570	0.085	Blanket	Yes
CD-05.1A FWH 35A to HDR	CD-05.1A-02E	Main	Cycle 10B	01126-15.DAT	0.438	0.054	Blanket	Yes
CD-05.1A FWH 35A to HDR	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-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

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-03E	Main	RO10	01126-17.DAT	0.438	0.083	Blanket	Yes
CD-05.1B FWH 35B to HDR	CD-05.1B-03E	Main	RO11	01UT095	0.438	0.078	Blanket	Yes
CD-05.1B FWH 35B to HDR	CD-05.1B-04P	Entered as D/S Ext. of CD-05.1B-03E	RO11	01UT095	0.438	0.081	Band	Yes
CD-05.1B FWH 35B to HDR	CD-05.1B-07E	Main	RO8		0.575	0.094	T DAT	Yes
CD-05.1B FWH 35B to HDR	CD-05.1B-08P	Main	RO8		0.465	0.035	T DAT	Yes
CD-05.1C FWH 35C to HDR	CD-05.1C-08E	Main	RO8		0.438	0.059	Blanket	Yes
CD-05.1C FWH 35C to HDR	CD-05.1C-08E	Main	RO9	97UT092	0.438	0.060	Blanket	Yes
CD-05.3 FWH 35 OUT HDR	CD-05.1B-09T	US Main	RO13	05UT063	0.724	0.076	Band	Yes
CD-05.3 FWH 35 OUT HDR	CD-05.1B-09T	DS Main	RO13	05UT063	0.724	0.295	Band	Yes
CD-05.3 FWH 35 OUT HDR	CD-05.1B-09T	Branch	RO13	05UT063	0.438	0.035	Band	Yes
CD-05.3 FWH 35 OUT HDR	CD-05.1B-09T	U/S Main	RO8		0.724	0.051	T DAT	Yes
CD-05.3 FWH 35 OUT HDR	CD-05.1B-09T	Branch	RO8		0.438	0.039	T DAT	Yes
CD-05.3 FWH 35 OUT HDR	CD-05.3-01P	Main	RO13	05UT063	0.724	0.056	Band	Yes
CD-05.3 FWH 35 OUT HDR	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 OUT HDR	CD-05.3-01P	Main	RO8		0.724	0.055	T DAT	Yes
CD-05.3 FWH 35 OUT HDR	CD-05.3-01P	Entered as U/S Ext. of CD-05.1C-10T	RO9	97UT092	0.724	0.057	Band	No (2)
CD-05.4 FWH 35 OUT HDR	CD-05.1C-10T	U/S Main	RO8		0.688	0.032	Band	No (1)
CD-05.4 FWH 35 OUT HDR	CD-05.1C-10T	D/S Main	RO8		0.688	0.089	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-05.4 FWH 35 OUT HDR	CD-05.1C-10T	Branch	RO8		0.438	0.074	Band	Yes
CD-05.4 FWH 35 OUT HDR	CD-05.1C-10T	U/S Main	RO9	97UT092	0.688	0.027	Band	No (1)
CD-05.4 FWH 35 OUT HDR	CD-05.1C-10T	D/S Main	RO9	97UT092	0.688	0.033	Band	No (1)
CD-05.4 FWH 35 OUT HDR	CD-05.1C-10T	Branch	RO9	97UT092	0.438	0.056	Band	Yes
CD-05.4 FWH 35 OUT HDR	CD-05.4-01E	Main	RO9	97UT092	0.688	0.099	Blanket	Yes
CD-05.4 FWH 35 OUT HDR	CD-05.4-02P	Entered as Br. Ext of CD-05.4-03T	RO12	03UT082	0.688	0.062	Band	No (2)
CD-05.4 FWH 35 OUT HDR	CD-05.4-02P	Main	RO8		0.722	0.089	T DAT	Yes
CD-05.4 FWH 35 OUT HDR	CD-05.4-02P	Entered as Br. Ext. of CD-05.4-03T	RO9	97UT065	0.722	0.067	Band	No (2)
CD-05.4 FWH 35 OUT HDR	CD-05.4-03T	U/S Main	RO12	03UT082	0.696	0.019	Band	No (1)
CD-05.4 FWH 35 OUT HDR	CD-05.4-03T	D/S Main	RO12	03UT082	0.696	0.020	Band	No (1)
CD-05.4 FWH 35 OUT HDR	CD-05.4-03T	Branch	RO12	03UT082	0.696	0.044	Band	Yes
CD-05.4 FWH 35 OUT HDR	CD-05.4-03T	US Main	RO13	05UT051	0.696	0.031	Band	No(17)
CD-05.4 FWH 35 OUT HDR	CD-05.4-03T	DS Main	RO13	05UT051	0.696	0.026	Band	No(2)
CD-05.4 FWH 35 OUT HDR	CD-05.4-03T	Branch	RO13	05UT051	0.696	0.045	Band	Yes
CD-05.4 FWH 35 OUT HDR	CD-05.4-03T	U/S Main	RO8		0.696	0.022	T DAT	No (6)
CD-05.4 FWH 35 OUT HDR	CD-05.4-03T	Branch	RO8		0.696	0.052	T DAT	No (17)
CD-05.4 FWH 35 OUT HDR	CD-05.4-03T	U/S Main	RO9	97UT065/66	0.696	0.065	Band	No (6)
CD-05.4 FWH 35 OUT HDR	CD-05.4-03T	D/S Main	RO9	97UT065/66	0.696	0.036	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-05.4 FWH 35 OUT HDR	CD-05.4-03T	Branch	RO9	97UT065	0.696	0.061	Band	Yes
CD-05.4 FWH 35 OUT HDR	CD-05.4-04P	Entered as D/S Ext. of CD-05.1C-10T	RO8		0.688	0.176	Band	Yes
CD-05.4 FWH 35 OUT HDR	CD-05.4-05P	Entered as D/S Ext of CD-05.4-03T	RO12	03UT082	0.625	0.015	Band	No (1)
CD-05.4 FWH 35 OUT HDR	CD-05.4-05P	Entered as U/S Ext. of CD-06.1-01T	RO8		0.625	0.012	Band	No (1)
CD-06.1 FWH 35 OUT HDR	CD-06.1-01T	U/S Main	RO8		0.659	0.031	Band	No (1)
CD-06.1 FWH 35 OUT HDR	CD-06.1-01T	D/S Main	RO8		0.659	0.031	Band	No (1)
CD-06.1 FWH 35 OUT HDR	CD-06.1-01T	Branch	RO8		0.500	0.085	Band	Yes
CD-06.1 FWH 35 OUT HDR	CD-06.1-01T	N/A	RO8		0.659	0.029	T DAT	No (13)
CD-06.1 FWH 35 OUT HDR	CD-06.1-01T	U/S Main	RO9	97UT066	0.659	0.022	Band	No (1)
CD-06.1 FWH 35 OUT HDR	CD-06.1-01T	D/S Main	RO9	97UT066	0.659	0.020	Band	No (1)
CD-06.1 FWH 35 OUT HDR	CD-06.1-01T	Branch	RO9	97UT066	0.500	0.114	Band	Yes
CD-06.1 FWH 35 OUT HDR	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 OUT HDR	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 OUT HDR	CD-06.1-02P	N/A	RO8		0.663	0.026	T DAT	No (13)
CD-06.1 FWH 35 OUT HDR	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 OUT HDR	CD-06.1-03T	U/S Main	RO8		0.702	0.028	T DAT	Yes
CD-06.1 FWH 35 OUT HDR	CD-06.1-03T	Branch	RO8		0.721	0.062	T DAT	Yes
CD-06.1 FWH 35 OUT HDR	CD-06.1-03T	U/S Main	RO9	97UT066	0.702	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)
CD-06.1 FWH 35 OUT HDR	CD-06.1-03T	D/S Main	RO9	97UT066	0.702	0.029	Band	No (1)
CD-06.1 FWH 35 OUT HDR	CD-06.1-03T	Branch	RO9	97UT066	0.721	0.086	Band	Yes
CD-06.2A HDR to BFP 31	CD-06.2A-01P	Main	RO8		0.721	0.050	T DAT	Yes
CD-06.2A HDR to BFP 31	CD-06.2A-01P	Entered as Br. Ext. of CD-06.1-03T	RO9	97UT066	0.721	0.066	Band	No (2)
CD-06.2A HDR to BFP 31	CD-06.2A-02E	Main	RO8		0.729	0.055	T DAT	Yes
CD-06.2A HDR to BFP 31	CD-06.2A-23P	Entered as US Ext of CD-06.2A-24O	RO13	05UT068	0.688	0.043	Band	No(1)
CD-06.2A HDR to BFP 31	CD-06.2A-25P	Entered as DS Ext of CD-06.2A-24O	RO13	05UT068	0.688	0.043	Band	Yes
CD-06.2A HDR to BFP 31	CD-06.3A-01R	U/S Main	RO8		0.688	0.064	Band	Yes
CD-06.2A HDR to BFP 31	CD-06.3A-01R	D/S Main	RO8		0.562	0.040	Band	Yes
CD-06.2A HDR to BFP 31	CD-06.3A-02N	U/S Main	RO8		0.562	0.118	Band	Yes
CD-06.2B HDR to BFP 32	CD-06.2B-01R	U/S Ext.	RO11	01UT062	0.625	0.013	Band	No (2)
CD-06.2B HDR to BFP 32	CD-06.2B-01R	U/S Main	RO11	01UT062	0.625	0.171	Band	Yes
CD-06.2B HDR to BFP 32	CD-06.2B-01R	D/S Main	RO11	01UT062	0.688	0.075	Band	Yes
CD-06.2B HDR to BFP 32	CD-06.2B-02P	Entered as D/S Ext. of CD-06.2B-01R	RO11	01UT062	0.688	0.051	Band	Yes
CD-06.2B HDR to BFP 32	CD-06.2B-02P	Entered as D/S Ext. of CD-06.2B-01R	RO8		0.702	0.063	T DAT	Yes
CD-06.2B HDR to BFP 32	CD-06.2B-07P	Imported as US Ext of CD-06.2B-08O	RO13	05UT059	0.688	0.056	Band	No(1)
CD-06.2B HDR to BFP 32	CD-06.2B-08O	N/A	RO9	97UT099	0.688	N/A	N/A	No (15)
CD-06.2B HDR to BFP 32	CD-06.2B-09P	Imported as DS Ext of CD-06.2B-08O	RO13	05UT059	0.688	0.087	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-01.1 HP EXT to FWH 36 HDR	EX-01.1-01N	Main	RO12	03UT136	0.330	0.038	Band	No(9)
EX-01.1 HP EXT to FWH 36 HDR	EX-01.1-02E	Main	RO8		0.446	0.133	Blanket	Yes
EX-01.1 HP EXT to FWH 36 HDR	EX-01.1-03P	Entered as D/S Ext. of EX-01.1-02E	RO8		0.352	0.131	Band	Yes
EX-01.1 HP EXT to FWH 36 HDR	EX-01.1-04E	Main	RO8		0.450	0.127	Blanket	Yes
EX-01.1 HP EXT to FWH 36 HDR	EX-01.1-05P	Main	RO8		0.368	0.037	T DAT	Yes
EX-01.1 HP EXT to FWH 36 HDR	EX-01.1-07P	Entered as U/S Ext. of EX-01.1-08R	RO8		0.330	0.206	Band	No (2)
EX-01.1 HP EXT to FWH 36 HDR	EX-01.1-08R	D/S Main	RO8		0.438	0.218	Band	Yes
EX-01.1 HP EXT to FWH 36 HDR	EX-01.1-08R	U/S Main	RO8		0.330	0.161	Band	Yes
EX-01.2 HP EXT to FWH 36 HDR	EX-01.2-01N	N/A	RO8		0.330	0.142	T DAT	No (3)
EX-01.2 HP EXT to FWH 36 HDR	EX-01.2-02E	Main	RO8		0.330	0.285	Blanket	Yes
EX-01.2 HP EXT to FWH 36 HDR	EX-01.2-03P	Entered as D/S Ext. of EX-01.2-02E	RO8		0.385	0.070	Band	Yes
EX-01.2 HP EXT to FWH 36 HDR	EX-01.2-04E	Main	RO8		0.330	0.080	Blanket	Yes
EX-01.2 HP EXT to FWH 36 HDR	EX-01.2-05P	Entered as D/S Ext. of EX-01.2-04E	RO8		0.330	0.037	Band	Yes
EX-01.2 HP EXT to FWH 36 HDR	EX-01.2-09P	Entered as U/S Ext. of EX-01.2-10L	RO8		0.357	0.090	Band	No (2)
EX-01.2 HP EXT to FWH 36 HDR	EX-01.2-09P	N/A	RO8		0.357	0.224	T DAT	No (13)
EX-01.3 HP EXT FWH 36 HEADER	EX-01.2-10L	U/S Main	RO8		0.482	0.158	Band	Yes
EX-01.3 HP EXT FWH 36 HEADER	EX-01.2-10L	D/S Main	RO8		0.482	0.228	Band	Yes
EX-01.3 HP EXT FWH 36 HEADER	EX-01.2-10L	Branch	RO8		0.391	0.226	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-01.3 HP EXT FWH 36 HEADER	EX-01.2-10L	Branch Ext.	RO8		0.391	0.140	Band	No (2)
EX-01.3 HP EXT FWH 36 HEADER	EX-01.2-10L	Branch	RO8		0.391	0.192	T DAT	No (13)
EX-01.3 HP EXT FWH 36 HEADER	EX-01.2-10L	Run	RO8		0.482	0.187	T DAT	No (13)
EX-01.3 HP EXT FWH 36 HEADER	EX-01.2-10L	U/S Main	RO9		0.482	0.000	Baseline	No (5)
EX-01.3 HP EXT FWH 36 HEADER	EX-01.2-10L	D/S Main	RO9		0.482	0.000	Baseline	No (5)
EX-01.3 HP EXT FWH 36 HEADER	EX-01.2-10L	Branch	RO9		0.391	0.000	Baseline	No (5)
EX-01.3 HP EXT FWH 36 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 FWH 36 HEADER	EX-01.3-03P	Entered as U/S Ext. of EX-01.3-04T	RO8		0.438	0.047	T DAT	No (2)
EX-01.3 HP EXT FWH 36 HEADER	EX-01.3-04T	Branch	RO8		0.280	0.036	T DAT	No (14)
EX-01.3 HP EXT FWH 36 HEADER	EX-01.3-04T	U/S Main	RO8		0.468	0.098	T DAT	No (17)
EX-01.3 HP EXT FWH 36 HEADER	EX-01.3-05P	Main	RO8		0.464	0.094	T DAT	Yes
EX-01.3 HP EXT FWH 36 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 FWH 36 HEADER	EX-01.3-17T	U/S Main	RO8		0.501	0.169	Band	Yes
EX-01.3 HP EXT FWH 36 HEADER	EX-01.3-17T	D/S Main	RO8		0.501	0.156	Band	Yes
EX-01.3 HP EXT FWH 36 HEADER	EX-01.3-17T	Branch	RO8		0.280	0.037	Band	No (6)
EX-01.3 HP EXT FWH 36 HEADER	EX-01.3-19E	Main	RO8		0.438	0.277	Blanket	Yes
EX-01.3 HP EXT FWH 36 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 FWH 36 HEADER	EX-01.3-23T	U/S Main	RO8		0.539	0.042	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-01.3 HP EXT FWH 36 HEADER	EX-01.3-23T	D/S Main	RO8		0.539	0.042	Band	No (3)
EX-01.3 HP EXT FWH 36 HEADER	EX-01.3-23T	Branch	RO8		0.566	0.333	Band	No (3)
EX-01.4 HP EXT FWH 36 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 FWH 36 HEADER	EX-01.4-01P	N/A	RO8		0.528	0.047	T DAT	No (13)
EX-01.4 HP EXT FWH 36 HEADER	EX-01.4-02T	U/S Main	RO8		0.439	0.235	T DAT	Yes
EX-01.4 HP EXT FWH 36 HEADER	EX-01.4-02T	Branch	RO8		0.363	0.082	T DAT	Yes
EX-01.4 HP EXT FWH 36 HEADER	EX-01.4-02T	U/S Main	RO9		0.439	0.000	Baseline	No (5)
EX-01.4 HP EXT FWH 36 HEADER	EX-01.4-02T	D/S Main	RO9		0.439	0.000	Baseline	No (5)
EX-01.4 HP EXT FWH 36 HEADER	EX-01.4-02T	Branch	RO9		0.363	0.000	Baseline	No (5)
EX-01.5A HP EX HDR to FWH 36A	EX-01.5A-01R	N/A	RO8		0.438	0.184	T DAT	No (3)
EX-01.5A HP EX HDR to FWH 36A	EX-01.5A-02P	Main	RO8		0.374	0.057	T DAT	Yes
EX-01.5A HP EX HDR to FWH 36A	EX-01.5A-03E	Main	RO8		0.330	0.158	Blanket	No (3)
EX-01.5A HP EX HDR to 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 HDR to FWH 36A	EX-01.5A-05E	Main	RO8		0.419	0.167	Blanket	No (3)
EX-01.5A HP EX HDR to FWH 36A	EX-01.5A-12P	Main	RO8		0.387	0.166	T DAT	Yes
EX-01.5A HP EX HDR to FWH 36A	EX-01.5A-13E	Main	RO8		0.426	0.106	T DAT	Yes
EX-01.5A HP EX HDR to FWH 36A	EX-01.5A-14E	Main	RO8		0.470	0.170	T DAT	Yes
EX-01.5A HP EX HDR to FWH 36A	EX-01.5A-17P	Main	RO8		0.335	0.090	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-01.5B HP EX HDR to FWH 36B	EX-01.5B-01P	N/A	RO8		0.363	0.129	T DAT	No (3)
EX-01.5B HP EX HDR to FWH 36B	EX-01.5B-02E	N/A	RO8		0.477	0.137	T DAT	No (3)
EX-01.5B HP EX HDR to FWH 36B	EX-01.5B-10P	Main	RO8		0.374	0.123	T DAT	Yes
EX-01.5B HP EX HDR to FWH 36B	EX-01.5B-11E	Main	RO8		0.452	0.107	T DAT	Yes
EX-01.5B HP EX HDR to FWH 36B	EX-01.5B-12E	N/A	RO8		0.543	0.321	T DAT	No (3)
EX-01.5B HP EX HDR to 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-01P	Entered as U/S Ext. of EX-01.5C-02E	RO8		0.450	0.307	Band	No (2)
EX-01.5C HP EX HDR to FWH 36C	EX-01.5C-02E	Main	RO8		0.423	0.053	Blanket	Yes
EX-01.5C HP EX HDR to FWH 36C	EX-01.5C-03P	N/A	RO8		0.377	0.130	T DAT	No (3)
EX-01.5C HP EX HDR to FWH 36C	EX-01.5C-04L	U/S Main	RO8		0.364	0.109	T DAT	No (17)
EX-01.5C HP EX HDR to FWH 36C	EX-01.5C-05P	Main	RO8		0.373	0.084	T DAT	Yes
EX-01.5C HP EX HDR to FWH 36C	EX-01.5C-06E	Main	RO8		0.431	0.146	T DAT	Yes
EX-01.5C HP EX HDR to FWH 36C	EX-01.5C-07E	Main	RO8		0.416	0.104	T DAT	Yes
EX-01.5C HP EX HDR to FWH 36C	EX-01.5C-08P	Main	RO8		0.356	0.101	T DAT	Yes
EX-01.5C HP EX HDR to FWH 36C	EX-01.5C-10P	Main	RO8		0.358	0.070	T DAT	Yes
EX-01.5C HP EX HDR to FWH 36C	EX-01.5C-11E	Main	RO8		0.448	0.107	T DAT	Yes
EX-01.5C HP EX HDR to FWH 36C	EX-01.5C-12E	N/A	RO8		0.485	0.201	T DAT	No (3)
EX-01.5C HP EX HDR to FWH 36C	EX-01.5C-14L	U/S Main	RO8		0.373	0.067	T DAT	No (17)

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 HDR to FWH 36C	EX-01.5C-15P	Main	RO8		0.337	0.074	T DAT	Yes
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	RO12	03UT142	0.425	0.164	Blanket	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-02.1-06T	U/S Main	RO12	03UT130	0.500	0.240	Blanket	No(6)
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	Branch	RO12	03UT130	0.365	0.094	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)
EX-02.13 PSEP 1B&2B to 35 HDR	EX-02.13-02B	Main	RO11	01UT108	0.501	0.130	Blanket	Yes
EX-02.13 PSEP 1B&2B to 35 HDR	EX-02.13-02B	Main	RO12	03UT085	0.500	0.127	Blanket	Yes
EX-02.13 PSEP 1B&2B to 35 HDR	EX-02.13-03E	Main	RO11	01UT108	0.501	0.143	Blanket	Yes
EX-02.13 PSEP 1B&2B to 35 HDR	EX-02.13-03E	D/S Ext.	RO11	01UT108	0.312	0.069	Band	No (14)
EX-02.13 PSEP 1B&2B to 35 HDR	EX-02.13-03E	Main	RO12	03UT085	0.375	0.156	Blanket	Yes
EX-02.13 PSEP 1B&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 PSEP 1B&2B to 35 HDR	EX-02.13-04E	Main	RO11	01UT108	0.375	0.117	Blanket	Yes
EX-02.13 PSEP 1B&2B to 35 HDR	EX-02.13-04E	Main	RO12	03UT086	0.375	0.120	Blanket	Yes
EX-02.13 PSEP 1B&2B to 35 HDR	EX-02.13-05P	Main	RO11	01UT108	0.375	0.072	Band	Yes
EX-02.13 PSEP 1B&2B to 35 HDR	EX-02.13-05P	Main	RO12	03UT086	0.375	0.062	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-02.14 FWH 35 HEADER	EX-02.14-04T	US Main	RO13	05UT032	0.375	0.027	Band	No(2)
EX-02.14 FWH 35 HEADER	EX-02.14-04T	DS Main	RO13	05UT032	0.375	0.009	Band	No(2)
EX-02.14 FWH 35 HEADER	EX-02.14-04T	Branch	RO13	05UT032	0.280	0.026	Band	No(2)
EX-02.14 FWH 35 HEADER	EX-02.14-12P	Entered as D/S Ext. of EX-02.14-11V	RO9		0.375	0.185	Band	Yes
EX-02.14 FWH 35 HEADER	EX-02.14-14E	Main	RO9		0.375	0.153	Blanket	Yes
EX-02.14 FWH 35 HEADER	EX-02.14-16E	Main	RO9		0.375	0.157	Blanket	Yes
EX-02.14 FWH 35 HEADER	EX-02.14-18E	Main	RO12	03UT104	0.375	0.146	Blanket	Yes
EX-02.14 FWH 35 HEADER	EX-02.14-19P	Entered as D/S Ext of EX-02.14-18E	RO12	03UT104	0.375	0.029	Band	No(1)
EX-02.14 FWH 35 HEADER	EX-02.14-20E	Main	RO12	03UT104	0.375	0.186	Blanket	Yes
EX-02.14 FWH 35 HEADER	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 35 HEADER	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 35 HEADER	EX-02.14-24E	Main	RO12	03UT148	0.375	0.177	Blanket	Yes
EX-02.14 FWH 35 HEADER	EX-02.14-25E	Main	RO12	03UT148	0.375	0.210	Blanket	Yes
EX-02.14 FWH 35 HEADER	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 35 HEADER	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 35 HEADER	EX-02.14-27E	Main	RO12	03UT148	0.375	0.266	Max P-P + Past Wear	Yes
EX-02.14 FWH 35 HEADER	EX-02.14-27E	Main	RO8		0.375	0.192	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-02.14-28P	Entered as D/S Ext of EX-02.14-27E	RO12	03UT148	0.375	0.011	Band	No(1)
EX-02.14 FWH 35 HEADER	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 35 HEADER	EX-02.14-32T	U/S Main	RO12	03UT072	0.375	0.030	Band	No(1)
EX-02.14 FWH 35 HEADER	EX-02.14-32T	D/S Main	RO12	03UT072	0.375	0.024	Band	No(1)
EX-02.14 FWH 35 HEADER	EX-02.14-32T	Branch	RO12	03UT072	0.250	0.070	Band	No(6)
EX-02.14 FWH 35 HEADER	EX-02.14-32T	N/A	RO9		N/A	N/A	N/A	No (15)
EX-02.14 FWH 35 HEADER	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	U/S Main	RO10		0.375	0.326	Blanket	No (11)
EX-02.16 HDR 35 to FWH 35A	EX-02.16-01R	D/S Main	RO10		0.312	0.444	Blanket	No (11)
EX-02.16 HDR 35 to FWH 35A	EX-02.16-01R	U/S Main	RO8		0.375	0.284	Blanket	Yes
EX-02.16 HDR 35 to FWH 35A	EX-02.16-01R	D/S Main	RO8		0.312	0.126	Blanket	Yes
EX-02.16 HDR 35 to FWH 35A	EX-02.16-02P	Main	RO10		0.284	0.102	Band	Yes
EX-02.16 HDR 35 to FWH 35A	EX-02.16-02P	Main	RO8		0.284	0.077	Band	Yes
EX-02.16 HDR 35 to FWH 35A	EX-02.16-02P	N/A	RO8		0.284	0.046	T DAT	No (13)
EX-02.16 HDR 35 to FWH 35A	EX-02.16-03E	Main	RO10		0.455	0.274	Blanket	Yes
EX-02.16 HDR 35 to FWH 35A	EX-02.16-03E	U/S Ext.	RO10		0.284	0.106	Band	No (2)
EX-02.16 HDR 35 to FWH 35A	EX-02.16-03E	Main	RO8		0.455	0.242	T DAT	Yes
EX-02.16 HDR 35 to FWH 35A	EX-02.16-04P	Entered as D/S Ext. of EX-02.16-03E	RO10		0.346	0.060	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-02.16 HDR 35 to FWH 35A	EX-02.16-04P	Entered as D/S Ext. of EX-02.16-03E	RO8		0.346	0.037	T DAT	Yes
EX-02.16 HDR 35 to FWH 35A	EX-02.16-06E	Main	RO10		0.312	0.249	Blanket	Yes
EX-02.16 HDR 35 to FWH 35A	EX-02.16-06E	Main	RO8		0.312	0.176	Blanket	Yes
EX-02.16 HDR 35 to FWH 35A	EX-02.16-06E	N/A	RO8		0.312	0.255	T DAT	No (13)
EX-02.16 HDR 35 to FWH 35A	EX-02.16-06E	Main	RO9		0.312	0.199	Blanket	Yes
EX-02.16 HDR 35 to FWH 35A	EX-02.16-07P	Entered as D/S Ext. of EX-02.16-06E	RO10		0.380	0.196	Band	Yes
EX-02.16 HDR 35 to FWH 35A	EX-02.16-07P	Entered as D/S Ext. of EX-02.16-06E	RO8		0.380	0.208	Band	Yes
EX-02.16 HDR 35 to FWH 35A	EX-02.16-07P	N/A	RO8		0.380	0.196	T DAT	No (13)
EX-02.16 HDR 35 to FWH 35A	EX-02.16-07P	Entered as D/S Ext. of EX-02.16-06E	RO9		0.380	0.187	Band	Yes
EX-02.16 HDR 35 to FWH 35A	EX-02.16-08E	Main	RO10		0.924	0.181	Blanket	Yes
EX-02.16 HDR 35 to FWH 35A	EX-02.16-08E	Main	RO8		0.924	0.165	Blanket	Yes
EX-02.16 HDR 35 to FWH 35A	EX-02.16-08E	Main	RO8		0.924	0.194	T DAT	No (17)
EX-02.16 HDR 35 to FWH 35A	EX-02.16-08E	Main	RO9		0.924	0.174	Blanket	Yes
EX-02.16 HDR 35 to FWH 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	Main	RO10		0.497	0.313	Blanket	Yes
EX-02.17 HDR 35 to FWH 35B	EX-02.17-03E	Main	RO8		0.497	0.268	T DAT	Yes
EX-02.17 HDR 35 to FWH 35B	EX-02.17-04P	Main	RO10		0.378	0.285	Band	No (11)
EX-02.17 HDR 35 to FWH 35B	EX-02.17-04P	Main	RO8		0.378	0.178	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-02.17 HDR 35 to FWH 35B	EX-02.17-05E	Main	RO10		0.968	0.247	Blanket	Yes
EX-02.17 HDR 35 to FWH 35B	EX-02.17-05E	N/A	RO8		0.968	0.226	T DAT	No (13)
EX-02.17 HDR 35 to FWH 35B	EX-02.17-05E	Main	RO9		0.968	0.184	Blanket	Yes
EX-02.17 HDR 35 to FWH 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	Main	RO10		0.375	0.160	Blanket	No (11)
EX-02.18 HDR 35 to FWH 35C	EX-02.18-03E	Main	RO8		0.480	0.154	T DAT	Yes
EX-02.18 HDR 35 to FWH 35C	EX-02.18-04P	Main	RO10		0.375	0.024	Band	No (1)
EX-02.18 HDR 35 to FWH 35C	EX-02.18-04P	Main	RO8		0.346	0.129	T DAT	Yes
EX-02.18 HDR 35 to FWH 35C	EX-02.18-05E	Main	RO10		0.312	0.166	Blanket	Yes
EX-02.18 HDR 35 to FWH 35C	EX-02.18-05E	N/A	RO8		0.312	0.207	T DAT	No (3)
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-02.2-02P	Entered as D/S Ext. of EX-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. of EX-02.2-03E	RO11	01UT117	0.365	0.060	Band	No (2)
EX-02.2 PSEP 1A 10" to 35 HDR	EX-02.2-03E	Main	RO11	01UT113	0.365	0.202	Blanket	Yes
EX-02.2 PSEP 1A 10" to 35 HDR	EX-02.2-04P	Entered as D/S Ext. of EX-02.2-03E	RO11	01UT113	0.365	0.127	Band	Yes
EX-02.6 PSEP 1A&2A to 35 HDR	EX-02.2-07T	U/S Main	RO12	03UT130	0.500	0.162	Blanket	Yes
EX-02.6 PSEP 1A&2A to 35 HDR	EX-02.2-07T	D/S Main	RO12	03UT130	0.500	0.166	Blanket	Yes
EX-02.6 PSEP 1A&2A to 35 HDR	EX-02.2-07T	Branch	RO12	03UT130	0.365	0.043	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-02.7 PSEP 1A&2A to 35 HDR	EX-02.4-05T	U/S Main	RO12	03UT130	0.500	0.043	Blanket	No(3)
EX-02.7 PSEP 1A&2A to 35 HDR	EX-02.4-05T	D/S Main	RO12	03UT130	0.500	0.092	Blanket	No(3)
EX-02.7 PSEP 1A&2A to 35 HDR	EX-02.4-05T	Branch	RO12	03UT130	0.375	0.036	Blanket	No(3)
EX-02.7 PSEP 1A&2A to 35 HDR	EX-02.4-05T	Br. Ext.	RO12	03UT130	0.375	0.048	Band	No(2)
EX-02.9 PSEP 1B 10" to 35 HDR	EX-02.9-02P	Entered as U/S Ext of EX-02.9-03E	RO12	03UT084	0.365	0.124	Band	No(2)
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	Entered as D/S Ext of EX-02.9-03E	RO12	03UT084	0.365	0.126	Band	Yes
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	Entered as D/S Ext of EX-02.9-05E	RO12	03UT084	0.365	0.107	Band	Yes
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-02.9-07P	Entered as U/S Ext of EX-02.9-07E	RO12	03UT141	0.365	0.054	Band	No(2)
EX-02.9 PSEP 1B 10" to 35 HDR	EX-02.9-08P	Entered as D/S Ext of EX-02.9-07E	RO12	03UT141	0.365	0.083	Band	Yes
EX-02.9 PSEP 1B 10" to 35 HDR	EX-02.9-09E	Main	RO12	03UT141	0.365	0.190	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-02.9 PSEP 1B 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-03.1A LP EXT 12 to FWH 34A	EX-03.1A-35P	N/A	RO8		0.249	0.012	T DAT	No (1)
EX-03.1A LP EXT 12 to FWH 34A	EX-03.1A-36E	Main	RO8		0.461	0.079	T DAT	Yes
EX-03.1A LP EXT 12 to FWH 34A	EX-03.1A-37P	N/A	RO8		0.253	0.020	T DAT	No (1)
EX-03.1B LP EXT 12 to FWH 34B	EX-03.1B-04P	Entered as U/S Ext. of EX-03.1B-05T	RO9		0.250	0.111	Band	No (2)
EX-03.1B LP EXT 12 to FWH 34B	EX-03.1B-05T	U/S Main	Cycle 10B		0.250	0.036	Band	No (11)
EX-03.1B LP EXT 12 to FWH 34B	EX-03.1B-05T	D/S Main	Cycle 10B		0.250	0.053	Band	No (11)
EX-03.1B LP EXT 12 to FWH 34B	EX-03.1B-05T	U/S Main	RO9		0.250	0.081	Band	Yes
EX-03.1B LP EXT 12 to FWH 34B	EX-03.1B-05T	D/S Main	RO9		0.250	0.042	Band	Yes
EX-03.1B LP EXT 12 to FWH 34B	EX-03.1B-05T	Branch	RO9		0.280	0.076	Band	No (6)
EX-03.1B LP EXT 12 to FWH 34B	EX-03.1B-05T	Branch Ext.	RO9		0.280	0.105	Band	No (2)
EX-03.1B LP EXT 12 to FWH 34B	EX-03.1B-06E	Main	RO9		0.250	0.059	Blanket	Yes
EX-03.1B LP EXT 12 to FWH 34B	EX-03.1B-32P	N/A	RO8		0.263	0.025	T DAT	No (1)
EX-03.1B LP EXT 12 to FWH 34B	EX-03.1B-33E	Main	RO8		0.431	0.046	T DAT	Yes
EX-03.1B LP EXT 12 to FWH 34B	EX-03.1B-34P	N/A	RO8		0.263	0.025	T DAT	No (1)
EX-03.1C LP EXT 12 to FWH 34C	EX-03.1C-12P	Entered as D/S Ext. of EX-03.1C-11V	RO9		0.250	0.049	Band	Yes
EX-03.1C LP EXT 12 to FWH 34C	EX-03.1C-13E	Main	RO9		0.250	0.056	Blanket	Yes
EX-03.1C LP EXT 12 to 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-03.1C LP EXT 12 to FWH 34C	EX-03.1C-36P	N/A	RO8		0.263	0.025	T DAT	No (1)
EX-03.1C LP EXT 12 to FWH 34C	EX-03.1C-37E	Main	RO8		0.439	0.096	T DAT	Yes
EX-03.1C LP EXT 12 to FWH 34C	EX-03.1C-38P	N/A	RO8		0.259	0.025	T DAT	No (1)
EX-04.11 LPEX FWH 33B IN HDR	EX-04.11-18P	N/A	RO8		0.313	0.016	T DAT	No (1)
EX-04.11 LPEX FWH 33B IN HDR	EX-04.11-19T	U/S Main	RO11	01UT088	0.313	0.020	Blanket	No (1)
EX-04.11 LPEX FWH 33B IN HDR	EX-04.11-19T	D/S Main	RO11	01UT088	0.313	0.026	Blanket	No (1)
EX-04.11 LPEX FWH 33B IN HDR	EX-04.11-19T	Branch	RO11	01UT088	0.259	0.047	Blanket	Yes
EX-04.11 LPEX FWH 33B IN HDR	EX-04.11-19T	N/A	RO8		0.313	0.026	T DAT	No (1)
EX-04.11 LPEX FWH 33B IN HDR	EX-04.11-19T	Branch	RO8		0.259	0.041	T DAT	No (13)
EX-04.11 LPEX FWH 33B IN HDR	EX-04.11-19T	Branch	RO9		0.259	0.057	Band	Yes
EX-04.11 LPEX FWH 33B 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-04.12-01P	N/A	RO8		0.313	0.021	T DAT	No (1)
EX-04.13 LP EXT 32 to FWH 33B	EX-04.13-01R	U/S Main	RO11	01UT088	0.313	0.116	Band	Yes
EX-04.13 LP EXT 32 to FWH 33B	EX-04.13-01R	D/S Main	RO11	01UT088	0.250	0.576	Band	No (3)
EX-04.13 LP EXT 32 to FWH 33B	EX-04.13-01R	N/A	RO8		0.313	0.759	T DAT	No (3)
EX-04.13 LP EXT 32 to FWH 33B	EX-04.13-02P	Main	RO11	01UT088	0.255	0.076	Band	Yes
EX-04.13 LP EXT 32 to FWH 33B	EX-04.13-02P	Main	RO8		0.255	0.058	T DAT	Yes
EX-04.14 LP EXT 32 to FWH 33B	EX-04.14-01P	Main	RO11	01UT088	0.276	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)
EX-04.14 LP EXT 32 to FWH 33B	EX-04.14-01P	Main	RO8		0.276	0.042	T DAT	Yes
EX-04.14 LP EXT 32 to FWH 33B	EX-04.14-01P	Main	RO9		0.276	0.054	Band	Yes
EX-04.14 LP EXT 32 to FWH 33B	EX-04.14-02E	Main	RO9		0.250	0.073	Blanket	Yes
EX-04.18 LPEX FWH 33C IN HDR	EX-04.20-15P	N/A	RO8		0.313	0.025	T DAT	No (1)
EX-04.18 LPEX FWH 33C IN HDR	EX-04.20-16T	U/S Main	Cycle 10B		0.384	0.041	Band	No (3)
EX-04.18 LPEX FWH 33C IN HDR	EX-04.20-16T	D/S Main	Cycle 10B		0.384	0.051	Band	No (3)
EX-04.18 LPEX FWH 33C IN HDR	EX-04.20-16T	Branch	Cycle 10B		0.250	0.073	Band	No (3)
EX-04.18 LPEX FWH 33C IN HDR	EX-04.20-16T	U/S Ext.	Cycle 10B		0.313	0.025	Band	No (2)
EX-04.18 LPEX FWH 33C IN HDR	EX-04.20-16T	Branch Ext.	Cycle 10B		0.271	0.048	Band	No (2)
EX-04.18 LPEX FWH 33C IN HDR	EX-04.20-16T	Branch	RO8		0.250	0.034	T DAT	No (17)
EX-04.18 LPEX FWH 33C IN HDR	EX-04.20-16T	Run	RO8		0.384	0.046	T DAT	No (3)
EX-04.21 LP EXT 31 to FWH 33C	EX-04.20-17P	N/A	RO8		0.313	0.008	T DAT	No (1)
EX-04.21 LP EXT 31 to FWH 33C	EX-04.21-01R	U/S Main	Cycle 10B		0.313	0.109	Blanket	Yes
EX-04.21 LP EXT 31 to FWH 33C	EX-04.21-01R	D/S Main	Cycle 10B		0.250	0.546	Blanket	No (3)
EX-04.21 LP EXT 31 to FWH 33C	EX-04.21-01R	N/A	RO8		0.313	0.643	T DAT	No (3)
EX-04.21 LP EXT 31 to FWH 33C	EX-04.21-02P	Entered as D/S Ext. of EX-04.21-01R	Cycle 10B		0.267	0.069	Band	Yes
EX-04.21 LP EXT 31 to FWH 33C	EX-04.21-02P	Entered as D/S Ext. of EX-04.21-01R	RO8		0.267	0.058	T DAT	Yes
EX-04.21 LP EXT 31 to FWH 33C	EX-04.21-03E	Main	Cycle 10B		0.250	0.118	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-04.21 LP EXT 31 to FWH 33C	EX-04.21-04P	Main	Cycle 13	05UT003	0.250	0.050	Band	Yes
EX-04.21 LP EXT 31 to FWH 33C	EX-04.21-04P	Entered as U/S Ext. of EX-04.21-05E	RO9		0.250	0.054	Band	No (2)
EX-04.21 LP EXT 31 to FWH 33C	EX-04.21-05E	Main	RO9		0.250	0.070	Blanket	Yes
EX-04.21 LP EXT 31 to FWH 33C	EX-04.21-07T	U/S Main	Cycle 10B		0.250	0.073	Band	Yes
EX-04.21 LP EXT 31 to FWH 33C	EX-04.21-07T	D/S Main	Cycle 10B		0.250	0.037	Band	Yes
EX-04.22 LP EXT 31 to FWH 33C	EX-04.22-01P	Main	RO8		0.271	0.037	T DAT	Yes
EX-04.4 LPEX FWH 33A IN HDR	EX-04.4-21P	N/A	RO8		0.313	0.021	T DAT	No (1)
EX-04.4 LPEX FWH 33A IN HDR	EX-04.4-22T	Branch Ext.	Cycle 10B		0.264	0.044	Band	No (2)
EX-04.4 LPEX FWH 33A IN HDR	EX-04.4-22T	U/S Main	Cycle 10B		0.352	0.026	Band	No (1)
EX-04.4 LPEX FWH 33A IN HDR	EX-04.4-22T	D/S Main	Cycle 10B		0.352	0.037	Band	No (3)
EX-04.4 LPEX FWH 33A IN HDR	EX-04.4-22T	Branch	Cycle 10B		0.259	0.089	Band	No (3)
EX-04.4 LPEX FWH 33A IN HDR	EX-04.4-22T	U/S Ext.	Cycle 10B		0.313	0.022	Band	No (2)
EX-04.4 LPEX FWH 33A IN HDR	EX-04.4-22T	US Main	RO13	05UT031	0.352	0.041	Band	No(17)
EX-04.4 LPEX FWH 33A IN HDR	EX-04.4-22T	DS Main	RO13	05UT031	0.352	0.039	Band	No(17)
EX-04.4 LPEX FWH 33A IN HDR	EX-04.4-22T	Branch	RO13	05UT031	0.259	0.113	Band	No(17)
EX-04.4 LPEX FWH 33A IN HDR	EX-04.4-22T	N/A	RO8		0.352	0.030	T DAT	No (1)
EX-04.4 LPEX FWH 33A IN HDR	EX-04.4-22T	Branch	RO8		0.259	0.050	T DAT	No (17)
EX-04.6 LP EXT to FWH 33A	EX-04.5-01P	N/A	RO8		0.313	0.017	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)
EX-04.6 LP EXT to FWH 33A	EX-04.6-01R	U/S Main	Cycle 10B		0.313	0.115	Blanket	Yes
EX-04.6 LP EXT to FWH 33A	EX-04.6-01R	D/S Main	Cycle 10B		0.250	0.552	Blanket	No (3)
EX-04.6 LP EXT to FWH 33A	EX-04.6-01R	N/A	RO8		0.313	0.666	T DAT	No (3)
EX-04.6 LP EXT to FWH 33A	EX-04.6-02P	Entered as D/S Ext. of EX-04.6-01R	Cycle 10B		0.264	0.065	Band	Yes
EX-04.6 LP EXT to FWH 33A	EX-04.6-02P	Entered as D/S Ext. of EX-04.6-01R	RO8		0.264	0.055	T DAT	Yes
EX-04.6 LP EXT to FWH 33A	EX-04.6-03E	Main	Cycle 10B		0.461	0.152	Blanket	Yes
EX-04.6 LP EXT to FWH 33A	EX-04.6-03E	Main	RO8		0.461	0.149	T DAT	Yes
EX-04.6 LP EXT to FWH 33A	EX-04.6-04P	Main	RO8		0.279	0.039	T DAT	Yes
EX-04.6 LP EXT to FWH 33A	EX-04.6-04P	Entered as U/S Ext. of EX-04.6-05E	RO9		0.250	0.042	Band	No (2)
EX-04.6 LP EXT to FWH 33A	EX-04.6-07T	U/S Main	Cycle 10B		0.262	0.029	Band	No (1)
EX-04.6 LP EXT to FWH 33A	EX-04.6-07T	D/S Main	Cycle 10B		0.262	0.027	Band	No (1)
EX-04.6 LP EXT to FWH 33A	EX-04.6-07T	U/S Main	RO8		0.262	0.036	T DAT	No (17)
EX-04.7 LP EXT to FWH 33A	EX-04.7-01P	Main	RO8		0.264	0.042	T DAT	Yes
EX-05.1B LP EXT 16 to FWH 32B	EX-05.1B-01N	Main	RO13	05UT095	0.250	0.039	Band	No(9)
EX-05.1B LP EXT 16 to FWH 32B	EX-05.1B-02P	Main	RO13	05UT095	0.250	0.070	Band	Yes
EX-05.1B LP EXT 16 to FWH 32B	EX-05.1B-03E	Main	RO13	05UT095	0.250	0.061	Blanket	Yes
EX-05.1B LP EXT 16 to FWH 32B	EX-05.1B-04N	Main	RO13	05UT095	0.375	0.072	Band	Yes
EX-05.2B LP EXT 15 to FWH 32B	EX-05.2B-01N	Main	RO13	05UT105	0.250	0.104	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-05.2B LP EXT 15 to FWH 32B	EX-05.2B-02E	Main	RO13	05UT105	0.250	0.111	Blanket	Yes
EX-05.2B LP EXT 15 to FWH 32B	EX-05.2B-03E	Main	RO13	05UT105	0.250	0.093	Blanket	Yes
EX-05.2B LP EXT 15 to FWH 32B	EX-05.2B-04P	Main	RO13	05UT105	0.250	0.134	Band	Yes
EX-05.2B LP EXT 15 to FWH 32B	EX-05.2B-05E	Main	RO13	05UT105	0.250	0.163	Blanket	Yes
EX-05.2B LP EXT 15 to FWH 32B	EX-05.2B-06N	Main	RO13	05UT105	0.375	0.133	Band	Yes
FW-01.1A BFP 31 to RCIRC T	FW-01.1A-01N	Main	RO13	05UT080	1.031	0.594	Band	No(11)
FW-01.1A BFP 31 to RCIRC T	FW-01.1A-01N	Main	RO8		1.031	0.082	Band	No (3)
FW-01.1A BFP 31 to RCIRC T	FW-01.1A-02P	Main	RO13	05UT080	1.075	0.085	Band	Yes
FW-01.1A BFP 31 to RCIRC T	FW-01.1A-02P	Entered as D/S Ext. of FW-01.1A-01N	RO8		1.075	0.058	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-01.1A-03R	DS Main	RO13	05UT080	1.031	0.065	Band	Yes
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-01.2A-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	U/S Ext.	RO8		1.043	0.052	T DAT	No (2)
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	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-01.1B 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-01.1B 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-01.1B BFP 32 to RCIRC T	FW-01.1B-03R	U/S Main	RO11	01UT087	1.095	0.092	Band	Yes
FW-01.1B BFP 32 to RCIRC T	FW-01.1B-03R	D/S Main	RO11	01UT087	1.031	0.094	Band	Yes
FW-01.1B BFP 32 to RCIRC T	FW-01.1B-03R	D/S Main	RO8		1.031	0.086	Band	Yes
FW-01.1B BFP 32 to RCIRC T	FW-01.1B-03R	U/S Main	RO8		1.095	0.078	Band	Yes
FW-01.1B BFP 32 to RCIRC T	FW-01.2B-01E	Main	RO8		1.031	0.208	Blanket	Yes
FW-01.1B BFP 32 to RCIRC T	FW-01.2B-03E	N/A	RO8		1.251	0.208	T DAT	No (13)
FW-01.1B BFP 32 to RCIRC T	FW-01.2B-03E	Main	RO8		1.251	0.199	Blanket	Yes
FW-01.1B BFP 32 to RCIRC T	FW-01.2B-04P	N/A	RO8		1.032	0.053	T DAT	No (13)
FW-01.1B 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-01.1B BFP 32 to RCIRC T	FW-01.2B-05T	N/A	RO8		1.036	0.036	T DAT	No (1)
FW-01.1B BFP 32 to RCIRC T	FW-01.2B-05T	U/S Main	RO8		1.036	0.043	Band	No (1)
FW-01.1B BFP 32 to RCIRC T	FW-01.2B-05T	D/S Main	RO8		1.036	0.024	Band	No (1)
FW-01.2A BFP31 RCIRC T to HDR	FW-01.2A-04P	Main	RO8		1.039	0.059	T DAT	Yes
FW-01.2A BFP31 RCIRC T to HDR	FW-01.2A-23P	Main	RO8		1.053	0.078	T DAT	Yes
FW-01.2B BFP32 RCIRC T to HDR	FW-01.2B-06P	N/A	RO8		1.057	0.053	T DAT	No (13)
FW-01.2B BFP32 RCIRC 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)

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-01.2B BFP32 RCIRC T to HDR	FW-01.2B-27R	U/S Main	RO10	99UT271	1.031	0.100	Band	Yes
FW-01.2B BFP32 RCIRC T to HDR	FW-01.2B-27R	D/S Main	RO10	99UT271	1.260	0.113	Band	Yes
FW-01.2B BFP32 RCIRC T to HDR	FW-01.2B-27R	U/S Ext.	RO10	99UT271	1.031	0.062	Band	No (2)
FW-01.2B BFP32 RCIRC T to HDR	FW-01.2B-27R	D/S Main	RO8		1.031	0.096	T DAT	No (17)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-01T	U/S Main	RO10	99UT271	1.375	0.047	Band	No (1)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-01T	D/S Main	RO10	99UT271	1.375	0.026	Band	No (1)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-01T	Branch	RO10	99UT271	1.042	0.095	Band	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-01T	Br. Ext.	RO10	99UT271	1.053	0.052	Band	No (2)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-01T	N/A	RO8		1.375	0.036	T DAT	No (1)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-01T	N/A	RO8		1.042	0.089	T DAT	No (13)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-01T	U/S Main	RO8		1.375	0.061	Band	No (1)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-01T	D/S Main	RO8		1.375	0.069	Band	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-01T	Branch	RO8		1.042	0.091	Band	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-01T	Br. Ext.	RO8		1.053	0.061	Band	No (2)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-01T	U/S Ext.	RO8		1.375	0.145	Band	No (2)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-02P	Entered as D/S Ext. of FW-01.3-01T	RO10	99UT271	1.371	0.035	Band	No (1)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-02P	N/A	RO8		1.371	0.029	T DAT	No (1)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-02P	Entered as D/S Ext. of FW-01.3-01T	RO8		1.371	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)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-03E	N/A	RO8		1.514	0.204	T DAT	No (13)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-03E	Main	RO8		1.514	0.185	Blanket	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-04E	Main	RO8		1.638	0.225	Blanket	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-05P	Entered as U/S Ext. of FW-01.3-06E	RO9		1.260	0.084	Band	No (2)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-06E	Main	RO9		1.260	0.233	Blanket	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-07P	Entered as D/S Ext. of FW-01.3-06E	RO9		1.260	0.068	Band	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-08E	Main	RO9		1.260	0.242	Blanket	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-09P	Entered as the U/S Ext of FW-01.3-10E	RO12	03UT112	1.260	0.026	Band	No(1)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-09P	Entered as D/S Ext. of FW-01.3-08E	RO9		1.260	0.082	Band	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-10E	Main	RO12	03UT112	1.260	0.210	Blanket	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-11P	Entered as the D/S Ext of FW-01.3-10E	RO12	03UT112	1.260	0.034	Band	No(1)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-11P	Entered as US Ext of FW-01.3-12E	RO13	05UT094	1.260	0.043	Band	No(1)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-12E	Main	RO13	05UT094	1.260	0.227	Blanket	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-13P	Entered as DS Ext of FW-01.3-12E	RO13	05UT094	1.260	0.084	Band	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-15E	Main	RO11	01UT127	1.260	0.216	Blanket	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-16P	Entered as D/S Ext. of FW-01.3-15E	RO11	01UT127	1.260	0.064	Band	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-17T	US Main	RO13	05UT050	1.260	0.044	Band	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-17T	DS Main	RO13	05UT050	1.260	0.047	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-01.3-17T	Branch	RO13	05UT050	0.938	0.122	Band	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.3-18P	Entered as DS Ext of FW-01.3-17T	RO13	05UT050	1.348	0.030	Band	No(2)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-18P	N/A	RO8		1.348	0.061	T DAT	No (1)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-18P	Entered as U/S Ext. of FW-01.4-01T	RO8		1.348	0.028	Band	No (1)
FW-01.3 BFP DISCHARGE HDR	FW-01.3-18P	Entered as U/S Ext. of FW-01.4-01T	RO9		1.348	0.054	Band	No (1)
FW-01.3 BFP DISCHARGE HDR	FW-01.4-01T	N/A	RO8		1.351	0.074	T DAT	No (13)
FW-01.3 BFP DISCHARGE HDR	FW-01.4-01T	N/A	RO8		1.019	0.209	T DAT	No (13)
FW-01.3 BFP DISCHARGE HDR	FW-01.4-01T	U/S Main	RO8		1.351	0.028	Band	No (1)
FW-01.3 BFP DISCHARGE HDR	FW-01.4-01T	D/S Main	RO8		1.351	0.032	Band	No (1)
FW-01.3 BFP DISCHARGE HDR	FW-01.4-01T	Branch	RO8		1.019	0.210	Band	Yes
FW-01.3 BFP DISCHARGE HDR	FW-01.4-01T	U/S Main	RO9		1.351	0.042	Band	No (1)
FW-01.3 BFP DISCHARGE HDR	FW-01.4-01T	D/S Main	RO9		1.351	0.057	Band	No (1)
FW-01.3 BFP DISCHARGE HDR	FW-01.4-01T	Branch	RO9		1.019	0.227	Band	Yes
FW-01.4 BFP DISCHARGE HDR	FW-01.4-02P	Entered as U/S Ext. of FW-01.5-01T	RO11	01UT126	1.341	0.051	Band	No (2)
FW-01.4 BFP DISCHARGE HDR	FW-01.4-02P	N/A	RO8		1.341	0.064	T DAT	No (13)
FW-01.4 BFP DISCHARGE HDR	FW-01.4-02P	Entered as D/S Ext. of FW-01.4-01T	RO8		1.341	0.039	Band	No (1)
FW-01.4 BFP DISCHARGE HDR	FW-01.4-02P	Entered as D/S Ext. of FW-01.4-01T	RO9		1.341	0.060	Band	No (1)
FW-01.4 BFP DISCHARGE HDR	FW-01.5-01T	U/S Main	RO11	01UT126	1.385	0.059	Band	Yes

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Thom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
FW-01.4 BFP DISCHARGE HDR	FW-01.5-01T	D/S Main	RO11	01UT126	1.385	0.045	Band	Yes
FW-01.4 BFP DISCHARGE HDR	FW-01.5-01T	Branch	RO11	01UT126	1.015	0.190	Band	Yes
FW-01.4 BFP DISCHARGE HDR	FW-01.5-01T	U/S Main	RO8		1.385	0.074	T DAT	Yes
FW-01.4 BFP DISCHARGE HDR	FW-01.5-01T	Branch	RO8		1.015	0.189	T DAT	Yes
FW-01.6A BFP HDR to FWH 36A	FW-01.6A-01R	U/S Main	RO11	01UT126	1.260	0.152	Band	Yes
FW-01.6A BFP HDR to FWH 36A	FW-01.6A-01R	D/S Main	RO11	01UT126	0.938	0.396	Band	No (3)
FW-01.6A BFP HDR to FWH 36A	FW-01.6A-01R	N/A	RO8		1.260	0.906	T DAT	No (3)
FW-01.6A BFP HDR to FWH 36A	FW-01.6A-02P	Entered as D/S Ext. of FW-01.6A-01R	RO11	01UT126	1.009	0.059	Band	Yes
FW-01.6A BFP HDR to FWH 36A	FW-01.6A-02P	Entered as D/S Ext. of FW-01.6A-01R	RO8		1.009	0.096	T DAT	Yes
FW-01.6B BFP HDR to FWH 36B	FW-01.6B-02P	Main	RO11	01UT129	0.930	0.075	Band	Yes
FW-01.6B BFP HDR to FWH 36B	FW-01.6B-02P	Main	RO8		0.930	0.088	T DAT	Yes
FW-01.6B BFP HDR to FWH 36B	FW-01.6B-06E	Main	RO12	03UT123	0.938	0.155	Blanket	Yes
FW-01.6B BFP HDR to 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-01.6B BFP HDR to FWH 36B	FW-01.6B-08E	Main	RO12	03UT123	0.938	0.100	Blanket	Yes
FW-01.6B BFP HDR to 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	Main	RO8		0.938	0.086		Yes
FW-01.6C BFP HDR to FWH 36C	FW-01.6C-02P	Entered as Br Ext. of FW-01.4-01T	RO8		0.938	0.043	Band	No (1)
FW-01.6C BFP HDR to FWH 36C	FW-01.6C-02P	Entered as Br Ext. of FW-01.4-01T	RO9		0.938	0.058	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-02.1A FWH 36A to SG HDR	FW-02.1A-11E	Main	RO10	99UT247	0.938	0.125	Blanket	Yes
FW-02.1A FWH 36A to SG HDR	FW-02.1A-11E	U/S Ext.	RO10	99UT247	0.938	0.204	Band	No (2)
FW-02.1A FWH 36A to SG HDR	FW-02.1A-12P	Entered as D/S Ext. of FW-02.1A-11E	RO10	99UT247	0.938	0.119	Band	Yes
FW-02.1A FWH 36A to SG HDR	FW-02.1A-13R	U/S Main	RO10	99UT270	0.938	0.108	Band	Yes
FW-02.1A FWH 36A to SG HDR	FW-02.1A-13R	D/S Main	RO10	99UT270	1.260	0.152	Band	Yes
FW-02.1A FWH 36A to SG HDR	FW-02.1A-13R	D/S Main	RO8		1.260	0.151	T DAT	No (17)
FW-02.1B FWH 36B to SG HDR	FW-02.1B-01N	Main	RO12	03UT102	0.938	0.041	Band	No(1)
FW-02.1B FWH 36B to SG HDR	FW-02.1B-02E	Main	RO12	03UT102	0.938	0.283	Blanket	Yes
FW-02.1B FWH 36B to SG HDR	FW-02.1B-03P	Entered as the D/S Ext of FW-02.1B-02E	RO12	03UT102	0.938	0.061	Band	Yes
FW-02.1B FWH 36B to SG HDR	FW-02.1B-04E	Main	RO12	03UT102	0.938	0.249	Blanket	Yes
FW-02.1B FWH 36B to SG HDR	FW-02.1B-06P	Entered as the D/S Ext of FW-02.1B-05V	RO12	03UT102	0.938	0.112	Band	Yes
FW-02.1B FWH 36B to SG 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-01N	Main	RO13	05UT052	0.938	0.156	Band	Yes
FW-02.1C FWH 36C to SG HDR	FW-02.1C-02E	Main	RO13	05UT052	0.938	0.280	Blanket	Yes
FW-02.1C FWH 36C to SG HDR	FW-02.1C-03P	Main	RO13	05UT052	0.938	0.050	Band	Yes
FW-02.1C FWH 36C to SG HDR	FW-02.1C-10P	Main	RO8		0.998	0.091	T DAT	Yes
FW-02.3 SG INLET HEADER	FW-02.1B-11T	U/S Main	RO10	99UT270	1.398	0.030	Band	No (1)
FW-02.3 SG INLET HEADER	FW-02.1B-11T	D/S Main	RO10	99UT270	1.398	0.035	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-02.3 SG INLET HEADER	FW-02.1B-11T	Branch	RO10	99UT270	0.974	0.071	Band	Yes
FW-02.3 SG INLET HEADER	FW-02.1B-11T	D/S Ext.	RO10	99UT270	1.380	0.038	Band	No (1)
FW-02.3 SG INLET HEADER	FW-02.1B-11T	Br. Ext.	RO10	99UT270	0.965	0.098	Band	No (2)
FW-02.3 SG INLET HEADER	FW-02.1B-11T	U/S Main	RO8		1.398	0.071	T DAT	Yes
FW-02.3 SG INLET HEADER	FW-02.1B-11T	Branch	RO8		0.974	0.059	T DAT	Yes
FW-02.3 SG INLET HEADER	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	N/A	RO8		1.375	0.041	T DAT	No (1)
FW-02.4 SG INLET HEADER	FW-02.1C-11T	Branch	RO8		0.975	0.066	T DAT	No (17)
FW-02.4 SG INLET HEADER	FW-02.4-01P	N/A	RO8		1.359	0.051	T DAT	No (14)
FW-02.4 SG INLET HEADER	FW-02.4-02T	US Main	RO13	05UT071	1.260	0.053	Band	Yes
FW-02.4 SG INLET HEADER	FW-02.4-02T	DS Main	RO13	05UT071	1.260	0.043	Band	Yes
FW-02.4 SG INLET HEADER	FW-02.4-02T	Branch	RO13	05UT071	0.944	0.110	Band	Yes
FW-02.4 SG INLET HEADER	FW-02.4-04E	Main	RO9		1.260	0.091	Blanket	Yes
FW-02.4 SG INLET HEADER	FW-02.4-05E	Main	RO9		1.260	0.238	Blanket	Yes
FW-02.4 SG INLET HEADER	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 INLET HEADER	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 INLET HEADER	FW-02.4-15E	Main	RO12	03UT081	1.260	0.212	Blanket	Yes
FW-02.4 SG INLET HEADER	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 INLET HEADER	FW-02.4-16P	Entered as US Ext of FW-02.4-17E	RO13	05UT057	1.260	0.173	Band	No(1)
FW-02.4 SG INLET HEADER	FW-02.4-17E	Main	RO13	05UT057	1.260	0.145	Blanket	Yes
FW-02.4 SG INLET HEADER	FW-02.4-18P	Entered as DS Ext of FW-02.4-17E	RO13	05UT057	1.365	0.040	Band	Yes
FW-02.4 SG INLET HEADER	FW-02.4-18P	N/A	RO8		1.365	0.027	T DAT	No (1)
FW-02.4 SG INLET HEADER	FW-02.4-19T	U/S Main	RO10	99UT269	1.368	0.022	Band	No (1)
FW-02.4 SG INLET HEADER	FW-02.4-19T	D/S Main	RO10	99UT269	1.368	0.033	Band	No (1)
FW-02.4 SG INLET HEADER	FW-02.4-19T	Branch	RO10	99UT269	0.974	0.145	Band	Yes
FW-02.4 SG INLET HEADER	FW-02.4-19T	U/S Ext.	RO10	99UT269	1.365	0.022	Band	No (2)
FW-02.4 SG INLET HEADER	FW-02.4-19T	Br. Ext.	RO10	99UT269	0.968	0.096	Band	No (2)
FW-02.4 SG INLET HEADER	FW-02.4-19T	N/A	RO8		1.368	0.026	T DAT	No (1)
FW-02.4 SG INLET HEADER	FW-02.4-19T	Branch	RO8		0.974	0.131	T DAT	Yes
FW-02.5 SG INLET HEADER	FW-02.5-01T	U/S Main	RO10	99UT269	1.372	0.036	Band	No (1)
FW-02.5 SG INLET HEADER	FW-02.5-01T	D/S Main	RO10	99UT269	1.372	0.036	Band	No (1)
FW-02.5 SG INLET HEADER	FW-02.5-01T	Branch	RO10	99UT269	0.432	0.048	Blanket	No (4)
FW-02.5 SG INLET HEADER	FW-02.5-04T	U/S Main	RO12	03UT096	1.368	0.032	Band	No(1)
FW-02.5 SG INLET HEADER	FW-02.5-04T	D/S Main	RO12	03UT096	1.368	0.021	Band	No(1)
FW-02.5 SG INLET HEADER	FW-02.5-04T	Branch	RO12	03UT096	1.002	0.086	Band	Yes
FW-02.5 SG INLET HEADER	FW-02.5-04T	N/A	RO8		1.368	0.041	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-02.5 SG INLET HEADER	FW-02.5-04T	Branch	RO8		1.002	0.075	T DAT	No (17)
FW-02.5 SG INLET HEADER	FW-02.5-05P	N/A	RO8		1.372	0.034	T DAT	No (14)
FW-02.5 SG INLET HEADER	FW-02.5-06P	N/A	RO8		1.365	0.030	T DAT	No (1)
FW-02.6 SG INLET HEADER	FW-02.6-01P	N/A	RO8		1.361	0.019	T DAT	No (1)
FW-02.6 SG INLET HEADER	FW-02.6-03T	N/A	RO8		1.361	0.030	T DAT	No (1)
FW-02.6 SG INLET HEADER	FW-02.6-03T	Branch	RO8		1.006	0.139	T DAT	No (17)
FW-02.8A SG HDR to SG 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)
FW-02.8A SG HDR to SG 31	FW-02.8A-01P	Main	RO8		0.968	0.097	T DAT	Yes
FW-02.8A SG HDR to SG 31	FW-02.8A-02E	Main	RO12	03UT135	0.938	0.129	Blanket	Yes
FW-02.8A SG HDR to SG 31	FW-02.8A-03T	U/S Main	RO12	03UT135	0.938	0.075	Band	Yes
FW-02.8A SG HDR to SG 31	FW-02.8A-03T	D/S Main	RO12	03UT135	0.938	0.056	Band	Yes
FW-02.8A SG HDR to SG 31	FW-02.8A-06E	Main	RO12	03UT135	0.938	0.158	Blanket	Yes
FW-02.8A SG HDR to SG 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 to SG 31	FW-02.8A-25R	U/S Main	RO12	03UT135	0.938	0.421	Band	No(3)
FW-02.8A SG HDR to SG 31	FW-02.8A-25R	D/S Main	RO12	03UT135	1.312	0.476	Band	No(3)
FW-02.8A SG HDR to SG 31	FW-02.8A-26R	U/S Main	RO12	03UT135	1.312	0.615	Band	No(3)
FW-02.8A SG HDR to SG 31	FW-02.8A-26R	D/S Main	RO12	03UT135	0.938	0.271	Band	Yes
FW-02.8A SG HDR to SG 31	FW-03.1A-08B	Main	RO9		0.750	0.172	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-02.8A SG HDR to SG 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	Entered as the Br Ext of FW-02.5-04T	RO12	03UT096	0.944	0.064	Band	No(1)
FW-02.8B SG HDR to SG 32	FW-02.8B-01P	Main	RO8		0.938	0.078	T DAT	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-07E	Main	RO9		0.938	0.188	Blanket	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-08P	Entered as D/S Ext. of FW-02.8B-07E	RO9		0.938	0.069	Band	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-09T	U/S Main	RO12	03UT058	0.938	0.060	Band	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-09T	D/S Main	RO12	03UT058	0.938	0.041	Band	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-09T	Br. Ext	RO12	03UT058	0.432	0.049	Band	No (2)
FW-02.8B SG HDR to SG 32	FW-02.8B-12P_2	Entered as U/S Ext. of FW-02.8B-13F	RO10	99UT232	0.938	0.125	Point to Point	No (2)
FW-02.8B SG HDR to SG 32	FW-02.8B-12P_2	Entered as U/S Ext. of FW-02.8B-13F	RO8		0.938	0.078	Band	No (2)
FW-02.8B SG HDR to SG 32	FW-02.8B-12P_2	Entered as U/S Ext. of FW-02.8B-13F	RO9		0.938	0.085	Band	No (2)
FW-02.8B SG HDR to SG 32	FW-02.8B-13F	Main	RO10	99UT232	0.938	0.222	Point to Point	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-13F	Main	RO8		0.938	0.167	Band	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-13F	Main	RO9		0.938	0.175	Band	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-14P	Entered as D/S Ext. of FW-02.8B-13F	RO10	99UT232	0.990	0.103	Band	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-14P	Entered as D/S Ext. of FW-02.8B-13F	RO8		0.990	0.093	Band	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-14P	Entered as D/S Ext. of FW-02.8B-13F	RO9		0.990	0.109	Band	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-22T	U/S Main	RO8		0.750	0.039	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 to SG 32	FW-02.8B-22T	D/S Main	RO8		0.750	0.059	Band	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-23E	Main	RO8		0.924	0.176	Blanket	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-25R	US Main	RO13	05UT045	0.938	0.352	Band	N(4)
FW-02.8B SG HDR to SG 32	FW-02.8B-25R	DS Main	RO13	05UT045	0.844	0.447	Band	N(4)
FW-02.8B SG HDR to SG 32	FW-02.8B-26R	U/S Main	RO9		0.938	0.238	Band	Yes
FW-02.8B SG HDR to SG 32	FW-02.8B-26R	D/S Main	RO9		0.844	0.256	Band	Yes
FW-02.8B SG HDR to SG 32	FW-03.1B-07B	Entered as U/S Ext of FW-03.1B-08E	RO13	05UT054	0.750	0.065	Band	No(1)
FW-02.8B SG HDR to SG 32	FW-03.1B-08E	Main	RO13	05UT054	0.750	0.099	Blanket	Yes
FW-02.8B SG HDR to SG 32	FW-03.1B-09P	Entered as D/S Ext of FW-03.1B-08E	RO13	05UT054	0.750	0.068	Band	Yes
FW-02.8C SG HDR to SG 34	FW-02.8C-01P	Main	RO8		0.946	0.071	T DAT	Yes
FW-02.8C SG HDR to SG 34	FW-02.8C-05V	Main	RO11	01UT120	0.938	N/A	x	No (12)
FW-02.8C SG HDR to SG 34	FW-02.8C-06V	Main	RO11	01UT120	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
FW-02.8C SG HDR to SG 34	FW-02.8C-08P	Entered as D/S Ext. of FW-02.8C-07E	RO11	01UT120	0.938	0.053	Band	Yes
FW-02.8C SG HDR to SG 34	FW-02.8C-24R	U/S Main	RO11	01UT120	0.938	0.247	Band	Yes
FW-02.8C SG HDR to SG 34	FW-02.8C-24R	D/S Main	RO11	01UT120	0.844	0.148	Band	Yes
FW-02.8C SG HDR to SG 34	FW-02.8C-25R	U/S Main	RO11	01UT120	0.844	0.087	Band	Yes
FW-02.8C SG HDR to SG 34	FW-02.8C-25R	D/S Main	RO11	01UT120	0.938	0.151	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-03.1C-10E	Main	RO12	03UT126	0.750	0.215	Blanket	Yes
FW-02.8C SG HDR to SG 34	FW-03.1C-11P	Entered as the D/S Ext of FW-03.1C-10E	RO12	03UT126	0.750	0.041	Band	Yes
FW-02.8C SG HDR to SG 34	FW-03.1C-12E	Main	RO12	03UT126	0.750	0.166	Blanket	Yes
FW-02.8C SG HDR to SG 34	FW-03.1C-13P	Entered as the D/S Ext of FW-03.1C-12E	RO12	03UT126	0.750	0.086	Band	Yes
FW-02.8C SG HDR to SG 34	FW-03.1C-14E	Main	RO12	03UT126	0.750	0.273	Blanket	Yes
FW-02.8C SG HDR to SG 34	FW-03.1C-15N	Main	RO12	03UT126	0.750	0.110	Band	No(11)
FW-02.8D SG HDR to SG 33	FW-02.7-01P	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	N/A	RO8		1.395	0.053	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-02.8D-01P	Main	RO8		0.964	0.052	T DAT	Yes
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-24R	DS Main	RO13	05UT049	0.844	0.414	Band	N(4)
FW-02.8D SG HDR to SG 33	FW-02.8D-25R	US Main	RO13	05UT049	0.844	0.237	Band	Yes
FW-02.8D SG HDR to SG 33	FW-02.8D-25R	DS Main	RO13	05UT049	0.938	0.175	Band	Yes
FW-04.1A BFP 31 RECIRC	FW-04.1A-01E	Main	RO8		0.954	0.180	T DAT	No (11)
FW-04.1A BFP 31 RECIRC	FW-04.1A-09P	Main	RO8		0.896	0.046	T DAT	No (11)
FW-04.1A BFP 31 RECIRC	FW-04.1A-10P	Main	RO8		0.864	0.098	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-04.2A-01R	U/S Main	RO8		0.864	0.290	T DAT	No (11)
FW-04.1A BFP 31 RECIRC	FW-04.2A-02P	Main	RO8		0.709	0.065	T DAT	No (11)
FW-04.1A BFP 31 RECIRC	FW-04.2A-21P	Main	RO8		0.700	0.045	Band	No (11)
FW-04.1A BFP 31 RECIRC	FW-04.2A-22B	Main	RO8		0.782	0.172	Blanket	No (11)
FW-04.1A BFP 31 RECIRC	FW-04.2A-23P	Entered as D/S Ext. of FW-04.2A-22B	RO8		0.724	0.086	Band	No (11)
FW-04.1A BFP 31 RECIRC	FW-05.1A-02P	Main	RO8		0.886	0.064	T DAT	No (11)
FW-04.1B BFP 32 RECIRC	FW-04.1B-01E	Main	RO11	01UT064	0.979	0.228	Blanket	No (11)
FW-04.1B BFP 32 RECIRC	FW-04.1B-01E	Main	RO8		0.979	0.186	T DAT	No (11)
FW-04.1B BFP 32 RECIRC	FW-04.1B-01E	Main	RO8		0.979	0.224	Blanket	No (11)
FW-04.1B BFP 32 RECIRC	FW-04.1B-02P	Entered as D/S Ext. of FW-04.1B-01E	RO11	01UT064	0.912	0.041	Band	No (11)
FW-04.1B BFP 32 RECIRC	FW-04.1B-02P	Entered as D/S Ext. of FW-04.1B-01E	RO8		0.912	0.058	Band	No (11)
FW-04.1B BFP 32 RECIRC	FW-04.1B-03E	Main	RO11	01UT064	1.083	0.266	Blanket	No (11)
FW-04.1B BFP 32 RECIRC	FW-04.1B-03E	Main	RO8		1.083	0.113	Blanket	No (11)
FW-04.1B BFP 32 RECIRC	FW-04.1B-04P	Entered as D/S Ext. of FW-04.1B-03E	RO11	01UT064	0.864	0.131	Band	No (11)
FW-04.1B BFP 32 RECIRC	FW-04.1B-10P	Entered as U/S Ext. of FW-04.1B-01E	RO11	01UT064	0.864	0.090	Band	No (11)
FW-04.1B BFP 32 RECIRC	FW-04.1B-10P	N/A	RO8		0.864	0.093	T DAT	No (11)
FW-04.1B BFP 32 RECIRC	FW-04.1B-10P	Entered as U/S Ext. of FW-04.1B-01E	RO8		0.864	0.093	Band	No (11)
FW-04.1B BFP 32 RECIRC	FW-04.2B-22P	Entered as U/S Ext. of FW-04.2B-23R	RO8		0.716	0.065	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)
FW-04.1B BFP 32 RECIRC	FW-04.2B-23R	D/S Main	RO8		0.962	0.123	Band	No (11)
FW-04.1B BFP 32 RECIRC	FW-04.2B-23R	U/S Main	RO8		0.674	0.082	Band	No (11)
FW-04.1B BFP 32 RECIRC	FW-05.1B-02P	Main	RO8		0.864	0.079	T DAT	No (11)
HD-01.1A FWH 36A to HD TK	HD-01.1A-08P	Entered as U/S ext of HD-01.1A-09E	RO12	03UT069	0.307	0.033	Band	Yes
HD-01.1A FWH 36A to HD TK	HD-01.1A-09E	Main	RO12	03UT069	0.307	0.082	Blanket	Yes
HD-01.1A FWH 36A to HD TK	HD-01.2A-01R	D/S Main	RO12	03UT069	0.280	0.122	Band	Yes
HD-01.1A FWH 36A to HD TK	HD-01.2A-01R	U/S Main	RO12	03UT069	0.307	0.066	Band	Yes
HD-01.1A FWH 36A to HD TK	HD-02.1A-02R	D/S Main	RO12	03UT069	0.365	0.086	Band	Yes
HD-01.1A FWH 36A to HD TK	HD-02.1A-02R	U/S Main	RO12	03UT069	0.280	0.073	Band	Yes
HD-01.1A FWH 36A to HD TK	HD-02.2A-02N	Main	RO12	03UT069	0.365	0.110	Band	Yes
HD-01.1B FWH 36B to HD TK	HD-01.1B-06P		RO9		0.307	0.036	Band	No (2)
HD-01.1B FWH 36B to HD TK	HD-01.1B-07E		RO9		0.307	0.061	Blanket	Yes
HD-01.1B FWH 36B to HD TK	HD-01.2B-01R		RO9		0.307	0.046	Band	Yes
HD-01.1B FWH 36B to HD TK	HD-01.2B-01R		RO9		0.280	0.062	Band	Yes
HD-01.1B FWH 36B to HD TK	HD-02.1B-01V		RO9		0.280	0.036	Blanket	No (10)
HD-01.1C FWH 36C to HD TK	HD-01.1C-10P;		RO11	01UT134	0.307	0.063	Band	No (2)
HD-01.1C FWH 36C to HD TK	HD-01.1C-11E		RO11	01UT134	0.421	0.131	Blanket	Yes
HD-01.1C FWH 36C to HD TK	HD-01.1C-11E					0.119	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)
HD-01.1C FWH 36C to HD TK	HD-01.2C-01R		RO11	01UT134	0.307	0.064	Band	Yes
HD-01.1C FWH 36C to HD TK	HD-01.2C-01R		RO11	01UT134	0.280	0.071	Band	Yes
HD-01.1C FWH 36C to HD TK	HD-02.1C-02R		RO11	01UT134	0.280	0.040	Band	No(3)
HD-01.1C FWH 36C to HD TK	HD-02.1C-02R		RO11	01UT134	0.365	0.060	Band	Yes
HD-01.1C FWH 36C to HD TK	HD-02.2C-02N		RO11	01UT135	0.365	0.089	Band	Yes
HD-03.1A FWH 35A to HD TK	HD-03.1A-10P		1994		0.250	0.032	Band	No (2)
HD-03.1A FWH 35A to HD TK	HD-03.1A-11E		1994		0.250	0.040	Blanket	Yes
HD-03.1A FWH 35A to HD TK	HD-03.1A-12E		1994		0.250	0.043	Blanket	Yes
HD-03.1A FWH 35A to HD TK	HD-03.1A-13P		1994		0.250	0.032	Band	Yes
HD-03.1A FWH 35A to HD TK	HD-03.1A-14E		1994		0.250	0.032	Blanket	Yes
HD-03.1A FWH 35A to HD TK	HD-03.1A-16N		1994		0.250	0.103	Band	No(9)
HD-03.1C FWH 35C to HD TK	HD-03.1C-12P	Entered as US Ext of HD-03.1C-13E	RO13	05UT040	0.250	0.037	Band	No(1)
HD-03.1C FWH 35C to HD TK	HD-03.1C-13E	Main	RO13	05UT040	0.250	0.059	Blanket	Yes
HD-03.1C FWH 35C to HD TK	HD-03.1C-14E	Main	RO13	05UT040	0.250	0.084	Blanket	Yes
HD-03.1C FWH 35C to HD TK	HD-03.1C-15P	Main	RO13	05UT040	0.250	0.038	Band	Yes
HD-03.1C FWH 35C to HD TK	HD-03.1C-16E	Main	RO13	05UT040	0.250	0.031	Blanket	Yes
HD-04.1A FWH 34A to FWH 33A	-01T D/S Flange		RO9		0.280	N/A	N/A	No (14)
HD-04.1A FWH 34A to FWH 33A	HD-04.1A-15P		RO11	01UT133	0.280	0.080	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-04.1A FWH 34A to FWH 33A	HD-04.2A-01E		RO11	01UT133	0.280	0.106	Blanket	No
HD-04.1A FWH 34A to FWH 33A	HD-04.2A-01E		RO11	01UT133	0.237	0.102	Blanket	No
HD-04.1A FWH 34A to FWH 33A	HD-04.3A-01R		RO11	01UT133	0.237	0.053	Band	No(3)
HD-04.1A FWH 34A to FWH 33A	HD-04.3A-01R		RO11	01UT133	0.216	0.044	Band	No(3)
HD-04.1A FWH 34A to FWH 33A	HD-05.1A-01V		RO9		0.216	0.034	Blanket	No (10)
HD-04.1A FWH 34A to FWH 33A	HD-05.1A-02R		RO11	01UT133	0.216	0.161	Band	No (20)
HD-04.1A FWH 34A to FWH 33A	HD-05.1A-02R		RO11	01UT133	0.280	0.074	Band	Yes
HD-04.1A FWH 34A to FWH 33A	HD-05.1A-02R	Baseline D/S Main	RO12	03UT122				
HD-04.1A FWH 34A to FWH 33A	HD-05.1A-02R	Baseline U/S Main	RO12	03UT122				
HD-04.1A FWH 34A to FWH 33A	HD-05.1A-02R		RO9		0.216	0.124	Band	Yes
HD-04.1A FWH 34A to FWH 33A	HD-05.1A-02R		RO9		0.280	0.083	Band	Yes
HD-04.1A FWH 34A to FWH 33A	HD-05.2A-01T		RO11	01UT133	0.280	0.111	Blanket	Yes
HD-04.1A FWH 34A to FWH 33A	HD-05.2A-01T		RO11	01UT133	0.280	0.078	Blanket	No (6)
HD-04.1A FWH 34A to FWH 33A	HD-05.2A-01T		RO11	01UT133	0.280	0.104	Blanket	Yes
HD-04.1A FWH 34A to FWH 33A	HD-05.2A-01T		RO9		0.280	0.088	Blanket	Yes
HD-04.1A FWH 34A to FWH 33A	HD-05.2A-01T		RO9		0.280	0.066	Blanket	No (6)
HD-04.1A FWH 34A to FWH 33A	HD-05.2A-01T		RO9		0.280	0.130	Blanket	Yes
HD-04.1A FWH 34A to FWH 33A	HD-05.2A-02P		RO11	01UT133	0.280	0.039	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-02P		RO9		0.280	0.040	Band	Yes
HD-04.1B FWH 34B to FWH 33B	-01T D/S Flange		RO9		0.280	N/A	N/A	No (14)
HD-04.1B FWH 34B to FWH 33B	HD-04.2B-01E	U/S Main	RO12	O3UT034	0.280	0.053	Blanket	Yes
HD-04.1B FWH 34B to FWH 33B	HD-04.2B-01E	D/S Main	RO12	O3UT034	0.237	0.102	Blanket	Yes
HD-04.1B FWH 34B to FWH 33B	HD-04.3B-01R	U/S Main	RO12	O3UT034	0.237	0.132	Band	Yes
HD-04.1B FWH 34B to FWH 33B	HD-04.3B-01R	D/S Main	RO12	O3UT034	0.216	0.065	Band	No(3)
HD-04.1B FWH 34B to FWH 33B	HD-05.1B-01V		RO9		0.216	0.034	Blanket	No (10)
HD-04.1B FWH 34B to FWH 33B	HD-05.1B-02R	U/S Main	RO12	O3UT034	0.216	0.135	Band	Yes
HD-04.1B FWH 34B to FWH 33B	HD-05.1B-02R	D/S main	RO12	O3UT034	0.280	0.125	Band	Yes
HD-04.1B FWH 34B to FWH 33B	HD-05.1B-02R		RO9		0.216	0.082	Band	Yes
HD-04.1B FWH 34B to FWH 33B	HD-05.1B-02R		RO9		0.280	0.093	Band	Yes
HD-04.1B FWH 34B to FWH 33B	HD-05.2B-01T	U/S Main	RO12	O3UT034	0.280	0.074	Blanket	Yes
HD-04.1B FWH 34B to FWH 33B	HD-05.2B-01T	D/S Main	RO12	O3UT034	0.280	0.072	Blanket	No (6)
HD-04.1B FWH 34B to FWH 33B	HD-05.2B-01T	Branch	RO12	O3UT034	0.280	0.098	Blanket	Yes
HD-04.1B FWH 34B to FWH 33B	HD-05.2B-01T		RO9		0.280	0.125	Blanket	Yes
HD-04.1B FWH 34B to FWH 33B	HD-05.2B-01T		RO9		0.280	0.076	Blanket	No (6)
HD-04.1B FWH 34B to FWH 33B	HD-05.2B-01T		RO9		0.280	0.141	Blanket	Yes
HD-04.1B FWH 34B to FWH 33B	HD-05.2B-02P	Entered as branch ext. of HD-05.2B-01T	RO12	O3UT034	0.280	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)
HD-04.1B FWH 34B to FWH 33B	HD-05.2B-02P		RO9		0.280	0.058	Band	No (2)
HD-04.1C FWH 34C to FWH 33C	-01T D/S Flange		RO9		0.280	N/A	N/A	No (14)
HD-04.1C FWH 34C to FWH 33C	HD-04.1C-23P	Entered as U/S ext. of HD-04.2C-01E	RO12	03UT028	0.280	0.067	Pt to Pt	No (2)
HD-04.1C FWH 34C to FWH 33C	HD-04.1C-23P		RO9		0.280	0.044	Band	No (2)
HD-04.1C FWH 34C to FWH 33C	HD-04.2C-01E	U/S Main	RO12	03UT028	0.280	0.104	Pt to Pt	Yes
HD-04.1C FWH 34C to FWH 33C	HD-04.2C-01E	D/S Main	RO12	03UT028	0.237	0.175	Pt to Pt	Yes
HD-04.1C FWH 34C to FWH 33C	HD-04.2C-01E		RO9		0.280	0.073	Band	Yes
HD-04.1C FWH 34C to FWH 33C	HD-04.2C-01E		RO9		0.237	0.118	Band	Yes
HD-04.1C FWH 34C to FWH 33C	HD-04.3C-01R		RO11	01UT065	0.237	0.043	Band	No(3)
HD-04.1C FWH 34C to FWH 33C	HD-04.3C-01R		RO11	01UT065	0.216	0.057	Band	Yes
HD-04.1C FWH 34C to FWH 33C	HD-04.3C-01R	U/S Main	RO12	03UT028	0.237	0.032	Band	No(1)
HD-04.1C FWH 34C to FWH 33C	HD-04.3C-01R	D/S Main	RO12	03UT028	0.216	0.027	Band	No(1)
HD-04.1C FWH 34C to FWH 33C	HD-05.1C-01V		RO9		0.216	0.046	Blanket	No (10)
HD-04.1C FWH 34C to FWH 33C	HD-05.1C-02R		RO10	99UT080	0.216	0.050	Band	No(3)
HD-04.1C FWH 34C to FWH 33C	HD-05.1C-02R		RO10	99UT080	0.280	0.112	Band	Yes
HD-04.1C FWH 34C to FWH 33C	HD-05.1C-02R		RO10	99UT080	0.216	0.082	Band	No (3)
HD-04.1C FWH 34C to FWH 33C	HD-05.1C-02R		RO11	01UT065	0.216	0.050	Band	Yes
HD-04.1C FWH 34C to FWH 33C	HD-05.1C-02R		RO11	01UT065	0.280	0.133	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-04.1C FWH 34C to FWH 33C	HD-05.1C-02R	U/S Main	RO12	03UT028	0.216	0.063	Band	Yes
HD-04.1C FWH 34C to FWH 33C	HD-05.1C-02R	D/S main	RO12	03UT028	0.280	0.140	Band	No(3)
HD-04.1C FWH 34C to FWH 33C	HD-05.1C-02R		RO9		0.280	0.116	Band	Yes
HD-04.1C FWH 34C to FWH 33C	HD-05.1C-02R		RO9		0.216	0.071	Band	Yes
HD-04.1C FWH 34C to FWH 33C	HD-05.1C-02R	U/S Main	C013	05UT023	0.216	0.066	Band	Yes
HD-04.1C FWH 34C to FWH 33C	HD-05.1C-02R	D/S main	C013	05UT023	0.280	0.157	Band	Yes
HD-04.1C FWH 34C to FWH 33C	HD-05.2C-01T		RO10	99UT080	0.280	0.085	Blanket	Yes
HD-04.1C FWH 34C to FWH 33C	HD-05.2C-01T		RO10	99UT080	0.280	0.107	Blanket	No (6)
HD-04.1C FWH 34C to FWH 33C	HD-05.2C-01T		RO10	99UT080	0.280	0.153	Blanket	Yes
HD-04.1C FWH 34C to FWH 33C	HD-05.2C-01T		RO10	99UT080	0.280	0.049	Band	No (9)
HD-04.1C FWH 34C to FWH 33C	HD-05.2C-01T	U/S Main	RO12	03UT028	0.280	0.063	Blanket	Yes
HD-04.1C FWH 34C to FWH 33C	HD-05.2C-01T	D/S main	RO12	03UT028	0.280	0.071	Blanket	No (6)
HD-04.1C FWH 34C to FWH 33C	HD-05.2C-01T	Branch	RO12	03UT028	0.280	0.141	Blanket	Yes
HD-04.1C FWH 34C to FWH 33C	HD-05.2C-01T		RO9		0.280	0.064	Blanket	Yes
HD-04.1C FWH 34C to FWH 33C	HD-05.2C-01T		RO9		0.280	0.099	Blanket	No (6)
HD-04.1C FWH 34C to FWH 33C	HD-05.2C-01T		RO9		0.280	0.100	Blanket	Yes
HD-04.1C FWH 34C to FWH 33C	HD-05.2C-02P	Branch ext. of HD-05.2C-01T	RO12	03UT028	0.280	0.035	Band	No (2)
HD-04.1C FWH 34C to FWH 33C	HD-05.2C-02P		RO9		0.280	0.031	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-06.1A FWH 33A to FWH 32A	-03T D/S Flange		RO9		0.250	N/A	N/A	No (14)
HD-06.1A FWH 33A to FWH 32A	-03T D/S Flange		RO9		0.250	N/A	N/A	No (14)
HD-06.1A FWH 33A to FWH 32A	-03T D/S Flange		RO9		0.250	N/A	N/A	No (14)
HD-06.1A FWH 33A to FWH 32A	HD-06.1A-41E	Main	RO12	03UT059	0.250	0.056	Blanket	Yes
HD-06.1A FWH 33A to FWH 32A	HD-06.1A-42P	Entered as D/S ext. of HD-06.1A-41E	RO12	03UT059	0.250	0.047	Band	Yes
HD-06.1A FWH 33A to FWH 32A	HD-06.2A-01E	D/S Main	RO12	03UT059	0.280	0.164	Blanket	Yes
HD-06.1A FWH 33A to FWH 32A	HD-06.2A-01E	U/S Main	RO12	03UT059	0.250	1.061	Blanket	Yes
HD-06.1A FWH 33A to FWH 32A	HD-07.1A-02R	D/S Main	RO12	03UT059	0.250	0.107	Band	Yes
HD-06.1A FWH 33A to FWH 32A	HD-07.1A-02R	U/S Main	RO12	03UT059	0.280	0.089	Band	Yes
HD-06.1A FWH 33A to FWH 32A	HD-07.2A-02P	Main	RO12	03UT059	0.250	0.067	Band	Yes
HD-06.1A FWH 33A to FWH 32A	HD-07.2A-02P		RO9		0.250	0.065	Band	No (2)
HD-06.1A FWH 33A to FWH 32A	HD-07.2A-03T		RO9		0.250	0.081	Blanket	Yes
HD-06.1A FWH 33A to FWH 32A	HD-07.2A-03T		RO9		0.250	0.076	Blanket	No (6)
HD-06.1A FWH 33A to FWH 32A	HD-07.2A-03T		RO9		0.250	0.170	Blanket	Yes
HD-06.1A FWH 33A to FWH 32A	HD-07.1B-02R	U/S Main	C013	05UT026	0.280	0.088	Band	Yes
HD-06.1A FWH 33A to FWH 32A	HD-07.1B-02R	D/S Main	C013	05UT026	0.250	0.110	Band	Yes
HD-06.1A FWH 33A to FWH 32A	HD-07.2A-04P		RO9		0.250	0.084	Band	No (2)
HD-06.1B FWH 33B to FWH 32B	HD-07.2B-02P		RO9		0.250	0.047	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-06.1B FWH 33B to FWH 32B	HD-07.2B-03T		RO9		0.250	0.107	Blanket	Yes
HD-06.1B FWH 33B to FWH 32B	HD-07.2B-03T		RO9		0.250	0.204	Blanket	No (6)
HD-06.1B FWH 33B to FWH 32B	HD-07.2B-03T		RO9		0.250	0.153	Blanket	Yes
HD-06.1B FWH 33B to FWH 32B	HD-07.2B-04P		RO9		0.250	0.049	Band	No (2)
HD-06.1C FWH 33C to FWH 32C	HD-07.1C-02R		RO11	01UT101	0.280	0.083	Band	Yes
HD-06.1C FWH 33C to FWH 32C	HD-07.1C-02R		RO11	01UT101	0.250	0.066	Band	Yes
HD-06.1C FWH 33C to FWH 32C	HD-07.2C-02P		RO11	01UT101	0.250	0.039	Band	Yes
HD-06.1C FWH 33C to FWH 32C	HD-07.2C-02P		RO9		0.250	0.024	Band	No (1)
HD-06.1C FWH 33C to FWH 32C	HD-07.2C-03T		RO9		0.250	0.171	Blanket	Yes
HD-06.1C FWH 33C to FWH 32C	HD-07.2C-03T		RO9		0.250	0.152	Blanket	No (6)
HD-06.1C FWH 33C to FWH 32C	HD-07.2C-03T		RO9		0.250	0.159	Blanket	Yes
HD-06.1C FWH 33C to FWH 32C	HD-07.2C-04P		RO9		0.250	0.048	Band	No (2)
HD-06.1C FWH 33C to FWH 32C	HD-6.1C-33P		RO11	01UT101	0.250	0.038	Band	No (2)
HD-06.1C FWH 33C to FWH 32C	HD-6.2C-01E		RO11	01UT101	0.250	0.063	Blanket	Yes
HD-06.1C FWH 33C to FWH 32C	HD-6.2C-01E		RO11	01UT101	0.280	0.117	Blanket	Yes
HD-08.1A FWH 32A to FWH 31A	HD-09.1A-02R		1994		0.250	0.131	Band	No(9)
HD-08.1A FWH 32A to FWH 31A	HD-09.1A-02R		1994		0.250	0.069	Band	Yes
HD-08.1A FWH 32A to FWH 31A	HD-09.2A-03E					0.024	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)
HD-08.1B FWH 32B to FWH 31B	HD-09.1B-02R		1994		0.250	0.078	Band	Yes
HD-08.1B FWH 32B to FWH 31B	HD-09.1B-02R		1994		0.250	0.050	Band	Yes
HD-08.1C FWH 32C to FWH 31C	HD-09.1C-02R		1994		0.250	0.108	Band	No(9)
HD-08.1C FWH 32C to FWH 31C	HD-09.1C-02R		1994		0.250	0.087	Band	No(9)
HD-09.3A FWH 32A to FWH 31A	HD-09.3A-01P					0.019	T DAT	No (1)
HD-09.4A FWH 32A to FWH 31A	HD-09.4A-02E					0.080	T DAT	No (3)
HD-10.1A HD TK to HD PMP 31	HD-10.1A-02P	Main	RO13	05UT056	0.375	0.029	Band	No(2)
HD-10.1A HD TK to HD PMP 31	HD-10.2A-01E	US Main	RO13	05UT056	0.375	0.045	Blanket	Yes
HD-10.1A HD TK to HD PMP 31	HD-10.2A-01E	DS Main	RO13	05UT056	0.312	0.041	Blanket	Yes
HD-10.1A HD TK to HD PMP 31	HD-10.2A-02E	Main	RO13	05UT056	0.312	0.067	Blanket	Yes
HD-10.1A HD TK to HD PMP 31	HD-10.2A-03P	Main	RO13	05UT056	0.312	0.050	Band	Yes
HD-11.1A HD PMP 31 to HDR	HD-11.1A-01N		RO12	03UT103	0.500	0.023	Band	No (1)
HD-11.1A HD PMP 31 to HDR	HD-11.1A-02V	Valve Body	RO12	03UT103				No (10)
HD-11.1A HD PMP 31 to HDR	HD-11.2A-01R	D/S Main	RO12	03UT103	0.322	0.027	Band	No (1)
HD-11.1A HD PMP 31 to HDR	HD-11.2A-01R	U/S Main	RO12	03UT103	0.500	0.091	Band	Yes
HD-11.1A HD PMP 31 to 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 31 to HDR	HD-12.1A-01V	D/S Valve (flange)	RO12	03UT103	0.322	0.208	Blanket	No (10)
HD-11.1A HD PMP 31 to HDR	HD-12.1A-01V		RO8		0.500	0.108	Blanket	No (10)

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-12.1A-02R	D/S Main	RO12	03UT103	0.500	0.099	Band	Yes
HD-11.1A HD PMP 31 to HDR	HD-12.1A-02R	U/S Main	RO12	03UT103	0.322	0.032	Band	No(3)
HD-11.1A HD PMP 31 to HDR	HD-12.1A-02R		RO8		0.500	0.299	Band	No (3)
HD-11.1A HD PMP 31 to HDR	HD-12.1A-02R		RO8		0.322	0.019	Band	No (1)
HD-11.1A HD PMP 31 to HDR	HD-12.2A-05P		RO8		0.664	0.094	Band	No (2)
HD-11.1A HD PMP 31 to HDR	HD-12.2A-06O		RO11	01UT122	0.500	0.083	Band	No (10)
HD-11.1A HD PMP 31 to HDR	HD-12.2A-06O		RO11	01UT122	0.500	0.058	Band	No (2)
HD-11.1A HD PMP 31 to HDR	HD-12.2A-07P		RO11	01UT122	0.500	0.073	Band	Yes
HD-11.1A HD PMP 31 to HDR	HD-12.2A-07P		RO8		0.569	0.077	Band	Yes
HD-11.1A HD PMP 31 to HDR	up ext of -06O							
HD-11.1B HD PMP 32 to HDR	HD-11.2B-01R		RO10	99UT242	0.500	0.161	Point to Point	Yes
HD-11.1B HD PMP 32 to HDR	HD-11.2B-01R		RO10	99UT242	0.322	0.097	Point to Point	Yes
HD-11.1B HD PMP 32 to HDR	HD-11.2B-01R		RO8		0.500	0.109	Band	Yes
HD-11.1B HD PMP 32 to HDR	HD-11.2B-01R		RO8		0.322	0.051	Band	Yes
HD-11.1B HD PMP 32 to HDR	HD-12.1B-01V		RO11	99UT242	0.322	0.115	Band	No (10)
HD-11.1B HD PMP 32 to HDR	HD-12.1B-01V		RO8		0.322	0.066	Blanket	No (10)
HD-11.1B HD PMP 32 to HDR	HD-12.1B-02R	US Main	RO13	05UT107	0.322	0.070	Band	No(3)
HD-11.1B HD PMP 32 to HDR	HD-12.1B-02R	DS Main	RO13	05UT107	0.500	0.056	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 32 to HDR	HD-12.2B-02P		RO8		0.539	0.042	Band	Yes
HD-11.1B HD PMP 32 to HDR	HD-12.2B-03E		RO8		0.535	0.087	Blanket	Yes
HD-11.1B HD PMP 32 to HDR	HD-12.2B-04T		RO8		0.500	0.289	Blanket	No (3)
HD-11.1B HD PMP 32 to HDR	HD-12.2B-04T		RO8		0.500	0.280	Blanket	No (3)
HD-11.1B HD PMP 32 to HDR	HD-12.2B-04T		RO8		0.500	0.498	Blanket	No (3)
HD-11.1B HD PMP 32 to HDR	HD-12.2B-05P		RO8		0.500	0.043	Band	Yes
HD-11.1B HD PMP 32 to HDR	HD-12.2B-06O		RO10	99UT256	0.516	0.088	Band	No (10)
HD-11.1B HD PMP 32 to HDR	HD-12.2B-06O		RO10	99UT256	0.527	0.090	Band	Yes
HD-11.1B HD PMP 32 to HDR	HD-12.2B-06O					0.079	T DAT	Yes
HD-11.1B HD PMP 32 to HDR	HD-12.2B-08T					0.045	T DAT	No (6)
HD-11.1B HD PMP 32 to HDR	HD-12.2B-08T					0.082	T DAT	Yes
HD-11.1B HD PMP 32 to HDR	HD-12.3-01P					0.038	T DAT	Yes
HD-12.2A HD PMP HDR to CD SYS	HD-12.2A-08T					0.069	T DAT	Yes
HD-12.2A HD PMP HDR to CD SYS	HD-12.2A-08T					0.096	T DAT	Yes
HD-12.2A HD PMP HDR to CD SYS	HD-12.4-01E					0.162	T DAT	Yes
MSD-01.13A HDR to MSEP TK 33A	MSD-01.13A-01T		RO9	97UT107	0.250	0.148	Blanket	Yes
MSD-01.13A HDR to MSEP TK 33A	MSD-01.13A-02P		RO9	97UT107	0.250	0.046	Band	Yes
MSD-01.13A HDR to MSEP TK 33A	MSD-01.13A-03E		RO9	97UT108	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-01.13A 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				0.437	0.279	T DAT	Yes
MSD-01.13A HDR to MSEP TK 33A	MSD-01.13A-09P				0.382	0.291	T DAT	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-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	D/S Ext.	RO12	03UT098	0.250	0.052	Band	Yes
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-02P	Main	RO12	03UT098	0.250	0.048	Band	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.14A-04P		94/95		0.324	0.033	Band	No (1)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-01E		94/95		0.322	0.108	Blanket	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-01E		94/95		0.280	0.138	Blanket	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-04E		94/95		0.341	0.157	Blanket	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-05E		94/95		0.322	0.102	Blanket	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-06P		94/95		0.285	0.092	Band	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-08P		94/95		0.280	0.044	Band	No (1)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-09E		94/95		0.302	0.075	Blanket	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-10P		94/95		0.306	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)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-10P		94/95		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		94/95		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		94/95		0.272	0.083	Band	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-12P		94/95		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		94/95		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		94/95		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		94/95		0.331	0.084	Blanket	Yes
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		94/95		0.284	0.084	Band	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-16P		94/95		0.284	0.061	Band	No (1)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-17E		94/95		0.280	0.061	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-18P		94/95		0.280	0.164	Band	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-18P		94/95		0.280	N/A	N/A	No (3)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-18P		94/95		0.280	0.036	Band	No (1)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-18P		94/95		0.280	N/A	N/A	No (3)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-19E		94/95		0.331	0.227	Blanket	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-19E		94/95		0.331	N/A	N/A	No (3)
MSD-01.14A TK 33A to HD TK	MSD-01.15A-20N		94/95		0.280	0.064	Band	Yes
MSD-01.14A TK 33A to HD TK	MSD-01.15A-22P		94/95		0.281	0.027	Band	No (1)
MSD-01.14B TK 33B to HD TK	MSD-01.14B-04P		RO9	97UT097	0.322	0.045	Band	No (1)
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
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-06P		94/95		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-07E		94/95		0.309	0.094	Blanket	Yes
MSD-01.14B TK 33B to HD TK	MSD-01.15B-07E		RO9	97UT182	0.309	N/A	N/A	No (8)
MSD-01.14B TK 33B to HD TK	MSD-01.15B-13E		RO10	N/A (6)	0.280	0.046	Blanket	No (16)

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-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	01UT137	0.280	0.094	Blanket	Yes
MSD-01.14B TK 33B to HD TK	MSD-01.15B-14P		RO11	01UT137	0.280	0.071	Band	Yes
MSD-01.14B TK 33B to HD TK	MSD-01.15B-14P		RO11	01UT137	0.280	0.095	Band	No (1)
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-16P		RO11	01UT137	0.280	0.049	Band	Yes
MSD-01.14B TK 33B to HD TK	MSD-01.15B-26P		94/95		0.278	0.077	Band	No (1)
MSD-01.14B TK 33B to HD TK	MSD-01.15B-27E		94/95		0.341	0.150	Blanket	Yes
MSD-01.14B TK 33B to HD TK	MSD-01.15B-28P		94/95		0.282	0.096	Band	Yes
MSD-01.3A HDR to MSEP TK 31A	MSD-01.3A-01T	US Main	RO13	05UT067	0.250	0.140	Band	No(22)
MSD-01.3A HDR to MSEP TK 31A	MSD-01.3A-01T	DS Main	RO13	05UT067	0.250	0.307	Band	No(16)
MSD-01.3A HDR to MSEP TK 31A	MSD-01.3A-01T	Branch	RO13	05UT067	0.250	0.388	Band	No(7)
MSD-01.3A HDR to MSEP TK 31A	MSD-01.3A-02P	Main	RO13	05UT067	0.250	0.060	Band	Yes
MSD-01.3A HDR to MSEP TK 31A	MSD-01.3A-03E	Main	RO13	05UT067	0.250	0.055	Blanket	Yes
MSD-01.4A TK 31A to HD TK	MSD-01.4A-04P		RO8		0.349	0.050	Band	No (1)
MSD-01.4A TK 31A to HD TK	MSD-01.5A-01E		RO8		0.322	0.064	Blanket	Yes
MSD-01.4A TK 31A to HD TK	MSD-01.5A-01E		RO8		0.280	0.094	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-01.4A TK 31A to HD TK	MSD-01.5A-02P		RO8		0.314	0.035	Band	Yes
MSD-01.4A TK 31A to HD TK	MSD-01.5A-04P		94/95		0.349	0.046	Band	No (1)
MSD-01.4A TK 31A to HD TK	MSD-01.5A-05E		94/95		0.319	0.086	Blanket	Yes
MSD-01.4A TK 31A to HD TK	MSD-01.5A-07P		94/95		0.289	0.044	Band	Yes
MSD-01.4A TK 31A to HD TK	MSD-01.5A-08E		94/95		0.319	0.038	Blanket	Yes
MSD-01.4A TK 31A to HD TK	MSD-01.5A-09P		94/95		0.317	0.037	Band	Yes
MSD-01.4A TK 31A to HD TK	MSD-01.5A-23P		94/95		0.314	0.051	Band	No (1)
MSD-01.4A TK 31A to HD TK	MSD-01.5A-24E		94/95		0.302	0.064	Blanket	Yes
MSD-01.4A TK 31A to HD TK	MSD-01.5A-25P		94/95		0.318	0.041	Band	Yes
MSD-01.4A TK 31A to HD TK	MSD-01.5A-25P		94/95		0.280	0.064	Band	No (1)
MSD-01.4A TK 31A to HD TK	MSD-01.5A-26E		94/95		0.280	0.065	Blanket	Yes
MSD-01.4A TK 31A to HD TK	MSD-01.5A-27N		94/95		0.280	0.077	Band	Yes
MSD-01.4B TK 31B to HD TK	MSD-01.5B-05P		94/95		0.307	0.038	Band	No (1)
MSD-01.4B TK 31B to HD TK	MSD-01.5B-06E		94/95		0.303	0.055	Blanket	Yes
MSD-01.4B TK 31B to HD TK	MSD-01.5B-07P		94/95		0.313	0.057	Band	Yes
MSD-01.4B TK 31B to HD TK	MSD-01.5B-11P		RO11	01UT136	0.280	0.037	Band	No (1)
MSD-01.4B TK 31B to HD TK	MSD-01.5B-11P_1		RO10	99UT280	0.280	0.046	Band	Yes
MSD-01.4B TK 31B to HD TK	MSD-01.5B-11P_1		RO10	99UT280	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-01.4B TK 31B to HD TK	MSD-01.5B-12E		RO10	N/A (6)	0.280	0.031	Blanket	No (16)
MSD-01.4B TK 31B to HD TK	MSD-01.5B-12E		RO10	N/A (6)	0.280	0.025	Band	No (2)
MSD-01.4B TK 31B to HD TK	MSD-01.5B-12E		RO10	N/A (6)	0.280	0.031	Band	Yes
MSD-01.4B TK 31B to HD TK	MSD-01.5B-12E		RO11	01UT136	0.280	0.065	Blanket	Yes
MSD-01.4B TK 31B to HD TK	MSD-01.5B-13P		RO11	01UT136	0.280	0.045	Band	Yes
MSD-01.4B TK 31B to HD TK	MSD-01.5B-25P		94/95		0.302	0.052	Band	No (1)
MSD-01.4B TK 31B to HD TK	MSD-01.5B-25P		94/95		0.302	0.035	Band	No (1)
MSD-01.4B TK 31B to HD TK	MSD-01.5B-26E		94/95		0.280	0.149	Blanket	Yes
MSD-01.4B TK 31B to HD TK	MSD-01.5B-26E		94/95		0.280	N/A	N/A	No (3)
MSD-01.4B TK 31B to HD TK	MSD-01.5B-27P		94/95		0.311	0.072	Band	Yes
MSD-01.4B TK 31B to HD TK	MSD-01.5B-32P		94/95		0.302	N/A	N/A	No (1)
MSD-01.4B TK 31B to HD TK	Up ext of -12E							
MSD-01.6B_1 MSEP 32B to HDR	MSD-01.6B-03P	Entered as DS Ext of MSD-01.7B-01T	RO13	05UT066	0.304	0.087	Band	Yes
MSD-01.6B_1 MSEP 32B to HDR	MSD-01.6B-03P				0.312	0.079	T DAT	Yes
MSD-01.6B_3 MSEP 32B to HDR	MSD-01.6B-07P		RO11	01UT096	0.304	0.094	Band	Yes
MSD-01.6B_3 MSEP 32B to HDR	MSD-01.6B-07P				0.264	0.062	T DAT	Yes
MSD-01.7A MSEP 32A DR HDR	MSD-01.7A-01T		RO10	N/A (6)	0.250	0.276	Blanket	No (16)
MSD-01.7A MSEP 32A DR HDR	MSD-01.7A-01T		RO10	N/A (6)	0.250	0.184	Blanket	No (16)

CHECWORKS Line Name	Component Name	Component Section	Period	Report Number	Tinit or Tnom (in.)	Wear (in.)	Method	In LCF Calc (Yes/No)
MSD-01.7A MSEP 32A DR HDR	MSD-01.7A- 01T		RO10	N/A (6)	0.250	0.155	Band	No (1)
MSD-01.7A MSEP 32A DR HDR	MSD-01.7A- 01T		RO10	N/A (6)	0.250	0.117	Band	Yes
MSD-01.7B MSEP 32B DR HDR	MSD-01.7B- 01T		RO10	N/A (6)	0.250	0.143	Blanket	No (16)
MSD-01.7B MSEP 32B DR HDR	MSD-01.7B- 01T		RO10	N/A (6)	0.250	0.135	Blanket	No (16)
MSD-01.7B MSEP 32B DR HDR	MSD-01.7B- 01T		RO10	N/A (6)	0.312	0.062	Band	No (1)
MSD-01.7B MSEP 32B DR HDR	MSD-01.7B- 01T		RO10	N/A (6)	0.304	0.054	Band	No (16)
MSD-01.7B MSEP 32B DR HDR	MSD-01.7B- 01T	US Main	RO13	05UT066	0.250	0.043	Band	Yes
MSD-01.7B MSEP 32B DR HDR	MSD-01.7B- 01T	DS Main	RO13	05UT066	0.250	0.088	Band	Yes
MSD-01.7B MSEP 32B DR HDR	MSD-01.7B- 01T	Branch	RO13	05UT066	0.250	0.299	Band	No(8)
MSD-01.7B MSEP 32B DR HDR	MSD-01.7B- 01T				0.304	0.084	T DAT	Yes
MSD-01.7B MSEP 32B DR HDR	MSD-01.7B- 02P		RO11	01UT096	0.264	0.047	Band	Yes
MSD-01.7B MSEP 32B DR HDR	MSD-01.7B- 02P	Entered as US Ext of MSD-01.7B-01T	RO13	05UT066	0.312	0.092	Band	No(1)
MSD-01.8A HDR to MSEP TK 32A	MSD-01.8A- 01T		RO10	N/A (6)	0.250	0.159	Blanket	Yes
MSD-01.8A HDR to MSEP TK 32A	MSD-01.8A- 01T		RO10	N/A (6)	0.250	0.178	Blanket	Yes
MSD-01.8A HDR to MSEP TK 32A	MSD-01.8A- 01T		RO10	N/A (6)	0.250	0.091	Band	No (1)
MSD-01.8A HDR to MSEP TK 32A	MSD-01.8A- 01T		RO10	N/A (6)	0.250	0.085	Band	No (1)
MSD-01.8A HDR to MSEP TK 32A	MSD-01.8A- 01T	D/S Main	RO12	03UT098	0.250	0.086	Band	Yes
MSD-01.8A HDR to MSEP TK 32A	MSD-01.8A- 01T	U/S Main	RO12	03UT098	0.250	0.143	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-01.8A HDR to MSEP TK 32A	MSD-01.8A-02P	Main			0.250	0.068	Band	Yes
MSD-01.8A HDR to MSEP TK 32A	MSD-01.8A-03E	Main			0.250	0.090	Blanket	Yes
MSD-01.8A HDR to MSEP TK 32A	MSD-01.8A-05P	Main			0.250	0.061	Band	Yes
MSD-01.8B HDR to MSEP TK 32B	MSD-01.8B-01T		RO10	N/A (6)	0.250	0.122	Blanket	No (16)
MSD-01.8B HDR to MSEP TK 32B	MSD-01.8B-01T		RO10	N/A (6)	0.250	0.018	Blanket	No (16)
MSD-01.8B HDR to MSEP TK 32B	MSD-01.8B-01T		RO10	N/A (6)	0.264	0.029	Band	No (2)
MSD-01.8B HDR to MSEP TK 32B	MSD-01.8B-01T		RO10	N/A (6)	0.304	0.071	Band	No (16)
MSD-01.8B HDR to MSEP TK 32B	MSD-01.8B-01T		RO11	01UT096	0.250	0.104	Band	Yes
MSD-01.8B HDR to MSEP TK 32B	MSD-01.8B-01T		RO11	01UT096	0.250	0.073	Band	Yes
MSD-01.8B HDR to MSEP TK 32B	MSD-01.8B-01T		RO11	01UT096	0.250	0.218	Blanket	No (4)
MSD-01.8B HDR to MSEP TK 32B	MSD-01.8B-01T				0.285	0.058	T DAT	Yes
MSD-01.8B HDR to MSEP TK 32B	MSD-01.8B-02P		RO11	01UT096	0.285	0.061	Band	Yes
MSD-01.8B HDR to MSEP TK 32B	MSD-01.8B-02P		RO9	97UT122	0.285	0.057	Band	No (1)
MSD-01.8B HDR to MSEP TK 32B	MSD-01.8B-03E		RO9	97UT122	0.250	0.172	Blanket	Yes
MSD-01.8B HDR to MSEP TK 32B	MSD-01.8B-07P		RO9	97UT121	0.250	0.069	Band	Yes
MSD-01.8B HDR to MSEP TK 32B	MSD-01.8B-08N		RO9	97UT121	0.250	0.057	Band	Yes
MSD-01.9A TK 32A to HD TK	MSD-01.10A-02P		94/95		0.304	0.037	Band	No (1)
MSD-01.9A TK 32A to HD TK	MSD-01.10A-03E		94/95		0.309	0.103	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-04P		94/95		0.280	0.025	Band	No (2)
MSD-01.9A TK 32A to HD TK	MSD-01.10A-07P		94/95		0.293	0.048	Band	Yes
MSD-01.9A TK 32A to HD TK	MSD-01.10A-07P		RO9	97UT056	0.293	N/A	N/A	No (8)
MSD-01.9A TK 32A to HD TK	MSD-01.10A-08E		94/95		0.307	0.166	Blanket	Yes
MSD-01.9A TK 32A to HD TK	MSD-01.10A-08E		RO9	97UT056	0.307	N/A	N/A	No (8)
MSD-01.9A TK 32A to HD TK	MSD-01.10A-09P		94/95		0.293	0.074	Band	Yes
MSD-01.9A TK 32A to HD TK	MSD-01.10A-09P		RO9	97UT056	0.293	N/A	N/A	No (8)
MSD-01.9A TK 32A to HD TK	MSD-01.10A-21P		94/95		0.294	0.039	Band	No (1)
MSD-01.9A TK 32A to HD TK	MSD-01.10A-21P		RO9	97UT064	0.294	0.041	Band	No (1)
MSD-01.9A TK 32A to HD TK	MSD-01.10A-22E		94/95		0.317	0.150	Blanket	Yes
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		94/95		0.289	0.050	Band	Yes
MSD-01.9A TK 32A to HD TK	MSD-01.10A-23P		94/95		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		94/95		0.280	0.224	Blanket	Yes
MSD-01.9A TK 32A to HD TK	MSD-01.10A-24E		94/95		0.280	N/A	N/A	No (3)
MSD-01.9A TK 32A to HD TK	MSD-01.10A-25N		94/95		0.280	0.111	Band	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-01E		RO9	97UT189	0.322	0.086	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-01.9B TK 32B to HD TK	MSD-01.10B-01E		RO9	97UT189	0.280	0.119	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		RO9	97UT189	0.280	0.102	Blanket	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-03P		RO9	97UT197	0.280	0.135	Band	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-04E		RO9	97UT197	0.280	0.083	Blanket	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-06P		94/95		0.299	0.070	Band	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-07E		94/95		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-08P		94/95		0.289	0.078	Band	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-10P		RO11	01UT136	0.280	0.056	Band	No (1)
MSD-01.9B TK 32B to HD TK	MSD-01.10B-11E		RO10	N/A (6)	0.280	0.050	Blanket	No (16)
MSD-01.9B TK 32B to HD TK	MSD-01.10B-11E		RO10	N/A (6)	0.280	0.078	Band	No (1)
MSD-01.9B TK 32B to HD TK	MSD-01.10B-11E		RO10	N/A (6)	0.280	0.051	Band	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-11E		RO11	01UT136	0.280	0.093	Blanket	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-12P		RO11	01UT136	0.280	0.070	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-24P		94/95		0.285	0.069	Band	No (1)
MSD-01.9B TK 32B to HD TK	MSD-01.10B-25E		94/95		0.316	0.136	Blanket	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.10B-26P		94/95		0.290	0.072	Band	Yes
MSD-01.9B TK 32B to HD TK	MSD-01.9B-04P		RO9	97UT189	0.322	0.034	Band	No (1)
PD-01.3 PRESEP 1A DR to HDR	PD-01.4-01R	U/S Main	RO11	01UT111	0.375	0.040	Band	Yes
PD-01.3 PRESEP 1A DR to HDR	PD-01.4-01R	D/S Main	RO11	01UT111	0.365	0.050	Band	Yes
PD-01.3 PRESEP 1A DR to HDR	PD-01.4-02B	Main	RO11	01UT111	0.365	0.039	Blanket	Yes
PD-01.3 PRESEP 1A DR to HDR	PD-01.4-03P	Entered as D/S Ext. of PD-01.4-02B	RO11	01UT111	0.365	0.047	Band	Yes
PD-01.3 PRESEP 1A DR to HDR	PD-01.4-10O	Main	RO8		0.380	0.023	Band	No (1)
PD-01.5 PRESEP 2B DR to HDR	PD-01.6-11P	Entered as U/S Ext of PD-01.6-12E	RO12	03UT110	0.365	0.043	Band	No (2)
PD-01.5 PRESEP 2B DR to HDR	PD-01.6-12E	Main	RO12	03UT110	0.365	0.053	Blanket	Yes
PD-01.5 PRESEP 2B DR to HDR	PD-01.6-14O	Main	RO12	03UT110	0.365	0.021	Band	No (10)
PD-01.7 PRESEP 2A DR to HDR	PD-01.8-14O	Main	RO8		0.365	0.020	Band	No (1)
PD-02.2 PRESEP HDR to HD TK	PD-02.2-01T	U/S Main	RO8		0.375	0.139	Blanket	No (3)
PD-02.2 PRESEP HDR to HD TK	PD-02.2-01T	D/S Main	RO8		0.375	0.190	Blanket	No (3)
PD-02.2 PRESEP HDR to HD TK	PD-02.2-01T	Branch	RO8		0.365	0.027	Blanket	No (3)
PD-02.3 PRESEP HDR to HD TK	PD-02.3-01T	U/S Main	RO10	99UT279	0.375	0.061	Blanket	No (3)
PD-02.3 PRESEP HDR to HD TK	PD-02.3-01T	D/S Main	RO10	99UT279	0.375	0.330	Point to Point	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-02.3 PRESEP HDR to HD TK	PD-02.3-01T	U/S Main	RO8		0.375	0.066	Blanket	No (3)
PD-02.3 PRESEP HDR to HD TK	PD-02.3-01T	D/S Main	RO8		0.375	0.244	Blanket	No (3)
PD-02.4 PRESEP HDR to HD TK	PD-02.4-01T	U/S Main	RO10	99UT279	0.375	0.207	Point to Point	No (3)
PD-02.4 PRESEP HDR to HD TK	PD-02.4-01T	D/S Main	RO10	99UT279	0.375	0.284	Point to Point	No (3)
PD-02.4 PRESEP HDR to HD TK	PD-02.4-01T	Branch	RO10	99UT279	0.365	0.309	Point to Point	No (3)
PD-02.4 PRESEP HDR to HD TK	PD-02.4-01T	Branch Ext.	RO10	99UT281	0.365	0.019	Band	No (2)
PD-02.4 PRESEP HDR to HD TK	PD-02.4-01T	U/S Main	RO8		0.375	0.139	Blanket	No (3)
PD-02.4 PRESEP HDR to HD TK	PD-02.4-01T	D/S Main	RO8		0.375	0.143	Blanket	No (3)
PD-02.4 PRESEP HDR to HD TK	PD-02.4-01T	Branch	RO8		0.365	0.188	Blanket	No (3)
PD-02.4 PRESEP HDR to HD TK	PD-02.4-02E	Main	RO10	99UT279	0.375	0.154	Point to Point	Yes
PD-02.4 PRESEP HDR to HD TK	PD-02.4-15P	Entered as U/S Ext. of PD-02.4-16E	RO10	99UT216	0.375	0.045	Band	No (2)
PD-02.4 PRESEP HDR to HD TK	PD-02.4-16E	Main	RO10	99UT216	0.375	0.044	Blanket	Yes
PD-02.4 PRESEP HDR to HD TK	PD-02.4-17P	Entered as D/S Ext. of PD-02.4-16E	RO10	99UT216	0.375	0.067	Band	Yes
PD-02.4 PRESEP HDR to HD TK	PD-02.4-19P	Entered as U/S Ext. of PD-02.4-200	RO11	01UT123	0.375	0.055	Band	No (2)
PD-02.4 PRESEP HDR to HD TK	PD-02.4-200	Main	RO11	01UT123	0.421	0.054	Band	No (10)
PD-02.4 PRESEP HDR to HD TK	PD-02.4-200	N/A	RO8		0.421	0.072	T DAT	No (3)
PD-02.4 PRESEP HDR to HD TK	PD-02.4-21N	Main	RO11	01UT123	0.899	0.084	Band	Yes
PD-02.4 PRESEP HDR to HD TK	PD-02.4-21N	Main	RO8		0.899	0.084	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)
RHD-01.10A_2 TK 33A 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 TK 33A 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 TK 33A to A HDR	RHD01.10A-20R	US Main	RO13	05UT077	0.432	0.020	Band	No(2)
RHD-01.10A_2 TK 33A to A HDR	RHD01.10A-20R	DS Main	RO13	05UT077	0.500	0.065	Band	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD01.11A-01E	Main	RO13	05UT077	0.500	0.110	Blanket	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD01.11A-02P	Entered as DS Ext of RHD01.11A-01E	RO13	05UT077	0.500	0.088	Band	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD01.12A-01T	U/S Main	RO10	99UT263	0.500	0.085	Blanket	No (4)
RHD-01.10A_2 TK 33A to A HDR	RHD01.12A-01T	D/S Main	RO10	99UT263	0.500	0.078	Blanket	No (4)
RHD-01.10A_2 TK 33A to A HDR	RHD01.12A-01T	Branch	RO10	99UT263	0.432	0.069	Band	No (4)
RHD-01.10A_2 TK 33A to A HDR	RHD01.12A-01T	U/S Ext.	RO10	99UT263	0.500	0.062	Band	No (4)
RHD-01.10A_2 TK 33A to A HDR	RHD01.12A-01T	Branch Ext.	RO10	99UT263	0.432	0.053	Band	No (4)
RHD-01.10A_2 TK 33A 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 TK 33A to A HDR	RHD01.12A-08E	Main	RO10	99UT255	0.432	0.110	Blanket	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD01.13A-01R	U/S Main	RO10	99UT255	0.432	0.041	Band	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD01.13A-01R	D/S Main	RO10	99UT255	0.337	0.180	Band	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD02.5A-01V	Main	RO10	99UT255	0.337	0.067	Band	No (10)
RHD-01.10A_2 TK 33A to A HDR	RHD02.5A-01V	Main	RO8		0.337	0.011	Band	No (10)
RHD-01.10A_2 TK 33A to A HDR	RHD02.5A-02R	U/S Main	RO11	01UT078	0.337	0.128	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 TK 33A to A HDR	RHD02.5A-02R	D/S Main	RO11	01UT078	0.432	0.113	Band	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD02.5A-02R	D/S Main	RO8		0.432	0.157	Band	No (3)
RHD-01.10A_2 TK 33A to A HDR	RHD02.5A-02R	U/S Main	RO8		0.337	0.081	Band	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD02.6A-01P	Entered as D/S Ext. of RHD02.5A-02R	RO11	01UT078	0.432	0.050	Band	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD02.6A-01P	Entered as U/S Ext. of RHD02.6A-02E	RO11	01UT078	0.432	0.034	Band	No (2)
RHD-01.10A_2 TK 33A to A HDR	RHD02.6A-01P	Entered as D/S Ext. of RHD02.5A-02R	RO8		0.432	0.051	Band	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD02.6A-01P	Entered as U/S Ext. of RHD02.6A-02E	RO9	97UT081	0.432	0.035	Band	No (2)
RHD-01.10A_2 TK 33A to A HDR	RHD02.6A-02E	Main	RO11	01UT078	0.432	0.127	Blanket	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD02.6A-02E	Main	RO9	97UT081	0.432	0.096	Blanket	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD02.6A-03P	Entered as D/S Ext. of RHD02.6A-02E	RO11	01UT078	0.432	0.102	Band	Yes
RHD-01.10A_2 TK 33A to A HDR	RHD02.6A-03P	Entered as D/S Ext. of RHD02.6A-02E	RO9	97UT081	0.432	0.104	Band	Yes
RHD-01.10B_1 RH 33B to TK 33B	RHD01.10B- 01N	Main	RO10	99UT275	0.432	0.142	Band	Yes
RHD-01.10B_1 RH 33B 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 RH 33B to TK 33B	RHD01.10B- 03N	Main	RO10	99UT276	0.432	0.058	Band	Yes
RHD-01.10B_2 TK 33B to B HDR	RHD01.10B- 27P	Entered as D/S Ext of RHD01.10B-26F	R013	05UT074	0.432	0.031	Band	Yes
RHD-01.10B_2 TK 33B to B HDR	RHD01.10B- 27P	Entered as U/S Ext of RHD01.10B-28E	R013	05UT074	0.432	0.027	Band	No(1)
RHD-01.10B_2 TK 33B to B HDR	RHD01.10B- 28E	Main	R013	05UT074	0.432	0.180	Blanket	Yes
RHD-01.10B_2 TK 33B to B HDR	RHD01.10B- 29P	Entered as D/S Ext of RHD01.10B-28E	R013	05UT074	0.432	0.098	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 TK 33B to B HDR	RHD01.10B-52T	U/S Main	RO10	99UT268	0.432	0.119	Blanket	No (6)
RHD-01.10B_2 TK 33B to B HDR	RHD01.10B-52T	D/S Main	RO10	99UT268	0.432	0.119	Blanket	Yes
RHD-01.10B_2 TK 33B to B HDR	RHD01.10B-52T	Branch	RO10	99UT268	0.432	0.144	Blanket	Yes
RHD-01.10B_2 TK 33B to B HDR	RHD01.10B-52T	U/S Ext.	RO10	99UT268	0.432	0.031	Band	No (2)
RHD-01.10B_2 TK 33B to B HDR	RHD01.10B-52T	Branch Ext.	RO10	99UT268	0.432	0.038	Band	No (2)
RHD-01.10B_2 TK 33B 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 TK 33B to B HDR	RHD02.5B-01V	Main	RO10	99UT149	0.337	0.097	Point to Point	No (10)
RHD-01.10B_2 TK 33B to B HDR	RHD02.5B-01V	Main	RO8		0.337	0.035	Band	No (10)
RHD-01.10B_2 TK 33B to B HDR	RHD02.5B-01V	Main	RO9	97UT052	0.337	0.053	Band	No (10)
RHD-01.10B_2 TK 33B to B HDR	RHD02.5B-02R	U/S Main	RO10	99UT149	0.337	0.154	Point to Point	No (3)
RHD-01.10B_2 TK 33B to B HDR	RHD02.5B-02R	D/S Main	RO10	99UT149	0.500	0.303	Point to Point	No (3)
RHD-01.10B_2 TK 33B to B HDR	RHD02.5B-02R	U/S Main	RO11	01UT081	0.337	0.095	Band	Yes
RHD-01.10B_2 TK 33B to B HDR	RHD02.5B-02R	D/S Main	RO11	01UT081	0.500	0.135	Band	No (3)
RHD-01.10B_2 TK 33B to B HDR	RHD02.5B-02R	U/S Main	RO12	03UT029	0.337	0.051	Band	Yes
RHD-01.10B_2 TK 33B to B HDR	RHD02.5B-02R	D/S Main	RO12	03UT029	0.500	0.077	Band	Yes
RHD-01.10B_2 TK 33B to B HDR	RHD02.5B-02R	D/S Main	RO8		0.500	0.194	Band	No (3)
RHD-01.10B_2 TK 33B to B HDR	RHD02.5B-02R	U/S Main	RO8		0.337	0.101	Band	Yes
RHD-01.10B_2 TK 33B to B HDR	RHD02.5B-02R	D/S Main	RO9	97UT052	0.500	0.190	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-01.10B_2 TK 33B to B HDR	RHD02.5B-02R	U/S Main	RO9	97UT052	0.337	0.105	Band	Yes
RHD-01.10B_2 TK 33B to B HDR	RHD02.6B-01E	Main	RO10	99UT150	0.559	0.210	Blanket	Yes
RHD-01.10B_2 TK 33B to B HDR	RHD02.6B-01E	Main	RO11	01UT080	0.559	0.217	Blanket	Yes
RHD-01.10B_2 TK 33B to B HDR	RHD02.6B-01E	Main	RO12	03UT029	0.559	0.215	Blanket	Yes
RHD-01.10B_2 TK 33B to B HDR	RHD02.6B-01E	Main	RO8		0.559	0.183	Blanket	Yes
RHD-01.10B_2 TK 33B to B HDR	RHD02.6B-01E	Main	RO9	97UT050	0.559	0.188	Blanket	Yes
RHD-01.10B_2 TK 33B 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 TK 33B to B HDR	RHD02.6B-02P	Entered as D/S Ext. of RHD02.6B-01E	RO11	01UT080	0.559	0.099	Band	Yes
RHD-01.10B_2 TK 33B to B HDR	RHD02.6B-02P	Entered as D/S Ext. of RHD02.6B-01E	RO8		0.528	0.086	Band	Yes
RHD-01.10B_2 TK 33B to B HDR	RHD02.6B-02P	Entered as D/S Ext. of RHD02.6B-01E	RO9	97UT050	0.528	0.094	Band	Yes
RHD-01.1A_1 RH 31A to TK 31A	RHD01.1A-01N	Main	RO11	01UT132	0.432	0.127	Band	Yes
RHD-01.1A_1 RH 31A to 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 31A to TK 31A	RHD01.1A-03N	Main	RO11	01UT132	0.432	0.070	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	RO10	99UT230	0.432	0.037	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	RO8		0.475	0.074	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
RHD-01.1A_2 TK 31A to A HDR	RHD02.1A-01V	Main	RO10	99UT147	0.337	0.051	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-01.1A_2 TK 31A to A HDR	RHD02.1A-01V	Main	RO11		0.337	N/A	N/A	No (10)
RHD-01.1A_2 TK 31A to A HDR	RHD02.1A-01V	Main	RO8		0.337	0.031	Band	No (10)
RHD-01.1A_2 TK 31A to A HDR	RHD02.1A-02R	U/S Main	RO10	99UT147	0.337	0.098	Band	Yes
RHD-01.1A_2 TK 31A to A HDR	RHD02.1A-02R	D/S Main	RO10	99UT147	0.432	0.220	Point to Point	No (3)
RHD-01.1A_2 TK 31A to A HDR	RHD02.1A-02R	U/S Main	RO11	01UT079	0.337	0.089	Band	Yes
RHD-01.1A_2 TK 31A to A HDR	RHD02.1A-02R	D/S Main	RO11	01UT079	0.432	0.168	Band	No (3)
RHD-01.1A_2 TK 31A to A HDR	RHD02.1A-02R	U/S Main	RO8		0.337	0.161	Band	No (3)
RHD-01.1A_2 TK 31A to A HDR	RHD02.1A-02R	D/S Main	RO8		0.432	0.085	Band	No (3)
RHD-01.1A_2 TK 31A to 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 31A to 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 31A to 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 31A to A HDR	RHD02.2A-02E	Main	RO10	99UT155	0.473	0.155	Blanket	Yes
RHD-01.1A_2 TK 31A to A HDR	RHD02.2A-02E	Main	RO11	01UT079	0.473	0.148	Blanket	Yes
RHD-01.1A_2 TK 31A to A HDR	RHD02.2A-02E	Main	RO8		0.473	0.077	Blanket	Yes
RHD-01.1A_2 TK 31A to 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 31A to 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-15P	Entered as DS Ext of RHD01.1B-14F	RO13	05UT075	0.432	0.055	Band	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD01.1B-15P	Entered as US Ext of RHD01.1B-16E	RO13	05UT075	0.432	0.058	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)
RHD-01.1B_2 TK 31B to B HDR	RHD01.1B-16E	Main	RO13	05UT075	0.432	0.162	Blanket	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD01.1B-17P	Entered as DS Ext of RHD01.1B-16E	RO13	05UT075	0.432	0.041	Band	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD01.1B-29P	Entered as U/S Ext. of RHD01.1B-30E	RO8		0.473	0.046	Band	No (2)
RHD-01.1B_2 TK 31B to B HDR	RHD01.1B-30E	Main	RO8		0.473	0.083	Blanket	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD01.1B-31P	Entered as D/S Ext. of RHD01.1B-30E	RO8		0.469	0.042	Band	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD01.1B-38P_2	Entered as U/S Ext. of RHD01.1B-39E	RO11	01UT109	0.432	0.053	Band	No (2)
RHD-01.1B_2 TK 31B to B HDR	RHD01.1B-39E	Main	RO11	01UT109	0.432	0.074	Blanket	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD01.1B-40P	Entered as D/S Ext. of RHD01.1B-39E	RO11	01UT109	0.432	0.073	Band	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD01.1B-41E	Main	RO11	01UT109	0.432	0.057	Blanket	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD01.1B-42P_1	Entered as D/S Ext. of RHD01.1B-41E	RO11	01UT109	0.432	0.067	Band	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD01.1B-50P	Entered as U/S Ext. of RHD01.1B-51E	RO10	99UT174	0.432	0.064	Band	No (2)
RHD-01.1B_2 TK 31B to B HDR	RHD01.1B-51E	Main	RO10	99UT174	0.432	0.051	Blanket	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD01.1B-52P	Entered as D/S Ext. of RHD01.1B-51E	RO10	99UT174	0.476	0.054	Band	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD01.1B-52P	Entered as D/S Ext. of RHD01.1B-51E	RO8		0.432	0.051	T DAT	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD01.2B-01R	U/S Main	RO10	99UT174	0.432	0.047	Band	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD01.2B-01R	D/S Main	RO10	99UT174	0.401	0.052	Band	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD01.2B-01R	D/S Ext.	RO10	99UT174	0.337	0.051	Band	No (4)
RHD-01.1B_2 TK 31B to B HDR	RHD01.2B-01R	U/S Main	RO8		0.432	0.047	T DAT	No (17)

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 31B to B HDR	RHD02.1B-01V	Main	RO10	99UT167	0.337	0.077	Point to Point	No (10)
RHD-01.1B_2 TK 31B to B HDR	RHD02.1B-01V	Main	RO8		0.337	0.027	Band	No (10)
RHD-01.1B_2 TK 31B to B HDR	RHD02.1B-01V	Main	RO9	97UT051	0.337	0.043	Band	No (10)
RHD-01.1B_2 TK 31B to B HDR	RHD02.1B-02R	U/S Main	RO10	99UT167	0.337	0.117	Band	No (3)
RHD-01.1B_2 TK 31B to B HDR	RHD02.1B-02R	D/S Main	RO10	99UT167	0.432	0.210	Point to Point	No (3)
RHD-01.1B_2 TK 31B to B HDR	RHD02.1B-02R	U/S Main	RO11	01UT093	0.337	0.113	Band	No (3)
RHD-01.1B_2 TK 31B to B HDR	RHD02.1B-02R	D/S Main	RO11	01UT093	0.432	0.195	Band	No (3)
RHD-01.1B_2 TK 31B to B HDR	RHD02.1B-02R	D/S Main	RO8		0.432	0.176	Band	No (3)
RHD-01.1B_2 TK 31B to B HDR	RHD02.1B-02R	U/S Main	RO8		0.337	0.120	Band	No (3)
RHD-01.1B_2 TK 31B to B HDR	RHD02.1B-02R	D/S Main	RO9	97UT051	0.432	0.183	Band	No (3)
RHD-01.1B_2 TK 31B to B HDR	RHD02.1B-02R	U/S Main	RO9	97UT051	0.337	0.112	Band	No (3)
RHD-01.1B_2 TK 31B to B HDR	RHD02.2B-01P	Entered as D/S Ext. of RHD02.1B-02R	RO10	99UT167	0.432	0.042	Band	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD02.2B-01P	Entered as D/S Ext. of RHD02.1B-02R	RO11	01UT093	0.432	0.040	Band	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD02.2B-01P	Entered as D/S Ext. of RHD02.1B-02R	RO8		0.432	0.042	Band	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD02.2B-01P	Entered as D/S Ext. of RHD02.1B-02R	RO9	97UT051	0.432	0.042	Band	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD02.2B-02E	Main	RO10	99UT167	0.432	0.088	Blanket	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD02.2B-02E	U/S Ext.	RO10	99UT167	0.432	0.046	Band	No (2)
RHD-01.1B_2 TK 31B to B HDR	RHD02.2B-02E	Main	RO11	01UT093	0.432	0.083	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-01.1B_2 TK 31B to B HDR	RHD02.2B-03P	Entered as D/S Ext. of RHD02.2B-02E	RO10	99UT167	0.432	0.118	Band	Yes
RHD-01.1B_2 TK 31B to B HDR	RHD02.2B-03P	Entered as D/S Ext. of RHD02.2B-02E	RO11	01UT093	0.432	0.126	Band	Yes
RHD-01.3A_2 TK 32A to 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 32A to A HDR	RHD01.5A-01R	U/S Main	RO12	03UT129	0.500	0.109	Band	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD01.5A-01R	D/S Main	RO12	03UT129	0.432	0.154	Band	Yes
RHD-01.3A_2 TK 32A to 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 32A to 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 32A to 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 32A to 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 32A to A HDR	RHD01.5A-05R	U/S Main	RO12	03UT128	0.432	0.057	Band	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD01.5A-05R	D/S Main	RO12	03UT128	0.500	0.067	Band	Yes
RHD-01.3A_2 TK 32A to 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 32A to A HDR	RHD01.7A-04E	Main	RO10	99UT173	0.458	0.060	Blanket	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD01.7A-04E	U/S Ext.	RO10	99UT173	0.432	0.075	Band	No (2)
RHD-01.3A_2 TK 32A to A HDR	RHD01.7A-04E	Main	RO8		0.458	0.051	Blanket	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD01.8A-01R	U/S Main	RO10	99UT173	0.432	0.133	Point to Point	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD01.8A-01R	D/S Main	RO10	99UT173	0.337	0.135	Point to Point	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD01.8A-01R	U/S Main	RO8		0.432	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)
RHD-01.3A_2 TK 32A to A HDR	RHD01.8A-01R	D/S Main	RO8		0.337	0.085	Band	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD01.8A-02P	Entered as D/S Ext. of RHD01.8A-01R	RO10	99UT173	0.376	0.097	Point to Point	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD01.8A-02P	Entered as D/S Ext. of RHD01.8A-01R	RO8		0.376	0.054	Band	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD02.3A-01V	Main	RO10	99UT166	0.337	0.159	Band	No (10)
RHD-01.3A_2 TK 32A to A HDR	RHD02.3A-01V	U/S Ext.	RO10	99UT173	0.337	0.065	Band	No (10)
RHD-01.3A_2 TK 32A to A HDR	RHD02.3A-01V	Main	RO8		0.337	0.070	Band	No (10)
RHD-01.3A_2 TK 32A to A HDR	RHD02.3A-02R	U/S Main	RO10	99UT166	0.337	0.100	Band	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD02.3A-02R	D/S Main	RO10	99UT166	0.432	0.223	Band	No (3)
RHD-01.3A_2 TK 32A to A HDR	RHD02.3A-02R	D/S Main	RO8		0.432	0.198	Band	No (3)
RHD-01.3A_2 TK 32A to A HDR	RHD02.3A-02R	U/S Main	RO8		0.337	0.089	Band	No (3)
RHD-01.3A_2 TK 32A to 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 32A to A HDR	RHD02.4A-01P	Entered as D/S Ext. of RHD02.3A-02R	RO8		0.432	0.047	Band	Yes
RHD-01.3A_2 TK 32A to A HDR	RHD02.4A-02E	Main	RO8		0.473	0.054	Blanket	Yes
RHD-01.3B_1 RH 32B to TK 32B	RHD01.3B-01N	Main	RO9	97UT120	0.432	0.084	Band	Yes
RHD-01.3B_1 RH 32B to 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_1 RH 32B to 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-04N	Main	RO12	03UT074	0.432	0.074	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.3B-05P	Entered as D/S Ext of RHD01.3B-04N	RO12	03UT074	0.432	0.039	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	RHD01.3B-06E	Main	RO10	99UT251	0.432	0.131	Blanket	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.3B-06E	U/S Ext.	RO10	99UT252	0.432	0.050	Band	No (2)
RHD-01.3B_2 TK 32B to 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 32B to B HDR	RHD01.3B-08E	Main	RO10	99UT245	0.432	0.041	Blanket	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.3B-08E	U/S Ext.	RO10	99UT245	0.432	0.061	Band	No (2)
RHD-01.3B_2 TK 32B to 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 32B to 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 32B to B HDR	RHD01.3B-10E	Main	RO12	03UT119	0.432	0.056	Blanket	Yes
RHD-01.3B_2 TK 32B to 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 32B to B HDR	RHD01.3B-11P	Entered as U/S Ext of RHD01.3B-12E	RO12	03UT119	0.432	0.041	Band	No(2)
RHD-01.3B_2 TK 32B to B HDR	RHD01.3B-12E	Main	RO12	03UT119	0.432	0.066	Blanket	Yes
RHD-01.3B_2 TK 32B to 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 32B to 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 32B to B HDR	RHD01.3B-14E	Main	RO12	03UT119	0.432	0.085	Blanket	Yes
RHD-01.3B_2 TK 32B to 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 32B to 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 32B to B HDR	RHD01.3B-16E	Main	RO11	01UT100	0.432	0.111	Blanket	Yes
RHD-01.3B_2 TK 32B to 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 32B to B HDR	RHD01.3B-18E	Main	RO11	01UT100	0.432	0.097	Blanket	Yes
RHD-01.3B_2 TK 32B to 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 32B to B HDR	RHD01.3B-20R	U/S Main	RO11	01UT100	0.432	0.099	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.3B-20R	D/S Main	RO11	01UT100	0.594	0.104	Band	Yes
RHD-01.3B_2 TK 32B to 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 32B to B HDR	RHD01.5B-02P	Entered as U/S Ext. of RHD01.5B-03F	RO8		0.458	0.135	Band	No (2)
RHD-01.3B_2 TK 32B to 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 32B to 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 32B to 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 32B to B HDR	RHD01.5B-05R	US Main	RO13	05UT082	0.432	0.111	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.5B-05R	DS Main	RO13	05UT082	0.594	0.106	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.5B-05R	D/S Main	RO8		0.594	0.093	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.5B-05R	U/S Main	RO8		0.432	0.182	Band	No (3)
RHD-01.3B_2 TK 32B to 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 32B to 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 32B to 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 32B to B HDR	RHD01.6B-02E	Main	RO13	05UT082	0.594	0.086	Blanket	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.6B-03P_1	Entered as DS Ext of RHD01.6B-02E	RO13	05UT082	0.594	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)
RHD-01.3B_2 TK 32B to B HDR	RHD01.7B-03R	U/S Main	RO10	99UT277	0.432	0.311	Band	No(3)
RHD-01.3B_2 TK 32B to B HDR	RHD01.7B-03R	D/S Main	RO10	99UT277	0.594	0.079	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.7B-03R	U/S Ext.	RO10	99UT277	0.432	0.044	Band	No (2)
RHD-01.3B_2 TK 32B to B HDR	RHD01.8B-01P_1	Entered as D/S Ext. of RHD01.7B-03R	RO10	99UT277	0.594	0.076	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.8B-06E	Main	RO9	97UT073	0.594	0.087	Blanket	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.9B-01R	U/S Main	RO9	97UT073	0.594	0.067	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD01.9B-01R	D/S Main	RO9	97UT073	0.337	0.202	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD02.3B-01V	Main	RO8		0.337	0.042	Band	No (10)
RHD-01.3B_2 TK 32B to B HDR	RHD02.3B-01V	Main	RO9	97UT073	0.337	0.063	Band	No (10)
RHD-01.3B_2 TK 32B to B HDR	RHD02.3B-02R	U/S Main	RO11	01UT097	0.337	0.083	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD02.3B-02R	D/S Main	RO11	01UT097	0.594	0.227	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD02.3B-02R	U/S Main	RO12	03UT027	0.337	0.072	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD02.3B-02R	D/S Main	RO12	03UT027	0.594	0.230	Band	No(3)
RHD-01.3B_2 TK 32B to B HDR	RHD02.3B-02R	D/S Main	RO8		0.594	0.226	Band	No (3)
RHD-01.3B_2 TK 32B to B HDR	RHD02.3B-02R	U/S Main	RO8		0.337	0.104	Band	No (3)
RHD-01.3B_2 TK 32B to 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 32B to 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 32B to 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 32B to B HDR	RHD02.4B-02E	Main	RO11	01UT097	0.594	0.151	Blanket	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD02.4B-02E	Main	RO8		0.594	0.126	Blanket	No (8)
RHD-01.3B_2 TK 32B to B HDR	RHD02.4B-03P	Entered as D/S Ext. of RHD02.4B-02E	RO11	01UT097	0.594	0.056	Band	Yes
RHD-01.3B_2 TK 32B to B HDR	RHD02.4B-07P	Entered as Br Ext. of RHD02.7B-08L	RO8		0.609	0.054	Band	No (2)
RHD-02.10B B HDR to FWH 36A	RHD02.10B-14T	U/S Main	RO13	05UT073	0.432	0.213	Band	Yes
RHD-02.10B B HDR to FWH 36A	RHD02.10B-14T	D/S Main	RO13	05UT073	0.432	0.281	Band	Yes
RHD-02.10B B HDR to FWH 36A	RHD02.10B-14T	Branch	RO13	05UT073	0.432	0.295	Band	Yes
RHD-02.10B B HDR to FWH 36A	RHD02.10B-16T	U/S Main	RO13	05UT073	0.432	0.220	Band	Yes
RHD-02.10B B HDR to FWH 36A	RHD02.10B-16T	D/S Main	RO13	05UT073	0.432	0.196	Band	Yes
RHD-02.10B B HDR to FWH 36A	RHD02.10B-16T	Branch	RO13	05UT073	0.432	0.248	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-02.10B B HDR to FWH 36A	RHD02.10B-17R	D/S Main	RO13	05UT073	0.500	0.141	Band	Yes
RHD-02.11A A HDR to FWH 36A	RHD02.11A-16P	Entered as U/S Ext. of RHD02.11A-17T	RO8		0.489	0.066	Band	No (2)
RHD-02.11A A HDR to FWH 36A	RHD02.11A-17T	U/S Main	RO8		0.432	0.120	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	Branch	RO8		0.432	0.062	Blanket	Yes
RHD-02.11A A HDR to FWH 36A	RHD02.11A-18P	Entered as Br Ext. of RHD02.11A-17T	RO8		0.473	0.066	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)

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-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-04E	Main	RO11	01UT033	0.432	0.045	Blanket	Yes
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-05E	Main	RO11	01UT054	0.432	0.086	Blanket	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-05E	Main	RO9	97UT181	0.432	0.087	Blanket	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-06P_1	Entered as D/S Ext. of RHD02.13A-05E	RO11	97UT181	0.432	0.042	Band	Yes
RHD-02.13A A HDR to FWH 36B	RHD02.13A-06P_1	Entered as D/S Ext. of RHD02.13A-05E	RO9	01UT053	0.432	0.042	Band	Yes
RHD-02.7B TK B HDR to FWH 36	RHD02.7B-07P	Entered as U/S Ext. of RHD02.7B-08L	RO8		0.543	0.054	Band	No (2)
RHD-02.8B TK B HDR to FWH 36	RHD02.7B-08L	U/S Main	RO8		0.605	0.046	Band	Yes
RHD-02.8B TK B HDR to FWH 36	RHD02.7B-08L	D/S Main	RO8		0.605	0.054	Band	Yes
RHD-02.8B TK B HDR to FWH 36	RHD02.7B-08L	Branch	RO8		0.500	0.031	Band	No(9)
RHD-02.8B TK B HDR to FWH 36	RHD02.8B-01P	Entered as D/S Ext. of RHD02.7B-08L	RO8		0.609	0.058	Band	Yes

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 T _{nom} .
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 type 14 tees
19	D/S Ext is not a pipe
20	Unable to exclude counterbore
21	Small-bore components
22	Suspicious T _{nom} inflating measured wear to an excessive level.

Appendix G

Water Chemistry Analysis Reports

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*Estimate for Cycle 14

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 12-SEP-2005 Time: 09:31:17
 Analysis Date: 12-SEP-2005 Time: 09:31:04
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

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

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 15.670
 Concentration of Ammonia (PPM): 0.680, Sampling at Final Feedwater
 Concentration of Hydrazine (PPB): 20.000, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 12.000
 Hydrazine at MSR drain (PPB): 24.000

HBD Item Description	(Note 1)		Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
	Cold pH	Hot pH			
Steam Generator(Blowdown Line)	8.89	5.75	0.19	53.07	n/a
Steam Generator Outlet Steam	9.28	5.75	0.19	53.07	n/a
HP Extraction Line #1	9.28	6.06	0.16	83.03	n/a
HP Extraction Line #2	9.28	5.89	0.17	55.42	n/a
Moisture Separator Drain Line	8.86	6.00	0.17	24.00	n/a
LP Extraction Line #1	9.31	6.45	0.17	45.88	n/a
LP Extraction Line #2	9.31	6.81	0.17	34.34	n/a
LP Extraction Line #3	9.31	7.29	0.20	7.80	n/a
LP Extraction Line #4	9.31	7.62	0.18	9.62	n/a
#1 Feedwater Heater Tube Side	9.28	6.16	0.68	20.06	n/a
#2 Feedwater Heater Tube Side	9.30	6.40	0.74	25.57	n/a
#3 Feedwater Heater Tube Side	9.30	6.86	0.74	31.54	n/a
#4 Feedwater Heater Tube Side	9.30	7.24	0.74	34.85	n/a
#5 Feedwater Heater Tube Side	9.30	7.73	0.74	37.34	n/a
#6 Feedwater Heater Tube Side	9.30	8.14	0.74	38.45	n/a
#1 Feedwater Heater Shell Side	9.28	6.16	0.69	12.00	n/a
#2 Feedwater Heater Shell Side	9.28	6.38	0.69	12.00	n/a
#3 Feedwater Heater Shell Side	9.31	6.86	0.75	2.74	n/a
#4 Feedwater Heater Shell Side	9.31	7.24	0.75	2.74	n/a
#5 Feedwater Heater Shell Side	9.31	7.73	0.75	2.74	n/a
#6 Feedwater Heater Shell Side	9.31	8.14	0.75	2.74	n/a
Feed Pump #1 Drain Line	9.31	8.36	0.13	20.50	n/a
#1 Reheater Drain Line	9.28	5.95	0.65	12.20	n/a
#1 Drain Tank	9.20	6.03	0.52	16.00	n/a
#2 Drain Tank	8.89	5.76	0.19	53.07	n/a

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

Note 2: For superheated steam, amine concentrations, cold and hot pH are not reported since there is no water phase.

***** Power Level and Steam Cycle Data *****

Steam Generator :
 Main Steam Flow Rate: 13.024 Mlb/hr Blowdown Flow Rate: 0.100 Mlb/hr
 SG Outlet Pressure: 778.6 psia SG Outlet Temperature: 518.0 F
 SG Carryover: 0.01% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.024	778.6	518.0	0.9999	-----
HP Extraction Line #1	0.929	185.6	375.6	0.9540	1158.3
HP Extraction Line #2	0.706	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line	1.217	221.9	390.6	0.0000	363.3
LP Extraction Line #1	0.503	65.0	298.0	0.9981	1177.4
LP Extraction Line #2	0.476	27.9	246.1	0.9557	1120.6
LP Extraction Line #3	0.408	10.7	196.5	0.6642	815.4
LP Extraction Line #4	0.667	5.0	162.6	0.7270	858.0
#1 Feedwater Heater Tube Side	-----	-----	423.2	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	371.6	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	293.6	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	243.8	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	191.8	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.7	0.0000	-----
Feed Pump #1 Drain Line	0.117	1.0	101.7	0.8734	974.8
#1 Reheater Drain Line	0.796	644.7	494.0	0.0201	495.3
#1 Drain Tank	0.000	403.5	445.4	0.0000	359.1
#2 Drain Tank	0.000	779.0	515.2	0.0000	506.1

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 12-SEP-2005 Time: 09:32:46
 Analysis Date: 12-SEP-2005 Time: 09:32:20
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

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

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 16.430
 Concentration of Ammonia (PPM): 0.480, Sampling at Final Feedwater
 Concentration of Hydrazine (PPB): 20.000, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 12.000
 Hydrazine at MSR drain (PPB): 24.000

HBD Item Description	(Note 1)		Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
	Cold pH	Hot pH			
Steam Generator (Blowdown Line)	8.78	5.73	0.14	53.07	n/a
Steam Generator Outlet Steam	9.18	5.73	0.13	53.07	n/a
HP Extraction Line #1	9.18	6.01	0.12	83.03	n/a
HP Extraction Line #2	9.18	5.84	0.13	55.42	n/a
Moisture Separator Drain Line	8.76	5.94	0.13	24.00	n/a
LP Extraction Line #1	9.21	6.38	0.13	45.88	n/a
LP Extraction Line #2	9.21	6.74	0.13	34.34	n/a
LP Extraction Line #3	9.21	7.21	0.16	7.80	n/a
LP Extraction Line #4	9.21	7.55	0.14	9.62	n/a
#1 Feedwater Heater Tube Side	9.18	6.09	0.48	19.96	n/a
#2 Feedwater Heater Tube Side	9.20	6.32	0.52	25.52	n/a
#3 Feedwater Heater Tube Side	9.20	6.77	0.52	31.70	n/a
#4 Feedwater Heater Tube Side	9.20	7.14	0.52	35.16	n/a
#5 Feedwater Heater Tube Side	9.20	7.63	0.52	37.77	n/a
#6 Feedwater Heater Tube Side	9.20	8.04	0.52	38.94	n/a
#1 Feedwater Heater Shell Side	9.18	6.09	0.49	12.00	n/a
#2 Feedwater Heater Shell Side	9.18	6.30	0.49	12.00	n/a
#3 Feedwater Heater Shell Side	9.21	6.77	0.53	2.74	n/a
#4 Feedwater Heater Shell Side	9.21	7.15	0.53	2.74	n/a
#5 Feedwater Heater Shell Side	9.21	7.64	0.53	2.74	n/a
#6 Feedwater Heater Shell Side	9.21	8.04	0.53	2.74	n/a
Feed Pump #1 Drain Line	9.21	8.28	0.11	20.50	n/a
#1 Reheater Drain Line	9.18	5.89	0.46	12.20	n/a
#1 Drain Tank	9.09	5.96	0.37	16.00	n/a
#2 Drain Tank	8.78	5.73	0.14	53.07	n/a

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

**** Power Level and Steam Cycle Data ****

Steam Generator :
 Main Steam Flow Rate: 13.024 Mlb/hr Blowdown Flow Rate: 0.100 Mlb/hr
 SG Outlet Pressure: 778.6 psia SG Outlet Temperature: 518.0 F
 SG Carryover: 0.01% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.024	778.6	518.0	0.9999	-----
HP Extraction Line #1	0.929	185.6	375.6	0.9540	1158.3
HP Extraction Line #2	0.706	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line	1.217	221.9	390.6	0.0000	363.3
LP Extraction Line #1	0.503	65.0	298.0	0.9981	1177.4
LP Extraction Line #2	0.476	27.9	246.1	0.9557	1120.6
LP Extraction Line #3	0.408	10.7	196.5	0.6642	815.4
LP Extraction Line #4	0.667	5.0	162.6	0.7270	858.0
#1 Feedwater Heater Tube Side	-----	-----	423.2	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	371.6	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	293.6	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	243.8	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	191.8	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.7	0.0000	-----
Feed Pump #1 Drain Line	0.117	1.0	101.7	0.8734	974.8
#1 Reheater Drain Line	0.796	644.7	494.0	0.0201	495.3
#1 Drain Tank	0.000	403.5	445.4	0.0000	359.1
#2 Drain Tank	0.000	779.0	515.2	0.0000	506.1

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 12-SEP-2005 Time: 09:33:11
 Analysis Date: 12-SEP-2005 Time: 09:33:05
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

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

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 11.720
 Concentration of Ammonia (PPM): 0.760, Sampling at Condensate
 Concentration of Hydrazine (PPB): 25.000, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 15.000
 Hydrazine at MSR drain (PPB): 30.000
 Concentration of Boron (PPM): 7.500, Sampling at Steam Generator Blowdown
 Boron Injection Rate: 0.000 lbm/hr

HBD Item Description	(Note 1)		Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
	Cold pH	Hot pH			
Steam Generator (Blowdown Line)	7.48	5.75	0.20	66.34	n/a
Steam Generator Outlet Steam	9.02	5.75	0.19	66.34	n/a
HP Extraction Line #1	9.02	6.05	0.17	103.79	n/a
HP Extraction Line #2	9.02	5.89	0.18	69.28	n/a
Moisture Separator Drain Line	7.78	5.99	0.18	30.00	n/a
LP Extraction Line #1	9.26	6.39	0.19	57.35	n/a
LP Extraction Line #2	9.26	6.78	0.18	42.92	n/a
LP Extraction Line #3	9.26	7.28	0.20	9.75	n/a
LP Extraction Line #4	9.26	7.60	0.19	12.02	n/a
#1 Feedwater Heater Tube Side	8.99	6.17	0.70	24.95	n/a
#2 Feedwater Heater Tube Side	9.21	6.41	0.76	30.62	n/a
#3 Feedwater Heater Tube Side	9.21	6.86	0.76	35.69	n/a
#4 Feedwater Heater Tube Side	9.21	7.24	0.76	38.40	n/a
#5 Feedwater Heater Tube Side	9.21	7.73	0.76	40.40	n/a
#6 Feedwater Heater Tube Side	9.21	8.13	0.76	41.29	n/a
#1 Feedwater Heater Shell Side	9.02	6.17	0.71	15.00	n/a
#2 Feedwater Heater Shell Side	9.02	6.39	0.71	15.00	n/a
#3 Feedwater Heater Shell Side	9.26	6.87	0.78	3.42	n/a
#4 Feedwater Heater Shell Side	9.26	7.25	0.78	3.42	n/a
#5 Feedwater Heater Shell Side	9.26	7.74	0.78	3.42	n/a
#6 Feedwater Heater Shell Side	9.26	8.14	0.78	3.42	n/a
Feed Pump #1 Drain Line	9.26	8.18	0.19	25.62	n/a
#1 Reheater Drain Line	9.02	5.95	0.67	15.24	n/a
#1 Drain Tank	8.56	6.03	0.53	20.00	n/a
#2 Drain Tank	7.48	5.75	0.20	66.34	n/a

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

***** Power Level and Steam Cycle Data *****

Steam Generator :
 Main Steam Flow Rate: 13.024 Mlb/hr Blowdown Flow Rate: 0.100 Mlb/hr
 SG Outlet Pressure: 778.6 psia SG Outlet Temperature: 518.0 F
 SG Carryover: 0.01% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.024	778.6	518.0	0.9999	-----
HP Extraction Line #1	0.929	185.6	375.6	0.9540	1158.3
HP Extraction Line #2	0.706	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line	1.217	221.9	390.6	0.0000	363.3
LP Extraction Line #1	0.503	65.0	298.0	0.9981	1177.4
LP Extraction Line #2	0.476	27.9	246.1	0.9557	1120.6
LP Extraction Line #3	0.408	10.7	196.5	0.6642	815.4
LP Extraction Line #4	0.667	5.0	162.6	0.7270	858.0
#1 Feedwater Heater Tube Side	-----	-----	423.2	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	371.6	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	293.6	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	243.8	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	191.8	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.7	0.0000	-----
Feed Pump #1 Drain Line	0.117	1.0	101.7	0.8734	974.8
#1 Reheater Drain Line	0.796	644.7	494.0	0.0201	495.3
#1 Drain Tank	0.000	403.5	445.4	0.0000	359.1
#2 Drain Tank	0.000	779.0	515.2	0.0000	506.1

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 12-SEP-2005 Time: 09:33:48
 Analysis Date: 12-SEP-2005 Time: 09:33:40
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

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

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 9.130
 Concentration of Ammonia (PPM): 1.260, Sampling at Final Feedwater
 Concentration of Hydrazine (PPB): 40.000, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 24.000
 Hydrazine at MSR drain (PPB): 48.000
 Concentration of Boron (PPM): 7.500, Sampling at Steam Generator Blowdown
 Boron Injection Rate: 0.000 lbm/hr

HBD Item Description	(Note 1)		Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
	Cold pH	Hot pH			
Steam Generator (Blowdown Line)	7.71	5.82	0.35	106.15	n/a
Steam Generator Outlet Steam	9.24	5.82	0.34	106.15	n/a
HP Extraction Line #1	9.24	6.16	0.28	166.07	n/a
HP Extraction Line #2	9.24	5.99	0.30	110.85	n/a
Moisture Separator Drain Line	7.99	6.10	0.30	48.00	n/a
LP Extraction Line #1	9.44	6.52	0.29	91.76	n/a
LP Extraction Line #2	9.44	6.91	0.27	68.67	n/a
LP Extraction Line #3	9.44	7.41	0.31	15.60	n/a
LP Extraction Line #4	9.44	7.73	0.28	19.24	n/a
#1 Feedwater Heater Tube Side	9.21	6.30	1.26	39.98	n/a
#2 Feedwater Heater Tube Side	9.39	6.55	1.38	47.55	n/a
#3 Feedwater Heater Tube Side	9.39	7.01	1.38	52.60	n/a
#4 Feedwater Heater Tube Side	9.39	7.40	1.38	55.17	n/a
#5 Feedwater Heater Tube Side	9.39	7.89	1.38	57.08	n/a
#6 Feedwater Heater Tube Side	9.39	8.29	1.38	57.94	n/a
#1 Feedwater Heater Shell Side	9.24	6.30	1.28	24.00	n/a
#2 Feedwater Heater Shell Side	9.24	6.53	1.28	24.00	n/a
#3 Feedwater Heater Shell Side	9.44	7.02	1.40	5.48	n/a
#4 Feedwater Heater Shell Side	9.44	7.40	1.40	5.48	n/a
#5 Feedwater Heater Shell Side	9.44	7.90	1.40	5.48	n/a
#6 Feedwater Heater Shell Side	9.44	8.30	1.40	5.48	n/a
Feed Pump #1 Drain Line	9.44	8.31	0.27	40.99	n/a
#1 Reheater Drain Line	9.24	6.07	1.20	24.39	n/a
#1 Drain Tank	8.81	6.15	0.95	32.01	n/a
#2 Drain Tank	7.71	5.83	0.35	106.15	n/a

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

**** Power Level and Steam Cycle Data ****

Steam Generator :
 Main Steam Flow Rate: 13.024 Mlb/hr Blowdown Flow Rate: 0.100 Mlb/hr
 SG Outlet Pressure: 778.6 psia SG Outlet Temperature: 518.0 F
 SG Carryover: 0.01% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.024	778.6	518.0	0.9999	-----
HP Extraction Line #1	0.929	185.6	375.6	0.9540	1158.3
HP Extraction Line #2	0.706	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line	1.217	221.9	390.6	0.0000	363.3
LP Extraction Line #1	0.503	65.0	298.0	0.9981	1177.4
LP Extraction Line #2	0.476	27.9	246.1	0.9557	1120.6
LP Extraction Line #3	0.408	10.7	196.5	0.6642	815.4
LP Extraction Line #4	0.667	5.0	162.6	0.7270	858.0
#1 Feedwater Heater Tube Side	-----	-----	423.2	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	371.6	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	293.6	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	243.8	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	191.8	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.7	0.0000	-----
Feed Pump #1 Drain Line	0.117	1.0	101.7	0.8734	974.8
#1 Reheater Drain Line	0.796	644.7	494.0	0.0201	495.3
#1 Drain Tank	0.000	403.5	445.4	0.0000	359.1
#2 Drain Tank	0.000	779.0	515.2	0.0000	506.1

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 12-SEP-2005 Time: 09:34:44
 Analysis Date: 12-SEP-2005 Time: 09:34:36
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

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

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 2.830
 Concentration of Ammonia (PPM): 1.290, Sampling at Final Feedwater
 Concentration of Hydrazine (PPB): 40.000, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 24.000
 Hydrazine at MSR drain (PPB): 48.000

HBD Item Description	(Note 1)		Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
	Cold pH	Hot pH			
Steam Generator (Blowdown Line)	9.09	5.84	0.35	106.15	n/a
Steam Generator Outlet Steam	9.46	5.84	0.35	106.15	n/a
HP Extraction Line #1	9.46	6.19	0.28	166.07	n/a
HP Extraction Line #2	9.46	6.00	0.31	110.85	n/a
Moisture Separator Drain Line	9.04	6.12	0.30	48.00	n/a
LP Extraction Line #1	9.48	6.58	0.27	91.76	n/a
LP Extraction Line #2	9.48	6.95	0.27	68.67	n/a
LP Extraction Line #3	9.48	7.43	0.31	15.60	n/a
LP Extraction Line #4	9.48	7.76	0.28	19.24	n/a
#1 Feedwater Heater Tube Side	9.45	6.30	1.29	40.02	n/a
#2 Feedwater Heater Tube Side	9.48	6.55	1.41	46.95	n/a
#3 Feedwater Heater Tube Side	9.48	7.02	1.41	50.08	n/a
#4 Feedwater Heater Tube Side	9.48	7.41	1.41	51.26	n/a
#5 Feedwater Heater Tube Side	9.48	7.90	1.41	52.03	n/a
#6 Feedwater Heater Tube Side	9.48	8.32	1.41	52.36	n/a
#1 Feedwater Heater Shell Side	9.46	6.30	1.31	24.00	n/a
#2 Feedwater Heater Shell Side	9.46	6.53	1.31	24.00	n/a
#3 Feedwater Heater Shell Side	9.48	7.02	1.44	5.48	n/a
#4 Feedwater Heater Shell Side	9.48	7.41	1.44	5.48	n/a
#5 Feedwater Heater Shell Side	9.48	7.91	1.44	5.48	n/a
#6 Feedwater Heater Shell Side	9.48	8.32	1.44	5.48	n/a
Feed Pump #1 Drain Line	9.48	8.50	0.20	40.99	n/a
#1 Reheater Drain Line	9.46	6.07	1.23	24.39	n/a
#1 Drain Tank	9.38	6.16	0.97	32.01	n/a
#2 Drain Tank	9.09	5.84	0.35	106.15	n/a

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

***** Power Level and Steam Cycle Data *****

Steam Generator :
 Main Steam Flow Rate: 13.024 Mlb/hr Blowdown Flow Rate: 0.100 Mlb/hr
 SG Outlet Pressure: 778.6 psia SG Outlet Temperature: 518.0 F
 SG Carryover: 0.01% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.024	778.6	518.0	0.9999	-----
HP Extraction Line #1	0.929	185.6	375.6	0.9540	1158.3
HP Extraction Line #2	0.706	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line	1.217	221.9	390.6	0.0000	363.3
LP Extraction Line #1	0.503	65.0	298.0	0.9981	1177.4
LP Extraction Line #2	0.476	27.9	246.1	0.9557	1120.6
LP Extraction Line #3	0.408	10.7	196.5	0.6642	815.4
LP Extraction Line #4	0.667	5.0	162.6	0.7270	858.0
#1 Feedwater Heater Tube Side	-----	-----	423.2	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	371.6	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	293.6	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	243.8	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	191.8	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.7	0.0000	-----
Feed Pump #1 Drain Line	0.117	1.0	101.7	0.8734	974.8
#1 Reheater Drain Line	0.796	644.7	494.0	0.0201	495.3
#1 Drain Tank	0.000	403.5	445.4	0.0000	359.1
#2 Drain Tank	0.000	779.0	515.2	0.0000	506.1

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 12-SEP-2005 Time: 09:35:26
 Analysis Date: 12-SEP-2005 Time: 09:35:17
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

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

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 2.530
 Concentration of Ammonia (PPM): 1.290, Sampling at Final Feedwater
 Concentration of Hydrazine (PPB): 40.000, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 24.000
 Hydrazine at MSR drain (PPB): 48.000

HBD Item Description	(Note 1)		Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
	Cold pH	Hot pH			
Steam Generator (Blowdown Line)	9.09	5.84	0.35	106.15	n/a
Steam Generator Outlet Steam	9.46	5.84	0.35	106.15	n/a
HP Extraction Line #1	9.46	6.19	0.28	166.07	n/a
HP Extraction Line #2	9.46	6.00	0.31	110.85	n/a
Moisture Separator Drain Line	9.04	6.12	0.30	48.00	n/a
LP Extraction Line #1	9.48	6.58	0.27	91.76	n/a
LP Extraction Line #2	9.48	6.95	0.27	68.67	n/a
LP Extraction Line #3	9.48	7.43	0.31	15.60	n/a
LP Extraction Line #4	9.48	7.76	0.28	19.24	n/a
#1 Feedwater Heater Tube Side	9.45	6.30	1.29	40.02	n/a
#2 Feedwater Heater Tube Side	9.48	6.55	1.41	46.91	n/a
#3 Feedwater Heater Tube Side	9.48	7.02	1.41	49.95	n/a
#4 Feedwater Heater Tube Side	9.48	7.41	1.41	51.06	n/a
#5 Feedwater Heater Tube Side	9.48	7.90	1.41	51.78	n/a
#6 Feedwater Heater Tube Side	9.48	8.32	1.41	52.09	n/a
#1 Feedwater Heater Shell Side	9.46	6.30	1.31	24.00	n/a
#2 Feedwater Heater Shell Side	9.46	6.53	1.31	24.00	n/a
#3 Feedwater Heater Shell Side	9.48	7.02	1.44	5.48	n/a
#4 Feedwater Heater Shell Side	9.48	7.41	1.44	5.48	n/a
#5 Feedwater Heater Shell Side	9.48	7.91	1.44	5.48	n/a
#6 Feedwater Heater Shell Side	9.48	8.32	1.44	5.48	n/a
Feed Pump #1 Drain Line	9.48	8.50	0.20	40.99	n/a
#1 Reheater Drain Line	9.46	6.07	1.23	24.39	n/a
#1 Drain Tank	9.38	6.16	0.97	32.01	n/a
#2 Drain Tank	9.09	5.84	0.35	106.15	n/a

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

Note 2: For superheated steam, amine concentrations, cold and hot pH are not reported since there is no water phase.

**** Power Level and Steam Cycle Data ****

Steam Generator :
 Main Steam Flow Rate: 13.024 Mlb/hr Blowdown Flow Rate: 0.100 Mlb/hr
 SG Outlet Pressure: 778.6 psia SG Outlet Temperature: 518.0 F
 SG Carryover: 0.01% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.024	778.6	518.0	0.9999	-----
HP Extraction Line #1	0.929	185.6	375.6	0.9540	1158.3
HP Extraction Line #2	0.706	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line	1.217	221.9	390.6	0.0000	363.3
LP Extraction Line #1	0.503	65.0	298.0	0.9981	1177.4
LP Extraction Line #2	0.476	27.9	246.1	0.9557	1120.6
LP Extraction Line #3	0.408	10.7	196.5	0.6642	815.4
LP Extraction Line #4	0.667	5.0	162.6	0.7270	858.0
#1 Feedwater Heater Tube Side	-----	-----	423.2	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	371.6	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	293.6	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	243.8	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	191.8	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.7	0.0000	-----
Feed Pump #1 Drain Line	0.117	1.0	101.7	0.8734	974.8
#1 Reheater Drain Line	0.796	644.7	494.0	0.0201	495.3
#1 Drain Tank	0.000	403.5	445.4	0.0000	359.1
#2 Drain Tank	0.000	779.0	515.2	0.0000	506.1

Company: Entergy Nuclear Operations, Inc. Report Date: 12-SEP-2005 Time: 09:35:53
 Plant: Indian Point Analysis Date: 12-SEP-2005 Time: 09:35:46
 Unit: 3 CHECWORKS FAC Version 1.0G (Build 75)
 DB Name: IP3

 *** Chemistry Analysis Report ***

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

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 3.000
 Concentration of Morpholine (PPM): 4.500, Sampling at Final Feedwater
 Concentration of Ammonia (PPM): 0.060, Sampling at Final Feedwater
 Concentration of Hydrazine (PPB): 58.000, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 34.800
 Hydrazine at MSR drain (PPB): 69.600
 Concentration of Boron (PPM): 7.500, Sampling at Steam Generator Blowdown
 Boron Injection Rate: 0.000 lbm/hr

HBD Item Description	(Note 1) Cold pH	Hot pH	Morpholine (PPM)	Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
Steam Generator (Blowdown Line)	7.96	5.98	3.86	0.02	153.91	n/a
Steam Generator Outlet Steam	8.85	5.98	3.84	0.02	153.91	n/a
HP Extraction Line #1	8.85	6.44	5.41	0.01	240.80	n/a
HP Extraction Line #2	8.85	6.22	4.57	0.02	160.73	n/a
Moisture Separator Drain Line	8.34	6.37	5.09	0.02	69.60	n/a
LP Extraction Line #1	9.04	6.88	7.63	0.01	133.05	n/a
LP Extraction Line #2	9.04	7.32	9.42	0.01	99.57	n/a
LP Extraction Line #3	9.04	7.72	8.15	0.01	22.62	n/a
LP Extraction Line #4	9.04	8.09	9.86	0.01	27.89	n/a
#1 Feedwater Heater Tube Side	8.82	6.24	4.50	0.06	58.02	n/a
#2 Feedwater Heater Tube Side	8.98	6.44	4.42	0.06	67.86	n/a
#3 Feedwater Heater Tube Side	8.98	6.85	4.42	0.06	71.99	n/a
#4 Feedwater Heater Tube Side	8.98	7.20	4.42	0.06	73.50	n/a
#5 Feedwater Heater Tube Side	8.98	7.65	4.42	0.06	74.50	n/a
#6 Feedwater Heater Tube Side	8.98	8.01	4.42	0.06	74.93	n/a
#1 Feedwater Heater Shell Side	8.85	6.24	4.50	0.07	34.80	n/a
#2 Feedwater Heater Shell Side	8.85	6.44	4.50	0.07	34.80	n/a
#3 Feedwater Heater Shell Side	9.04	6.86	4.43	0.08	7.94	n/a
#4 Feedwater Heater Shell Side	9.04	7.21	4.43	0.08	7.94	n/a
#5 Feedwater Heater Shell Side	9.04	7.66	4.43	0.08	7.94	n/a
#6 Feedwater Heater Shell Side	9.04	8.03	4.43	0.08	7.94	n/a
Feed Pump #1 Drain Line	9.04	8.85	17.99	0.01	59.44	n/a
#1 Reheater Drain Line	8.85	6.06	4.49	0.07	35.37	n/a
#1 Drain Tank	8.58	6.18	4.70	0.05	46.41	n/a
#2 Drain Tank	7.96	5.99	3.86	0.02	153.91	n/a

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

Note 2: For superheated steam, amine concentrations, cold and hot pH are not reported
 since there is no water phase.

***** Power Level and Steam Cycle Data *****

Steam Generator :
 Main Steam Flow Rate: 13.024 Mlb/hr Blowdown Flow Rate: 0.100 Mlb/hr
 SG Outlet Pressure: 778.6 psia SG Outlet Temperature: 518.0 F
 SG Carryover: 0.01% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.024	778.6	518.0	0.9999	-----
HP Extraction Line #1	0.929	185.6	375.6	0.9540	1158.3
HP Extraction Line #2	0.706	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line	1.217	221.9	390.6	0.0000	363.3
LP Extraction Line #1	0.503	65.0	298.0	0.9981	1177.4
LP Extraction Line #2	0.476	27.9	246.1	0.9557	1120.6
LP Extraction Line #3	0.408	10.7	196.5	0.6642	815.4
LP Extraction Line #4	0.667	5.0	162.6	0.7270	858.0
#1 Feedwater Heater Tube Side	-----	-----	423.2	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	371.6	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	293.6	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	243.8	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	191.8	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.7	0.0000	-----
Feed Pump #1 Drain Line	0.117	1.0	101.7	0.8734	974.8
#1 Reheater Drain Line	0.796	644.7	494.0	0.0201	495.3
#1 Drain Tank	0.000	403.5	445.4	0.0000	359.1
#2 Drain Tank	0.000	779.0	515.2	0.0000	506.1

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 12-SEP-2005 Time: 09:36:25
 Analysis Date: 12-SEP-2005 Time: 09:36:14
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

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

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 4.000
 Concentration of Morpholine (PPM): 4.500, Sampling at Final Feedwater
 Concentration of Ammonia (PPM): 0.200, Sampling at Final Feedwater
 Concentration of Hydrazine (PPB): 190.000, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 114.000
 Hydrazine at MSR drain (PPB): 228.000
 Concentration of Boron (PPM): 7.500, Sampling at Steam Generator Blowdown
 Boron Injection Rate: 0.000 lbm/hr

HBD Item Description	(Note 1) Cold pH	Hot pH	Morpholine (PPM)	Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
Steam Generator (Blowdown Line)	8.03	6.03	3.85	0.06	504.20	n/a
Steam Generator Outlet Steam	8.95	6.02	3.81	0.06	504.20	n/a
HP Extraction Line #1	8.95	6.47	5.33	0.04	788.82	n/a
HP Extraction Line #2	8.95	6.25	4.51	0.05	526.52	n/a
Moisture Separator Drain Line	8.36	6.39	5.05	0.05	228.00	n/a
LP Extraction Line #1	9.15	6.89	7.58	0.04	435.84	n/a
LP Extraction Line #2	9.15	7.33	9.39	0.03	326.19	n/a
LP Extraction Line #3	9.15	7.73	8.14	0.04	74.10	n/a
LP Extraction Line #4	9.15	8.10	9.86	0.03	91.38	n/a
#1 Feedwater Heater Tube Side	8.91	6.28	4.50	0.20	190.01	n/a
#2 Feedwater Heater Tube Side	9.07	6.48	4.43	0.20	221.49	n/a
#3 Feedwater Heater Tube Side	9.07	6.90	4.43	0.19	232.79	n/a
#4 Feedwater Heater Tube Side	9.07	7.26	4.43	0.19	236.43	n/a
#5 Feedwater Heater Tube Side	9.07	7.71	4.43	0.19	238.86	n/a
#6 Feedwater Heater Tube Side	9.07	8.08	4.43	0.19	239.94	n/a
#1 Feedwater Heater Shell Side	8.95	6.28	4.50	0.24	114.00	n/a
#2 Feedwater Heater Shell Side	8.95	6.49	4.50	0.24	114.00	n/a
#3 Feedwater Heater Shell Side	9.15	6.91	4.43	0.26	26.02	n/a
#4 Feedwater Heater Shell Side	9.15	7.27	4.43	0.26	26.02	n/a
#5 Feedwater Heater Shell Side	9.15	7.73	4.43	0.26	26.02	n/a
#6 Feedwater Heater Shell Side	9.15	8.11	4.43	0.26	26.02	n/a
Feed Pump #1 Drain Line	9.15	8.85	17.99	0.02	194.72	n/a
#1 Reheater Drain Line	8.95	6.09	4.49	0.23	115.86	n/a
#1 Drain Tank	8.65	6.21	4.69	0.18	152.03	n/a
#2 Drain Tank	8.03	6.03	3.85	0.06	504.20	n/a

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

Note 2: For superheated steam, amine concentrations, cold and hot pH are not reported
 since there is no water phase.

***** Power Level and Steam Cycle Data *****

Steam Generator :
 Main Steam Flow Rate: 13.024 Mlb/hr Blowdown Flow Rate: 0.100 Mlb/hr
 SG Outlet Pressure: 778.6 psia SG Outlet Temperature: 518.0 F
 SG Carryover: 0.01% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.024	778.6	518.0	0.9999	-----
HP Extraction Line #1	0.929	185.6	375.6	0.9540	1158.3
HP Extraction Line #2	0.706	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line	1.217	221.9	390.6	0.0000	363.3
LP Extraction Line #1	0.503	65.0	298.0	0.9981	1177.4
LP Extraction Line #2	0.476	27.9	246.1	0.9557	1120.6
LP Extraction Line #3	0.408	10.7	196.5	0.6642	815.4
LP Extraction Line #4	0.667	5.0	162.6	0.7270	858.0
#1 Feedwater Heater Tube Side	-----	-----	423.2	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	371.6	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	293.6	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	243.8	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	191.8	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.7	0.0000	-----
Feed Pump #1 Drain Line	0.117	1.0	101.7	0.8734	974.8
#1 Reheater Drain Line	0.796	644.7	494.0	0.0201	495.3
#1 Drain Tank	0.000	403.5	445.4	0.0000	359.1
#2 Drain Tank	0.000	779.0	515.2	0.0000	506.1

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 12-SEP-2005 Time: 09:49:30
 Analysis Date: 12-SEP-2005 Time: 09:36:51
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

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

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 9.000
 Concentration of Morpholine (PPM): 4.500, Sampling at Final Feedwater
 Concentration of Ammonia (PPM): 0.680, Sampling at Final Feedwater
 Concentration of Hydrazine (PPB): 225.000, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 135.000
 Hydrazine at MSR drain (PPB): 270.000
 Concentration of Boron (PPM): 7.500, Sampling at Steam Generator Blowdown
 Boron Injection Rate: 0.000 lbm/hr

HBD Item Description	(Note 1) Cold pH	Hot pH	Morpholine (PPM)	Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
Steam Generator (Blowdown Line)	8.09	6.05	3.83	0.19	597.08	n/a
Steam Generator Outlet Steam	9.16	6.05	3.79	0.19	597.08	n/a
HP Extraction Line #1	9.16	6.49	5.29	0.13	934.12	n/a
HP Extraction Line #2	9.16	6.27	4.48	0.15	623.51	n/a
Moisture Separator Drain Line	8.41	6.41	5.02	0.15	270.00	n/a
LP Extraction Line #1	9.35	6.91	7.52	0.12	516.12	n/a
LP Extraction Line #2	9.35	7.34	9.34	0.10	386.27	n/a
LP Extraction Line #3	9.35	7.75	8.12	0.13	87.75	n/a
LP Extraction Line #4	9.35	8.12	9.84	0.10	108.21	n/a
#1 Feedwater Heater Tube Side	9.12	6.36	4.50	0.68	225.04	n/a
#2 Feedwater Heater Tube Side	9.29	6.58	4.43	0.72	262.36	n/a
#3 Feedwater Heater Tube Side	9.29	7.02	4.43	0.72	276.28	n/a
#4 Feedwater Heater Tube Side	9.29	7.38	4.43	0.72	281.58	n/a
#5 Feedwater Heater Tube Side	9.29	7.85	4.43	0.72	285.69	n/a
#6 Feedwater Heater Tube Side	9.29	8.24	4.43	0.71	287.69	n/a
#1 Feedwater Heater Shell Side	9.16	6.36	4.51	0.73	135.00	n/a
#2 Feedwater Heater Shell Side	9.16	6.57	4.51	0.73	135.00	n/a
#3 Feedwater Heater Shell Side	9.35	7.03	4.44	0.81	30.81	n/a
#4 Feedwater Heater Shell Side	9.35	7.40	4.44	0.81	30.81	n/a
#5 Feedwater Heater Shell Side	9.35	7.87	4.44	0.81	30.81	n/a
#6 Feedwater Heater Shell Side	9.35	8.26	4.44	0.81	30.81	n/a
Feed Pump #1 Drain Line	9.35	8.86	17.98	0.07	230.59	n/a
#1 Reheater Drain Line	9.16	6.15	4.49	0.68	137.20	n/a
#1 Drain Tank	8.81	6.27	4.68	0.54	180.04	n/a
#2 Drain Tank	8.09	6.05	3.83	0.19	597.08	n/a

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

Note 2: For superheated steam, amine concentrations, cold and hot pH are not reported
 since there is no water phase.

***** Power Level and Steam Cycle Data *****

Steam Generator :
 Main Steam Flow Rate: 13.024 Mlb/hr Blowdown Flow Rate: 0.100 Mlb/hr
 SG Outlet Pressure: 778.6 psia SG Outlet Temperature: 518.0 F
 SG Carryover: 0.01% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.024	778.6	518.0	0.9999	-----
HP Extraction Line #1	0.929	185.6	375.6	0.9540	1158.3
HP Extraction Line #2	0.706	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line	1.217	221.9	390.6	0.0000	363.3
LP Extraction Line #1	0.503	65.0	298.0	0.9981	1177.4
LP Extraction Line #2	0.476	27.9	246.1	0.9557	1120.6
LP Extraction Line #3	0.408	10.7	196.5	0.6642	815.4
LP Extraction Line #4	0.667	5.0	162.6	0.7270	858.0
#1 Feedwater Heater Tube Side	-----	-----	423.2	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	371.6	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	293.6	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	243.8	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	191.8	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.7	0.0000	-----
Feed Pump #1 Drain Line	0.117	1.0	101.7	0.8734	974.8
#1 Reheater Drain Line	0.796	644.7	494.0	0.0201	495.3
#1 Drain Tank	0.000	403.5	445.4	0.0000	359.1
#2 Drain Tank	0.000	779.0	515.2	0.0000	506.1

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 12-SEP-2005 Time: 09:37:45
 Analysis Date: 12-SEP-2005 Time: 09:37:40
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

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

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 1.800
 Concentration of Morpholine (PPM): 4.500, Sampling at Final Feedwater
 Concentration of Ammonia (PPM): 2.000, Sampling at Condensate
 Concentration of Hydrazine (PPB): 180.000, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 108.000
 Hydrazine at MSR drain (PPB): 216.000
 Concentration of Boron (PPM): 6.500, Sampling at Steam Generator Blowdown
 Boron Injection Rate: 0.000 lbm/hr

HBD Item Description	(Note 1)		Morpholine (PPM)	Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
	Cold pH	Hot pH				
Steam Generator(Blowdown Line)	8.24	6.08	3.79	0.48	477.66	n/a
Steam Generator Outlet Steam	9.43	6.08	3.77	0.48	477.66	n/a
HP Extraction Line #1	9.43	6.52	5.24	0.33	747.30	n/a
HP Extraction Line #2	9.43	6.30	4.44	0.39	498.81	n/a
Moisture Separator Drain Line	8.53	6.44	4.95	0.37	216.00	n/a
LP Extraction Line #1	9.58	6.94	7.42	0.29	412.90	n/a
LP Extraction Line #2	9.58	7.37	9.25	0.26	309.02	n/a
LP Extraction Line #3	9.58	7.80	8.07	0.31	70.20	n/a
LP Extraction Line #4	9.58	8.16	9.79	0.26	86.57	n/a
#1 Feedwater Heater Tube Side	9.41	6.48	4.50	1.84	180.00	n/a
#2 Feedwater Heater Tube Side	9.54	6.71	4.44	2.01	209.79	n/a
#3 Feedwater Heater Tube Side	9.54	7.17	4.44	2.00	220.17	n/a
#4 Feedwater Heater Tube Side	9.54	7.55	4.44	2.00	223.14	n/a
#5 Feedwater Heater Tube Side	9.54	8.04	4.44	2.00	224.89	n/a
#6 Feedwater Heater Tube Side	9.54	8.44	4.44	2.00	225.61	n/a
#1 Feedwater Heater Shell Side	9.44	6.48	4.51	1.89	108.00	n/a
#2 Feedwater Heater Shell Side	9.44	6.70	4.51	1.89	108.00	n/a
#3 Feedwater Heater Shell Side	9.58	7.18	4.45	2.08	24.65	n/a
#4 Feedwater Heater Shell Side	9.58	7.56	4.45	2.08	24.65	n/a
#5 Feedwater Heater Shell Side	9.58	8.05	4.45	2.08	24.65	n/a
#6 Feedwater Heater Shell Side	9.58	8.45	4.45	2.08	24.65	n/a
Feed Pump #1 Drain Line	9.58	8.90	17.89	0.17	184.47	n/a
#1 Reheater Drain Line	9.44	6.25	4.49	1.77	109.76	n/a
#1 Drain Tank	9.10	6.36	4.65	1.38	144.03	n/a
#2 Drain Tank	8.24	6.08	3.79	0.48	477.66	n/a

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

Note 2: For superheated steam, amine concentrations, cold and hot pH are not reported since there is no water phase.

***** Power Level and Steam Cycle Data *****

Steam Generator :
 Main Steam Flow Rate: 13.024 Mlb/hr Blowdown Flow Rate: 0.100 Mlb/hr
 SG Outlet Pressure: 778.6 psia SG Outlet Temperature: 518.0 F
 SG Carryover: 0.01% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.024	778.6	518.0	0.9999	----
HP Extraction Line #1	0.929	185.6	375.6	0.9540	1158.3
HP Extraction Line #2	0.706	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line	1.217	221.9	390.6	0.0000	363.3
LP Extraction Line #1	0.503	65.0	298.0	0.9981	1177.4
LP Extraction Line #2	0.476	27.9	246.1	0.9557	1120.6
LP Extraction Line #3	0.408	10.7	196.5	0.6642	815.4
LP Extraction Line #4	0.667	5.0	162.6	0.7270	858.0
#1 Feedwater Heater Tube Side	-----	-----	423.2	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	371.6	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	293.6	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	243.8	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	191.8	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.7	0.0000	-----
Feed Pump #1 Drain Line	0.117	1.0	101.7	0.8734	974.8
#1 Reheater Drain Line	0.796	644.7	494.0	0.0201	495.3
#1 Drain Tank	0.000	403.5	445.4	0.0000	359.1
#2 Drain Tank	0.000	779.0	515.2	0.0000	506.1

Company: Entergy Nuclear Operations, Inc. Report Date: 12-SEP-2005 Time: 09:38:11
 Plant: Indian Point Analysis Date: 12-SEP-2005 Time: 09:38:05
 Unit: 3 CHECWORKS FAC Version 1.0G (Build 75)
 DB Name: IP3

 *** Chemistry Analysis Report ***

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

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 2.500
 Concentration of Ethanolamine (PPM): 2.000, Sampling at Final Feedwater
 Concentration of Ammonia (PPM): 2.000, Sampling at Condensate
 Concentration of Hydrazine (PPB): 225.000, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 135.000
 Hydrazine at MSR drain (PPB): 270.000
 Concentration of Boron (PPM): 4.900, Sampling at Steam Generator Blowdown
 Boron Injection Rate: 0.000 lbm/hr

HBD Item Description	(Note 1) Cold pH	Hot pH	Ethanol amine (PPM)	Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
Steam Generator(Blowdown Line)	8.64	6.25	5.17	0.48	597.08	n/a
Steam Generator Outlet Steam	9.54	6.25	5.14	0.47	597.08	n/a
HP Extraction Line #1	9.54	6.83	9.50	0.30	934.12	n/a
HP Extraction Line #2	9.54	6.54	6.42	0.37	623.51	n/a
Moisture Separator Drain Line	9.10	6.70	7.06	0.35	270.00	n/a
LP Extraction Line #1	9.62	7.36	15.05	0.25	516.12	n/a
LP Extraction Line #2	9.62	7.77	14.62	0.21	386.27	n/a
LP Extraction Line #3	9.62	7.92	3.78	0.29	87.75	n/a
LP Extraction Line #4	9.62	8.33	4.68	0.23	108.21	n/a
#1 Feedwater Heater Tube Side	9.52	6.49	2.00	1.84	225.00	n/a
#2 Feedwater Heater Tube Side	9.59	6.71	1.36	2.01	262.23	n/a
#3 Feedwater Heater Tube Side	9.59	7.18	1.36	2.00	275.18	n/a
#4 Feedwater Heater Tube Side	9.59	7.56	1.36	2.00	278.93	n/a
#5 Feedwater Heater Tube Side	9.59	8.05	1.36	2.00	281.22	n/a
#6 Feedwater Heater Tube Side	9.59	8.46	1.36	2.00	282.18	n/a
#1 Feedwater Heater Shell Side	9.54	6.49	1.98	1.90	135.00	n/a
#2 Feedwater Heater Shell Side	9.54	6.72	1.98	1.90	135.00	n/a
#3 Feedwater Heater Shell Side	9.62	7.18	1.32	2.10	30.81	n/a
#4 Feedwater Heater Shell Side	9.62	7.57	1.32	2.10	30.81	n/a
#5 Feedwater Heater Shell Side	9.62	8.06	1.32	2.10	30.81	n/a
#6 Feedwater Heater Shell Side	9.62	8.47	1.32	2.10	30.81	n/a
Feed Pump #1 Drain Line	9.62	9.27	10.09	0.13	230.59	n/a
#1 Reheater Drain Line	9.54	6.26	2.00	1.78	137.20	n/a
#1 Drain Tank	9.36	6.44	3.67	1.38	180.04	n/a
#2 Drain Tank	8.64	6.26	5.17	0.48	597.08	n/a

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

Note 2: For superheated steam, amine concentrations, cold and hot pH are not reported
 since there is no water phase.

***** Power Level and Steam Cycle Data *****

Steam Generator :
 Main Steam Flow Rate: 13.024 Mlb/hr Blowdown Flow Rate: 0.100 Mlb/hr
 SG Outlet Pressure: 778.6 psia SG Outlet Temperature: 518.0 F
 SG Carryover: 0.01% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.024	778.6	518.0	0.9999	-----
HP Extraction Line #1	0.929	185.6	375.6	0.9540	1158.3
HP Extraction Line #2	0.706	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line	1.217	221.9	390.6	0.0000	363.3
LP Extraction Line #1	0.503	65.0	298.0	0.9981	1177.4
LP Extraction Line #2	0.476	27.9	246.1	0.9557	1120.6
LP Extraction Line #3	0.408	10.7	196.5	0.6642	815.4
LP Extraction Line #4	0.667	5.0	162.6	0.7270	858.0
#1 Feedwater Heater Tube Side	-----	-----	423.2	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	371.6	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	293.6	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	243.8	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	191.8	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.7	0.0000	-----
Feed Pump #1 Drain Line	0.117	1.0	101.7	0.8734	974.8
#1 Reheater Drain Line	0.796	644.7	494.0	0.0201	495.3
#1 Drain Tank	0.000	403.5	445.4	0.0000	359.1
#2 Drain Tank	0.000	779.0	515.2	0.0000	506.1

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 12-SEP-2005 Time: 09:38:43
 Analysis Date: 12-SEP-2005 Time: 09:38:34
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

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

Complex Chemistry Condition:
 Condensate Dissolved Oxygen (PPB): 3.300
 Concentration of Ethanolamine (PPM): 2.400, Sampling at Final Feedwater
 Concentration of Ammonia (PPM): 5.285, Sampling at Final Feedwater
 Concentration of Hydrazine (PPB): 190.000, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 114.000
 Hydrazine at MSR drain (PPB): 228.000

HBD Item Description	(Note 1) Cold pH	Hot pH	Ethanol amine (PPM)	Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
Steam Generator (Blowdown Line)	9.74	6.32	6.09	1.33	504.20	n/a
Steam Generator Outlet Steam	9.86	6.32	6.08	1.33	504.20	n/a
HP Extraction Line #1	9.86	6.90	11.14	0.83	788.82	n/a
HP Extraction Line #2	9.86	6.60	7.58	1.04	526.52	n/a
Moisture Separator Drain Line	9.77	6.77	8.33	0.95	228.00	n/a
LP Extraction Line #1	9.87	7.45	17.49	0.68	435.84	n/a
LP Extraction Line #2	9.87	7.84	17.38	0.59	326.19	n/a
LP Extraction Line #3	9.87	8.03	4.57	0.76	74.10	n/a
LP Extraction Line #4	9.87	8.43	5.67	0.60	91.38	n/a
#1 Feedwater Heater Tube Side	9.86	6.67	2.40	5.29	190.01	n/a
#2 Feedwater Heater Tube Side	9.86	6.91	1.65	5.82	221.47	n/a
#3 Feedwater Heater Tube Side	9.86	7.39	1.65	5.81	232.66	n/a
#4 Feedwater Heater Tube Side	9.86	7.78	1.65	5.81	236.13	n/a
#5 Feedwater Heater Tube Side	9.86	8.29	1.65	5.81	238.36	n/a
#6 Feedwater Heater Tube Side	9.86	8.70	1.65	5.81	239.34	n/a
#1 Feedwater Heater Shell Side	9.86	6.67	2.37	5.35	114.00	n/a
#2 Feedwater Heater Shell Side	9.86	6.91	2.37	5.35	114.00	n/a
#3 Feedwater Heater Shell Side	9.87	7.39	1.60	5.93	26.02	n/a
#4 Feedwater Heater Shell Side	9.87	7.79	1.60	5.93	26.02	n/a
#5 Feedwater Heater Shell Side	9.87	8.29	1.60	5.93	26.02	n/a
#6 Feedwater Heater Shell Side	9.87	8.70	1.60	5.93	26.02	n/a
Feed Pump #1 Drain Line	9.87	9.42	12.22	0.33	194.72	n/a
#1 Reheater Drain Line	9.86	6.42	2.40	5.01	115.86	n/a
#1 Drain Tank	9.83	6.58	4.36	3.88	152.03	n/a
#2 Drain Tank	9.74	6.33	6.09	1.33	504.20	n/a

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

**** Power Level and Steam Cycle Data ****

Steam Generator :
 Main Steam Flow Rate: 13.024 Mlb/hr Blowdown Flow Rate: 0.100 Mlb/hr
 SG Outlet Pressure: 778.6 psia SG Outlet Temperature: 518.0 F
 SG Carryover: 0.01% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.024	778.6	518.0	0.9999	-----
HP Extraction Line #1	0.929	185.6	375.6	0.9540	1158.3
HP Extraction Line #2	0.706	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line	1.217	221.9	390.6	0.0000	363.3
LP Extraction Line #1	0.503	65.0	298.0	0.9981	1177.4
LP Extraction Line #2	0.476	27.9	246.1	0.9557	1120.6
LP Extraction Line #3	0.408	10.7	196.5	0.6642	815.4
LP Extraction Line #4	0.667	5.0	162.6	0.7270	858.0
#1 Feedwater Heater Tube Side	-----	-----	423.2	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	371.6	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	293.6	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	243.8	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	191.8	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.7	0.0000	-----
Feed Pump #1 Drain Line	0.117	1.0	101.7	0.8734	974.8
#1 Reheater Drain Line	0.796	644.7	494.0	0.0201	495.3
#1 Drain Tank	0.000	403.5	445.4	0.0000	359.1
#2 Drain Tank	0.000	779.0	515.2	0.0000	506.1

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 12-SEP-2005 Time: 09:39:30
 Analysis Date: 12-SEP-2005 Time: 09:39:25
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

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

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 0.690
 Concentration of Ethanolamine (PPM): 3.558, Sampling at Final Feedwater
 Concentration of Ammonia (PPM): 5.830, Sampling at Final Feedwater
 Concentration of Hydrazine (PPB): 104.657, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 62.794
 Hydrazine at MSR drain (PPB): 125.589

HBD Item Description	(Note 1)		Ethanol amine (PPM)	Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
	Cold pH	Hot pH				
Steam Generator (Blowdown Line)	9.81	6.38	8.92	1.45	277.72	n/a
Steam Generator Outlet Steam	9.89	6.38	8.91	1.45	277.72	n/a
HP Extraction Line #1	9.89	6.98	16.17	0.90	434.50	n/a
HP Extraction Line #2	9.89	6.67	11.05	1.13	290.02	n/a
Moisture Separator Drain Line	9.85	6.85	12.14	1.02	125.59	n/a
LP Extraction Line #1	9.90	7.53	25.35	0.73	240.07	n/a
LP Extraction Line #2	9.90	7.93	25.48	0.63	179.67	n/a
LP Extraction Line #3	9.90	8.11	6.84	0.80	40.82	n/a
LP Extraction Line #4	9.90	8.52	8.48	0.63	50.33	n/a
#1 Feedwater Heater Tube Side	9.89	6.71	3.56	5.83	104.66	n/a
#2 Feedwater Heater Tube Side	9.90	6.94	2.47	6.43	121.99	n/a
#3 Feedwater Heater Tube Side	9.90	7.42	2.47	6.43	128.00	n/a
#4 Feedwater Heater Tube Side	9.90	7.82	2.47	6.42	129.64	n/a
#5 Feedwater Heater Tube Side	9.90	8.32	2.47	6.42	130.54	n/a
#6 Feedwater Heater Tube Side	9.90	8.73	2.47	6.42	130.89	n/a
#1 Feedwater Heater Shell Side	9.89	6.71	3.52	5.89	62.79	n/a
#2 Feedwater Heater Shell Side	9.89	6.94	3.52	5.89	62.79	n/a
#3 Feedwater Heater Shell Side	9.90	7.42	2.40	6.52	14.33	n/a
#4 Feedwater Heater Shell Side	9.90	7.82	2.40	6.52	14.33	n/a
#5 Feedwater Heater Shell Side	9.90	8.32	2.40	6.52	14.33	n/a
#6 Feedwater Heater Shell Side	9.90	8.74	2.40	6.52	14.33	n/a
Feed Pump #1 Drain Line	9.90	9.51	18.28	0.35	107.26	n/a
#1 Reheater Drain Line	9.89	6.46	3.56	5.50	63.82	n/a
#1 Drain Tank	9.88	6.62	6.39	4.26	83.74	n/a
#2 Drain Tank	9.81	6.39	8.92	1.45	277.72	n/a

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

**** Power Level and Steam Cycle Data ****

Steam Generator :
 Main Steam Flow Rate: 13.024 Mlb/hr Blowdown Flow Rate: 0.100 Mlb/hr
 SG Outlet Pressure: 778.6 psia SG Outlet Temperature: 518.0 F
 SG Carryover: 0.01% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.024	778.6	518.0	0.9999	-----
HP Extraction Line #1	0.929	185.6	375.6	0.9540	1158.3
HP Extraction Line #2	0.706	340.4	429.1	0.9161	1136.9
Moisture Separator Drain Line	1.217	221.9	390.6	0.0000	363.3
LP Extraction Line #1	0.503	65.0	298.0	0.9981	1177.4
LP Extraction Line #2	0.476	27.9	246.1	0.9557	1120.6
LP Extraction Line #3	0.408	10.7	196.5	0.6642	815.4
LP Extraction Line #4	0.667	5.0	162.6	0.7270	858.0
#1 Feedwater Heater Tube Side	-----	-----	423.2	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	371.6	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	293.6	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	243.8	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	191.8	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.7	0.0000	-----
Feed Pump #1 Drain Line	0.117	1.0	101.7	0.8734	974.8
#1 Reheater Drain Line	0.796	644.7	494.0	0.0201	495.3
#1 Drain Tank	0.000	403.5	445.4	0.0000	359.1
#2 Drain Tank	0.000	779.0	515.2	0.0000	506.1

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 12-SEP-2005 Time: 09:40:10
 Analysis Date: 12-SEP-2005 Time: 09:39:58
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

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

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 0.690
 Concentration of Ethanolamine (PPM): 3.558, Sampling at Final Feedwater
 Concentration of Ammonia (PPM): 5.830, Sampling at Final Feedwater
 Concentration of Hydrazine (PPB): 104.657, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 62.794
 Hydrazine at MSR drain (PPB): 125.589

HBD Item Description	(Note 1) Cold pH	Hot pH	Ethanol amine (PPM)	Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
Steam Generator (Blowdown Line)	9.81	6.39	9.07	1.43	281.15	n/a
Steam Generator Outlet Steam	9.89	6.39	9.06	1.43	281.15	n/a
HP Extraction Line #1	9.89	6.93	14.94	0.94	389.73	n/a
HP Extraction Line #2	9.89	6.65	10.86	1.14	285.48	n/a
Moisture Separator Drain Line	9.88	6.92	13.73	0.96	125.67	n/a
LP Extraction Line #1	Note 2	Note 2	Note 2	Note 2	Note 2	n/a
LP Extraction Line #2	9.90	7.79	17.80	0.67	103.84	n/a
LP Extraction Line #3	9.90	8.09	9.54	0.70	50.65	n/a
LP Extraction Line #4	9.90	8.52	10.75	0.57	56.48	n/a
#1 Feedwater Heater Tube Side	9.89	6.70	3.56	5.83	104.66	n/a
#2 Feedwater Heater Tube Side	9.89	6.93	2.60	6.28	123.14	n/a
#3 Feedwater Heater Tube Side	9.89	7.40	2.60	6.27	129.34	n/a
#4 Feedwater Heater Tube Side	9.89	7.82	2.60	6.27	131.12	n/a
#5 Feedwater Heater Tube Side	9.89	8.27	2.60	6.27	131.92	n/a
#6 Feedwater Heater Tube Side	9.89	8.74	2.60	6.27	132.33	n/a
#1 Feedwater Heater Shell Side	9.89	6.70	3.53	5.87	62.79	n/a
#2 Feedwater Heater Shell Side	9.89	6.93	3.53	5.87	62.79	n/a
#3 Feedwater Heater Shell Side	9.90	7.40	2.56	6.34	13.52	n/a
#4 Feedwater Heater Shell Side	9.90	7.82	2.56	6.34	13.52	n/a
#5 Feedwater Heater Shell Side	9.90	8.27	2.56	6.34	13.52	n/a
#6 Feedwater Heater Shell Side	9.90	8.74	2.56	6.34	13.52	n/a
Feed Pump #1 Drain Line	9.90	9.53	19.71	0.34	102.26	n/a
#1 Reheater Drain Line	9.89	6.46	3.63	5.13	64.95	n/a
#1 Drain Tank	9.89	6.90	6.17	4.60	79.05	n/a
#2 Drain Tank	9.81	6.40	9.07	1.43	281.15	n/a

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

***** Power Level and Steam Cycle Data *****

Steam Generator :
 Main Steam Flow Rate: 13.187 Mlb/hr Blowdown Flow Rate: 0.058 Mlb/hr
 SG Outlet Pressure: 774.4 psia SG Outlet Temperature: 514.5 F
 SG Carryover: 0.08% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.187	774.4	514.5	0.9992	-----
HP Extraction Line #1	0.936	200.9	382.2	0.9404	1148.2
HP Extraction Line #2	0.752	361.4	434.8	0.9172	1138.6
Moisture Separator Drain Line	0.923	199.8	381.7	0.0007	355.9
LP Extraction Line #1	0.531	74.5	307.2	1.0000	1197.4
LP Extraction Line #2	0.447	31.3	252.8	0.9055	1075.7
LP Extraction Line #3	0.459	12.8	205.1	0.7520	906.1
LP Extraction Line #4	0.772	5.6	166.7	0.7738	907.0
#1 Feedwater Heater Tube Side	-----	-----	425.0	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	374.7	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	296.6	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	243.0	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	196.4	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.3	0.0000	-----
Feed Pump #1 Drain Line	0.147	1.0	101.7	0.8749	976.3
#1 Reheater Drain Line	0.954	623.3	490.3	0.0414	506.5
#1 Drain Tank	0.000	197.7	380.8	0.0000	338.7
#2 Drain Tank	0.000	761.2	512.5	0.0000	502.9

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 12-SEP-2005 Time: 09:40:45
 Analysis Date: 12-SEP-2005 Time: 09:40:37
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

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

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 3.340
 Concentration of Ethanolamine (PPM): 3.423, Sampling at Final Feedwater
 Concentration of Ammonia (PPM): 4.886, Sampling at Final Feedwater
 Concentration of Hydrazine (PPB): 98.400, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 58.100
 Hydrazine at MSR drain (PPB): 116.100

HBD Item Description	(Note 1) Cold pH	Hot pH	Ethanol amine (PPM)	Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
Steam Generator (Blowdown Line)	9.79	6.38	8.74	1.20	260.13	n/a
Steam Generator Outlet Steam	9.86	6.38	8.74	1.20	260.13	n/a
HP Extraction Line #1	9.86	6.92	14.42	0.79	360.60	n/a
HP Extraction Line #2	9.86	6.64	10.47	0.96	264.14	n/a
Moisture Separator Drain Line	9.86	6.90	13.25	0.81	116.18	n/a
LP Extraction Line #1	Note 2	Note 2	Note 2	Note 2	Note 2	n/a
LP Extraction Line #2	9.86	7.78	17.14	0.57	96.00	n/a
LP Extraction Line #3	9.86	8.07	9.17	0.59	46.82	n/a
LP Extraction Line #4	9.86	8.51	10.33	0.48	52.21	n/a
#1 Feedwater Heater Tube Side	9.86	6.67	3.42	4.89	98.41	n/a
#2 Feedwater Heater Tube Side	9.86	6.89	2.49	5.26	116.36	n/a
#3 Feedwater Heater Tube Side	9.86	7.36	2.49	5.26	122.84	n/a
#4 Feedwater Heater Tube Side	9.86	7.79	2.49	5.26	125.23	n/a
#5 Feedwater Heater Tube Side	9.86	8.23	2.49	5.26	126.54	n/a
#6 Feedwater Heater Tube Side	9.86	8.70	2.49	5.26	127.28	n/a
#1 Feedwater Heater Shell Side	9.86	6.67	3.40	4.92	58.10	n/a
#2 Feedwater Heater Shell Side	9.86	6.90	3.40	4.92	58.10	n/a
#3 Feedwater Heater Shell Side	9.86	7.36	2.46	5.32	12.50	n/a
#4 Feedwater Heater Shell Side	9.86	7.79	2.46	5.32	12.50	n/a
#5 Feedwater Heater Shell Side	9.86	8.23	2.46	5.32	12.50	n/a
#6 Feedwater Heater Shell Side	9.86	8.70	2.46	5.32	12.50	n/a
Feed Pump #1 Drain Line	9.86	9.52	18.94	0.29	94.54	n/a
#1 Reheater Drain Line	9.86	6.43	3.49	4.30	60.09	n/a
#1 Drain Tank	9.86	6.88	5.95	3.86	73.11	n/a
#2 Drain Tank	9.79	6.38	8.74	1.20	260.13	n/a

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

***** Power Level and Steam Cycle Data *****

Steam Generator :
 Main Steam Flow Rate: 13.187 Mlb/hr Blowdown Flow Rate: 0.058 Mlb/hr
 SG Outlet Pressure: 774.4 psia SG Outlet Temperature: 514.5 F
 SG Carryover: 0.08% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.187	774.4	514.5	0.9992	-----
HP Extraction Line #1	0.936	200.9	382.2	0.9404	1148.2
HP Extraction Line #2	0.752	361.4	434.8	0.9172	1138.6
Moisture Separator Drain Line	0.923	199.8	381.7	0.0007	355.9
LP Extraction Line #1	0.531	74.5	307.2	1.0000	1197.4
LP Extraction Line #2	0.447	31.3	252.8	0.9055	1075.7
LP Extraction Line #3	0.459	12.8	205.1	0.7520	906.1
LP Extraction Line #4	0.772	5.6	166.7	0.7738	907.0
#1 Feedwater Heater Tube Side	-----	-----	425.0	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	374.7	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	296.6	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	243.0	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	196.4	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.3	0.0000	-----
Feed Pump #1 Drain Line	0.147	1.0	101.7	0.8749	976.3
#1 Reheater Drain Line	0.954	623.3	490.3	0.0414	506.5
#1 Drain Tank	0.000	197.7	380.8	0.0000	338.7
#2 Drain Tank	0.000	761.2	512.5	0.0000	502.9

Company: Entergy Nuclear Operations, Inc.
 Plant: Indian Point
 Unit: 3
 DB Name: IP3

Report Date: 12-SEP-2005 Time: 09:52:24
 Analysis Date: 12-SEP-2005 Time: 09:52:09
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

Water Treatment: Cycle 13
 Power Level: 104.95%
 Plant Type: PWR

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 3.340
 Concentration of Ethanolamine (PPM): 3.423, Sampling at Final Feedwater
 Concentration of Ammonia (PPM): 4.886, Sampling at Final Feedwater
 Concentration of Hydrazine (PPB): 98.400, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 58.100
 Hydrazine at MSR drain (PPB): 116.100

HBD Item Description	(Note 1) Cold pH	Hot pH	Ethanol amine (PPM)	Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
Steam Generator (Blowdown Line)	9.80	6.38	8.81	1.19	262.46	n/a
Steam Generator Outlet Steam	9.86	6.38	8.81	1.19	262.46	n/a
HP Extraction Line #1	9.86	6.90	14.10	0.80	352.48	n/a
HP Extraction Line #2	9.86	6.61	10.60	0.97	278.38	n/a
Moisture Separator Drain Line	9.85	6.88	12.61	0.83	116.12	n/a
LP Extraction Line #1	Note 2	Note 2	Note 2	Note 2	Note 2	n/a
LP Extraction Line #2	9.86	7.76	16.53	0.58	97.46	n/a
LP Extraction Line #3	9.86	8.05	8.86	0.60	47.52	n/a
LP Extraction Line #4	9.86	8.48	9.92	0.50	52.66	n/a
#1 Feedwater Heater Tube Side	9.86	6.65	3.42	4.89	98.41	n/a
#2 Feedwater Heater Tube Side	9.86	6.88	2.42	5.31	117.23	n/a
#3 Feedwater Heater Tube Side	9.86	7.35	2.42	5.31	124.08	n/a
#4 Feedwater Heater Tube Side	9.86	7.77	2.42	5.31	126.51	n/a
#5 Feedwater Heater Tube Side	9.86	8.22	2.42	5.31	127.92	n/a
#6 Feedwater Heater Tube Side	9.86	8.68	2.42	5.31	128.68	n/a
#1 Feedwater Heater Shell Side	9.86	6.65	3.40	4.92	58.10	n/a
#2 Feedwater Heater Shell Side	9.86	6.88	3.40	4.92	58.10	n/a
#3 Feedwater Heater Shell Side	9.86	7.35	2.39	5.37	12.75	n/a
#4 Feedwater Heater Shell Side	9.86	7.77	2.39	5.37	12.75	n/a
#5 Feedwater Heater Shell Side	9.86	8.22	2.39	5.37	12.75	n/a
#6 Feedwater Heater Shell Side	9.86	8.68	2.39	5.37	12.75	n/a
Feed Pump #1 Drain Line	9.86	9.51	18.20	0.29	95.44	n/a
#1 Reheater Drain Line	9.86	6.43	3.49	4.32	60.00	n/a
#1 Drain Tank	9.86	6.86	6.06	3.74	74.83	n/a
#2 Drain Tank	9.80	6.38	8.81	1.19	262.46	n/a

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

**** Power Level and Steam Cycle Data ****

Steam Generator :
 Main Steam Flow Rate: 13.784 Mlb/hr Blowdown Flow Rate: 0.058 Mlb/hr
 SG Outlet Pressure: 760.4 psia SG Outlet Temperature: 512.4 F
 SG Carryover: 0.08% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.784	760.4	512.4	0.9992	-----
HP Extraction Line #1	0.984	208.3	385.2	0.9386	1147.3
HP Extraction Line #2	0.853	388.6	441.8	0.9371	1155.1
Moisture Separator Drain Line	1.098	207.2	384.8	0.0002	358.7
LP Extraction Line #1	0.549	77.3	309.6	1.0000	1197.6
LP Extraction Line #2	0.473	32.4	254.8	0.9054	1076.5
LP Extraction Line #3	0.476	13.3	206.9	0.7508	905.9
LP Extraction Line #4	0.791	5.8	168.3	0.7711	905.2
#1 Feedwater Heater Tube Side	-----	-----	430.4	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	377.3	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	298.3	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	245.2	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	198.0	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	156.9	0.0000	-----
Feed Pump #1 Drain Line	0.161	1.0	101.7	0.8734	974.8
#1 Reheater Drain Line	0.870	620.3	489.8	0.0395	504.5
#1 Drain Tank	0.000	203.3	383.2	0.0000	342.5
#2 Drain Tank	0.000	760.4	512.4	0.0000	502.8