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Indian Point Unit 2 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 2 Nuclear Power Plant (IP2) 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 IP2. It documents the CHECWORKS Pass 1 analysis to generate a wear rate prediction for every piping component modeled in CHECWORKS. Component inspection data through the Refuel Outage 16 was imported to the model where available. A Pass 2 analysis was performed on all lines to provide wear predictions calibrated to the inspection data, as well as remaining lives 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.

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 scope of this model is all components and lines in the Indian Point 2 CHECWORKS model. However, not all lines and components in the input model were included in this analysis. Only those lines and components that were assigned to one of the Wear Rate Analysis run definitions in Table 1.0 of document number 00130-TR-001 were analyzed as part of this project [7.12]. The CHECWORKS model also contains “non-modeled” lines and components (typically assigned to CHECWORKS lines with the prefix “NCW” for “Non-CHECWORKS”). No analysis was performed on these “NCW” lines or any other plant lines and components that were not part of the “official” CHECWORKS model. Note that Table 1.0 of document 00130-TR-001 has two hand-written entries “x-under w/ exp joints” and “CND FWH 22 to FWH 23” [7.12]. Lines and components that belong in these two locations were also included in this analysis. The lines that are part of the CHECWORKS model scope are listed in Appendix D.

The CHECWORKS model reflects plant design and operation through Refuel Outage 16. All historical records (i.e. inspections, replacements, water chemistry, power levels, etc.) through Refuel Outage 16 were included in this analysis. Note that this model addresses changes due to Appendix K Uprate and Stretch Power Uprate (see CSI Calculation 040711-02, reference 7.2, for a detailed discussion of the power uprate). 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 2 CHECWORKS model. The assumptions and modeling decisions are categorized below based on the range of their influence.

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. Parallel trains of equal pipe diameter were assumed to have equal flow unless otherwise indicated.
- 4.1.3. 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.
- 4.1.4. For a number of lines on the Heat Balance Diagrams [7.3], 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" [7.8].

- 4.1.5. Plant period data and water treatment data prior to Cycle 16 was assumed to be complete and accurate in the as-received model [7.4].
- 4.1.6. When hydrazine data was not available at the Steam Generator Outlet and MSR Drain, the "rules of thumb" [7.8] 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.
- 4.1.7. The Water Treatment for future and current operating cycles was modeled as equivalent to the most recent complete operating cycle. The model can be updated with the actual water chemistry when this data becomes available.
- 4.1.8. Plant period data was estimated for the cycle where the SPU will occur. Start and end dates were estimated based on anticipated dates [7.5.1]. 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.
- 4.1.9. See Appendix C for any additional modeling decisions concerning plant global data.

4.2. Component and UT Inspection Assumptions and Modeling Decisions

- 4.2.1. All component data in the CHECWORKS model received as input (the as-received model) [7.4] was assumed to be complete and accurate.
- 4.2.2. UT inspections performed prior to Refuel Outage 16 were assumed to be complete and accurately modeled in the as-received model [7.4].
- 4.2.3. See Appendix F for any changes (excluding points, excluding counterbore rows, etc.) made to the UT data after importation.
- 4.2.4. The orifice size (inner diameter) of flow elements CD-72FE and CD-76FE were assumed to be 80% of the adjacent pipe inner diameter.

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 2 Heat Balance Diagrams were used to create the CHECWORKS Heat Balance Diagram (HBD) [7.3]. 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, IP2 uses the reverse order of the CHECWORKS HBD for the Feedwater Heaters. Therefore, IP2 items are not the same number as the CHECWORKS items. For example, IP2 #21 Feedwater Heater is the CHECWORKS #6 Feedwater Heater, IP2 #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. 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 [7.5.1].

Table 5.1 CHECWORKS SFA Power Levels

Power Level (%)	Power (MWt)	Operating Cycles	Notes
100.00	3090.2	Cycles 1-16A	Original Power Level
101.19	3127.0	Cycle 16B	Appendix K Uprate
104.48	3228.5	Cycle 17 to End of Life	Stretch Power Uprate

- **Steam Rate:** The steam mass flow rate out of the Steam Generator was taken from the Heat Balance Diagrams [7.3].
- **Steam Generator/Reactor Vessel Pressure:** The pressure at the outlet of the Steam Generator was taken from the Heat Balance Diagrams [7.3].
- **Steam Generator/Reactor Vessel Temperature:** The temperature at the outlet of the Steam Generator was taken from the Heat Balance Diagrams [7.3].
- **Steam Generator Blowdown Rate:** The blowdown rate was taken from the Heat Balance Diagrams [7.3].
- **Carryover:** The carryover percentage was obtained from the Heat Balance Diagrams [7.3].
- **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 [7.3] in Mlb/hr. Flow rates were entered for the HBD Items when required.
- **Vent Rate:** Vent rates are not entered for PWR plants [7.7].
- **Quality:** The steam quality, from the HBD [7.3], was entered in this location as necessary.
- **Enthalpy:** The enthalpy, from the HBD [7.3], is required for the two-phase lines and was entered as necessary in this field in Btu/lb.
- **Temperature:** The temperature, from the HBD [7.3] was entered in this field as necessary in °F.
- **Pressure:** The pressure, from the HBD [7.3], 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 4.1.6).

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.

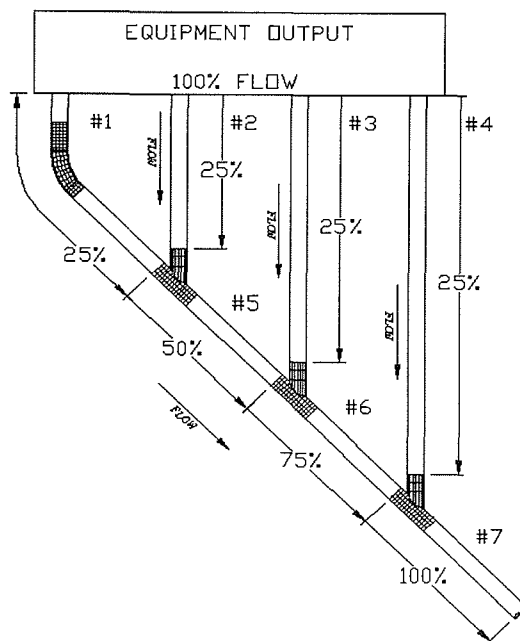
- **Water Treatment:** A water treatment was selected for each period from a pull down menu, which lists all of the water treatment titles in the CHECWORKS Model.
- **Power Level:** A power level was selected for each period from a pull down menu, which lists all of the power level titles in the CHECWORKS Model.
- **Period Type:** CHECWORKS allows the user to choose from two different Period Types: operating and maintenance. The appropriate period type was selected.

5.2. **Line Data**

All components in the CHECWORKS model were grouped into lines. Lines contain components with identical thermodynamic conditions and chemistry conditions due to the fact that all components of a line are linked to the same CHECWORKS Heat Balance Diagram Line. A listing of all lines that appear in the CHECWORKS model is in Appendix D.

For full use of the Advanced Run Definition lines were divided where flow rate changes. For conservatism, the tee where flow rate changed was associated to the line having the greatest flow rate. Note that this will over predict the wear for some sections of tees (see Section 4.1.3).

Figure 5-1 Diagram of Line Grouping Convention



Components were grouped into lines by comparing the input CHECWORKS model [7.4] with FAC isometrics [7.9] and flow diagrams [7.5.4]. Lines were named according to the naming convention, below.

AABBC-D-E

- AA = Abbreviation of the system (ex: CD = Condensate, EX = Extraction Steam, etc.)
- BB = Sketch number the line begins on (ex: 01, 80, etc.)
- C = Sketch letter if sketch number includes a letter (ex: A for sketch 80A)
- D = Sequential number for each line on one sketch, numbered in flow order
- E = Brief description of the line

New line names were created as required by CHECWORKS, not where plant line names changed. Therefore, lines may contain components located on different sketches but in all cases the sketch number corresponds to the first component in the line.

For example, line name "CD80-1-FWH 23A to FWH 24A" is located in the Condensate system, on FAC sketch 80, and runs from Feedwater Heater 23A to Feedwater Heater 24A.

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 2. 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.). 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 [7.7].
- **Pipe Size:** A pull-down menu contains outside pipe diameter, nominal wall thickness, and schedule (see Section 4.2.1).

- **Material:** A pull-down menu contains material choices (see Section 4.2.1).
- **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 5.4.4 of this calculation). Selection of the fourth option “Use D/S Ext. from Prev. Comp” is discussed in Section 5.4.1.2.
- **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 4.2.1).
- **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 (see Section 4.2.1).
- **Orifice Size:** Orifice size is entered for all orifices and for all piping immediately downstream of an orifice (see Section 4.2.1).
- **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 (see Section 4.2.1). 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} , (see Section 4.2.1).

T_{hoop} was calculated using the following equation:

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

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 (see Section 4.2.1).
- **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 (see Section 4.2.1).

5.3.4. Installation Subform

This subform contains information on component location, installation, replacement, and adjacent equipment (see Section 4.2.1). All data other

than installation and replacement dates are optional. Replacement information from 2R16 was obtained from the FAC Program Engineer [7.5.4]. 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 the CHECWORKS manual [7.7].

Appendix F contains a listing of all UT inspection data that has been imported for Refuel Outage 16. UT inspection data was received as UT examination reports [7.16] and electronic UT grid files [7.17]. Prior inspection data was assumed correct (see Section 4.2.2). 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. 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 [7.8].

5.4.1.1. 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.

5.4.1.2. 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.

5.4.2. 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.

5.4.2.1. *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.

5.4.2.2. *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.

5.4.2.3. *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 [7.8].

5.4.2.4. 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.

5.4.3. 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.

5.4.4. 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.

5.4.5. 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.

5.4.6. 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 [7.8]. 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. There are no NFAs in this model.

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 rates.

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

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

5.7. 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 upcoming refuel outage.

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 A.

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 [7.8].

Duty factors were taken from the input CHECWORKS model [7.4]. 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 [7.3], and the flow diagrams [7.5.5]. 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 [7.3].

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

For Pass 2 Wear Rate Analysis Runs, the Predicted vs. Measured Wear Plot illustrates the accuracy of the predictive model relative to measured wear. The points on the plot should be reasonably close to the central diagonal through the origin. For this reason, the Wear Plot has lines 50% above and below the central diagonal. In general, the Wear Plots for IP3 are good.

EPRI recommends that at least three to five locations be included in a Pass 2 Analysis to provide reasonable confidence in the results [7.8 & 7.14]. An inspection location in this context means a single component in CHECWORKS. All UT data entered into CHECWORKS for that component (whether it be partitioned into the u/s main, d/s main, branch, u/s ext, d/s ext, or branch ext) is grouped together as one inspection location. In the case of pipe entered as a d/s extension of a fitting, the pipe was grouped with the other fitting subcomponents and the combination of pipe and fitting constituted one inspection location. UT data imported to a completely separate component, and all of its subcomponents, constitutes a second location.

The more inspections used in 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.

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 [7.8]. 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.

If a CHECWORKS run can be considered properly calibrated, then the Pass 2 results can be used with confidence. These results can then be used to determine whether additional inspections are necessary. Otherwise, the CHECWORKS results should be used for relative ranking only.

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.

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 LCF, 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.*

In addition to the number of inspection locations, the LCF value, and the plot correlation, there are other factors that influence whether a run can be considered calibrated. These include train coverage, inspections downstream of orifices and control valves, the number of outliers on the "Comparison of Wear Predictions" plot, and geometry sampling.

EPRI's "Recommendations for an Effective Flow-Accelerated Corrosion Program" advises that inspections be performed on parallel trains [7.14]. As a consequence, there must be adequate train coverage to categorize a run as calibrated.

NSAC-202L states that special consideration should be given to locations immediately downstream of orifices and control valves [7.14]. Thus for a line to be calibrated, an inspection must be performed immediately downstream of these locations.

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%.

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.

7. References

- 7.1. "Erosion/Corrosion-Induced Pipe Wall Thinning", Generic Letter 89-08, U.S. Nuclear Regulatory Commission (NRC), May 2, 1989.
- 7.2. "Indian Point Unit 2 CHECWORKS Power Uprate Analysis", CSI Calculation 040711-02, Revision 0, 3/24/2005.
- 7.3. Indian Point 2 Heat Balance Diagrams
 - 7.3.1. Original HBD, 3090.2 MWt: Indian Point 2 Nuclear Power Plant "Benchmark PEPSE Model Tuned to 1-22-03 Data", Sheets 1-6, Run Date 1/10/05.
 - 7.3.2. Appendix K HBD, 3127.0 MWt: Indian Point 2 Nuclear Power Plant "Benchmark PEPSE Model Tuned to 1-22-03 Data", Sheets 1-6, Run Date 11/11/04.
 - 7.3.3. Stretch Power Uprate HBD, 3228.5 MWt: Indian Point 2 Nuclear Power Plant "Uprate PEPSE Model with New HP Turbine", Sheets 1-6, S&W Calc 58030-HU(S)-001 Rev. 0, Attachment 8.3 pages 1-6.
- 7.4. Indian Point 2 CHECWORKS FAC model, input model (as-received), electronic files provided to CSI on 10/5/2004.
- 7.5. Referenced Correspondence and Communications (see Attachment A)
 - 7.5.1. Email from Harry Hartjen (IP) to Daniel R. Poe (CSI Technologies), dated 10/12/2004, regarding SPU implementation dates, CSI Doc. No. 04071111.
 - 7.5.2. Email from Harry Hartjen (IP) to Daniel R. Poe (CSI Technologies), dated 10/18/2004, regarding operational and configuration changes due to SPU, CSI Doc. No. 04071113.
 - 7.5.3. Email from Ron Macina (IP3) to Brian Trudeau (CSI Technologies), dated 1/10/2005, regarding additional Heat Balance Diagrams and uprate start dates, CSI Doc. No 04071140.
 - 7.5.4. Letter IP-PCE-05-004 from Harry Hartjen (IP) to Daniel R. Poe (CSI Technologies), dated 3/10/2005, regarding Indian Point Unit 2 2R16 CHECWORKS update data submittal. (Hardcopy only, not included in Attachment A).

7.5.5. Email from Harry Hartjen (IP) to Brian Trudeau (CSI Technologies), dated 4/26/2005, regarding IP2 Cycle 17 start date and additional chemistry data CSI Doc. No. 050714b03.

7.6. Indian Point 2 Flow Diagrams

Main Steam, Dwg No. 9321-F-2017, Rev. 83

Condensate & Boiler Feed Pump Suction, Dwg No. 9321-2018, Rev. 137

Boiler Feedwater, Dwg No. 9321-F-2019, Rev. 110

Extraction Steam, Dwg No. 9321-F-2020, Rev. 41

Heater Drain & Vents, Dwg No. 9321-F-2022-52, Rev. 52

Moisture Separator and Reheater Drains & Vents, Dwg No. 9321-F-2023-21, Rev. 31

Boiler Feed Pump Turbine Steam Lines Drains & Vents, Dwg No. 9321-H-2024-23, Rev. 23

Steam Supply & Condensate Return, Dwg No. 9321-F-2027, Rev. 61

Main Steam, Dwg No. 227780, Rev. 50

Moisture PreSeparator, Dwg No. A-228272, Rev. 15

Condensate & Boiler Feed Pump Suction, Dwg No. A-235307, Rev. 29

Heater Drain & Vents, Dwg No. A-235304, Rev. 23

Steam Generator Blowdown & Blowdown Sample System, Dwg No. 9321-F-2729, Rev. 66

7.7. "CHECWORKS Flow-Accelerated Corrosion Application, Version 1.0G User Guide," Document TR-103198-P1-R1, October 2000.

7.8. "CHECWORKS Steam/Feedwater Application, Guidelines for Plant Modeling and Evaluation of Component Inspection Data", Doc. No. 1009599, Final Report, September 2004.

7.9. Indian Point 2 FAC Program Isometrics/Sketches

SK-1 Rev D	SK-33A Rev C	SK-50B Rev C
SK-2 Rev D	SK-33B Rev C	SK-50C Rev C
SK-3 Rev D	SK-34A Rev C	SK-51 Rev D
SK-4 Rev C	SK-34B Rev C	SK-52 Rev C
SK-5 Rev E	SK-35A Rev C	SK-53 Rev C
SK-6 Rev E	SK-35B Rev C	SK-54 Rev C
SK-7 Rev C	SK-36A Rev C	SK-56 Rev D
SK-7A Rev B	SK-36B Rev C	SK-57 Rev C
SK-8 Rev D	SK-37A Rev C	SK-66A Rev C
SK-9 Rev D	SK-37B Rev C	SK-68A Rev D
SK-12 Rev D	SK-38A Rev C	SK-69A Rev D
SK-19 Rev C	SK-38B Rev D	SK-71 Rev C
SK-20 Rev E	SK-39 Rev B	SK-72 Rev B
SK-21A Rev C	SK-40 Rev B	SK-73 Rev D
SK-21B Rev C	SK-41 Rev B	SK-74 Rev C
SK-22A Rev C	SK-42 Rev B	SK-75 Rev C
SK-22B Rev C	SK-43 Rev B	SK-76 Rev C
SK-23A Rev C	SK-44 Rev B	SK-77 Rev C
SK-23B Rev D	SK-45A Rev C	SK-78 Rev C

SK-24A Rev B	SK-45B Rev B	SK-80 Rev B
SK-24B Rev C	SK-45C Rev B	SK-81 Rev B
SK-25A Rev B	SK-45D Rev B	SK-82 Rev C
SK-25B Rev C	SK-46A Rev C	SK-83 Rev C
SK-26A Rev B	SK-46B Rev C	SK-84 Rev C
SK-26B Rev C	SK-47 Rev B	SK-92 Rev C
SK-27 Rev C	SK-48A Rev C	SK-93 Rev B
SK-28 Rev C	SK-48B Rev D	SK-94 Rev B
SK-29 Rev C	SK-49A Rev D	SK-95 Rev B
SK-30 Rev C	SK-49B Rev B	SK-242 Rev A
SK-31 Rev C	SK-49C Rev D	SK-243 Rev A
SK-32 Rev C	SK-50A Rev D	SK-244 Rev A

- 7.10. Indian Point 3 FAC Program Isometric, "Erosion Corrosion Inspection Turbine Building & Heater Bay Condensate System Piping Isometric from F.W. Heaters 32A, B & C to F.W. Heaters 33A, B, C", Drawing No. EC-H-50061, Revision 1.
- 7.11. Component Names for Newly Modeled Lines Between Feedwater Heaters 22 and Feedwater Heaters 23, electronic file "UNIT 2 COMP NOS.xls" provided to CSI on 11/15/2004.
- 7.12. "Flow Accelerated Corrosion Program CHECWORKS Analysis Enhancement", Technical Report No. 00130-TR-001, Volume 1 of 1, Revision 0, December 2000.
- 7.13. Case N-597 of ASME Boiler and Pressure Vessel Code, 3/2/1998.
- 7.14. "Recommendations for an Effective Flow-Accelerated Corrosion Program", EPRI NSAC-202L-R2, April 1999.
- 7.15. Chemistry Data for Cycle 16
 - 7.15.1. Cycle 16 Feedwater Chemistry Data, electronic spreadsheet titled "IP2HPFWdatacycle16.xls", received as an attachment to letter IP-PCE-05-004, 3/10/2005.
 - 7.15.2. Cycle 16 Condensate Dissolved Oxygen, electronic spreadsheet titled "IP2 CPD DO.xls", received as an attachment to email 050714b03, 4/27/2005.
- 7.16. Ultrasonic Examination Reports
 - 7.16.1. 2R16 UT Exam Reports, hardcopy reports received as an attachment to letter IP-PCE-05-004, 3/10/2005.
- 7.17. Ultrasonic Examination Grid Files

7.17.1. 2R16 UT Exam Electronic Grid Files, electronic text files received as an attachment to letter IP-PCE-05-004, 3/10/2005.

Appendix A
CHECWORKS Model Change History

Updates prior to 2R16

- Updates to the model prior to 2R16 are not documented in this Appendix.

Update for 2R16

- The model was updated with all information necessary to run Wear Rate Analysis (WRA) for plant conditions through 2R16, such as updates to the plant period table, water treatments, WRA run definitions, the Advanced Run Definition, replacements, UT inspection data, etc.
- All 2R16 FAC inspections were imported to the appropriate component. These inspections are listed in Appendix F.
- Cycle 16 water chemistry was updated to reflect measured concentrations. This data appears in Appendix C.
- The plant period table was updated with actual the actual Cycle 16 start date, end date, and operating hours. Refuel Outage 16 was updated with actual start and end dates. Cycle 17 was updated with the actual start date and estimated end date, operating hours, and water chemistry. This data appears in Appendix C.
- Several components were shown on the isometric sketches but did not exist in the field. These components were deleted from the model: MS-2B55N, BFD-23P, and BFD-56P [7.5.4].
- Components MS-2B33P, MS-2B35, MS-2B35P, and MS-2B36 were replaced with chromemoly. Pipe replacements were A335 Grade P22 seamless, schedule 80; elbow replacements were A234 Grade WP22 seamless, schedule 80 [7.5.4].
- It was discovered that component 4EXB-14P was replaced in 2R15 (based on the 2R16 inspection) [7.16.1]. The model was updated with this replacement.

- Vent chamber drain lines to the condensers were replaced with chrome-moly, schedule 40. These lines were replaced on all six MSR's from the control valve through the connection to the condenser [7.5.4]. These lines are not part of the "official" model scope, but were updated with replacement information for historical tracking purposes. The following table list the components updated with replacement information.

Line	Component
xNCW_65A	1A-VCD15
xNCW_65A	1A-VCD15P
xNCW_66A	2A-VCD20
xNCW_66A	2A-VCD36P
xNCW_66A	2A-VCD36
xNCW_66A	2A-VCD36P-1 US
xNCW_66A	2A-VCD41P DS
xNCW_66A	2A-VCD42
xNCW_67A	3A-VCD16
xNCW_68A	1B-VCD16P
xNCW_68A	1B-VCD17
xNCW_68A	1B-VCD17P
xNCW_68A	1B-VCD18P
xNCW_68A	1B-VCD19E

Line	Component
xNCW_68A	1B-VCD19P US
xNCW_69A	2B-VCD8E
xNCW_69A	2B-VCD39P
xNCW_69A	2B-VCD39
xNCW_70A	3B-VCD7P
xNCW_273	273-9P DS
xNCW_273	273-10E
xNCW_273	273-1P US
xNCW_273	273-7P DS
xNCW_273	273-8E
xNCW_273	273-9P US
xNCW_285	285-13P DS
xNCW_285	285-1B-VCD-XE
xNCW_285	285-15P US

- Flow element FE-1102-2 was added to the model as component CD-76FE. This is an original component that was omitted during prior modeling. The orifice size (inner diameter) was assumed to be 80% of the upstream pipe inner diameter (see Section 4.2.4). The geometry code of the downstream pipe, CD-76P DS, was updated to type 56 and the orifice size was entered for this pipe as well.

- The table below lists nozzles that were modeled in CHECWORKS due to the Power Uprate Engineering Report and Feedwater Heater 21 and 22 studies. These components were entered in line "xNCW_FWH 21&22 Nozzles". Note that these nozzles are not part of the "official" CHECWORKS model.

Name	Location	Geometry Code	Diameter (in.)	Tnom (in.)	Material
LPFW21A-1N	Ext Stm inlet nozzle	30	26	0.375	A53 Gr B
LPFW21A-2N	Ext Stm inlet nozzle	30	26	0.375	A53 Gr B
LPFW21A-3N	Ext Stm inlet nozzle	30	26	0.375	A53 Gr B
LPFW21A-4N	Ext Stm inlet nozzle	30	26	0.375	A53 Gr B
LPFW21A-5N	Condensate inlet nozzle	30	14	0.438	A106 Gr B
LPFW21A-6N	Condensate outlet nozzle	31	14	0.438	A106 Gr B
LPFW21A-7N	Heater drain outlet nozzle	31	12	0.250	A106 Gr B
LPFW21B-1N	Ext Stm inlet nozzle	30	26	0.375	A53 Gr B
LPFW21B-2N	Ext Stm inlet nozzle	30	26	0.375	A53 Gr B
LPFW21B-3N	Ext Stm inlet nozzle	30	26	0.375	A53 Gr B
LPFW21B-4N	Ext Stm inlet nozzle	30	26	0.375	A53 Gr B
LPFW21B-5N	Condensate inlet nozzle	30	14	0.438	A106 Gr B
LPFW21B-6N	Condensate outlet nozzle	31	14	0.438	A106 Gr B
LPFW21B-7N	Heater drain outlet nozzle	31	12	0.250	A106 Gr B
LPFW21C-1N	Ext Stm inlet nozzle	30	26	0.375	A53 Gr B
LPFW21C-2N	Ext Stm inlet nozzle	30	26	0.375	A53 Gr B
LPFW21C-3N	Ext Stm inlet nozzle	30	26	0.375	A53 Gr B
LPFW21C-4N	Ext Stm inlet nozzle	30	26	0.375	A53 Gr B
LPFW21C-5N	Condensate inlet nozzle	30	14	0.438	A106 Gr B
LPFW21C-6N	Condensate outlet nozzle	31	14	0.438	A106 Gr B
LPFW21C-7N	Heater drain outlet nozzle	31	12	0.250	A106 Gr B
LPFW22A-1N	Ext Stm inlet nozzle	30	22	0.375	A53 Gr B
LPFW22A-2N	Ext Stm inlet nozzle	30	22	0.375	A53 Gr B
LPFW22A-3N	Condensate inlet nozzle	30	14	0.438	A106 Gr B
LPFW22B-1N	Ext Stm inlet nozzle	30	22	0.375	A53 Gr B
LPFW22B-2N	Ext Stm inlet nozzle	30	22	0.375	A53 Gr B
LPFW22B-3N	Condensate inlet nozzle	30	14	0.438	A106 Gr B
LPFW22C-1N	Ext Stm inlet nozzle	30	22	0.375	A53 Gr B
LPFW22C-2N	Ext Stm inlet nozzle	30	22	0.375	A53 Gr B
LPFW22C-3N	Condensate inlet nozzle	30	14	0.438	A106 Gr B

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
3RD POINT EXTRAC STM	Yes	39	8	Moderate	1.113	Good	Good	N/A	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.
4TH POINT EXTRAC STM	No	32	N/A	N/A	1.000	Good	Good	N/A	This WRA run consists of components that operate at superheated steam conditions only. CHECWORKS predicts zero wear for these components so no Pass 2 Analysis can be performed.
5TH POINT EXTRAC STM	No	13	6	Moderate	0.526	Good	Poor	N/A	Nearly all components have been replaced with FAC-resistant material (Cr-Mo, stainless steel, or stainless steel ID clad) except some valves and 2 exit nozzles, which remain carbon steel.
6TH POINT EXTRAC STM	No	2	0	N/A	0.702	Poor	Poor	N/A	Override material alloy content has been select for most components in this run (18% Cr). Some nozzles and valves remain carbon steel. Does not meet minimum number of inspections for calibration.
BLOWDOWN	No	18	2	Good	0.683	Good	Good	No	Inspections required immediately downstream of 3 of 4 flow elements to consider this run calibrated. Note that run consists mainly of small-bore, socket-welded components so CHECWORKS predictions may be questionable (see EPRI Guidelines for Plant Modeling).

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
CND DWNSTRM HDPD <i>Condensate Downstream of Htr Drn Pmp Dis</i>	Yes	15	3	Good	0.687	Good	Good	Yes	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.
CND FWH 22 TO FWH 23 <i>Condensate FWH 23 to FWH 24</i>	No	0	N/A	N/A	N/A	Poor	Poor	N/A	No inspections have been performed on components in this run.
CND FWH 23 TO FWH 24 <i>Condensate FWH 23 to FWH 24 U/S of HDPD</i>	Yes	13	2	Good	0.446	Good	Good	N/A	Run can be considered calibrated based on good correlation between predicted and measured wear and fulfillment of all other criterion. LCF is below desired range, but correlation is good. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
CND FWH 24 TO FWH 25 <i>Condensate FWH 24 to FWH 25 U/S of HDPD</i>	Yes	13	2	Good	0.359	Good	Good	N/A	Run can be considered calibrated based on good correlation between predicted and measured wear and fulfillment of all other criterion. LCF is below desired range, but correlation is good. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
CND FWH 25 TO HEADER <i>Condensate FWH 25 U/S of HDPD</i>	Yes	7	2	Good	0.424	Good	Fair	N/A	Run can be considered calibrated based on good correlation between predicted and measured wear and fulfillment of all other criterion. LCF is below desired range, but correlation is good. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
CROSSUNDER	No	0	N/A	N/A	N/A	Poor	Poor	N/A	Override material alloy content has been select for most components in this run (18% Cr). No inspections have been performed on components in this run.

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 BFP TO FWH 26 <i>Feedwater Pump Discharge to FWH 26</i>	Yes	27	3	Good	0.598	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 FWH 26 TO STM GEN <i>Feedwater from FWH 26 to Stm Generators</i>	Yes	36	1	Good	1.436	Good	Good	Yes	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.
FWH 23 DRNS DSCV	Yes	5	1	Moderate	1.621	Fair	Fair	Yes	Meets minimum number of inspection locations. Run can be considered calibrated, but additional inspections recommended.
FWH 23 DRNS USCV	Yes	28	2	Good	2.464	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.
FWH 24 DRNS DSCV	No	8	7	Moderate	2.656	Good	Good	Yes	Run is not calibrated based on large number of outliers.
FWH 24 DRNS USCV	Yes	12	0	Good	2.168	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.
FWH 25 DRNS TO HDT	Yes	17	1	Good	1.348	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.

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
FWH 26 DRNS DSCV	No	1	0	N/A	0.707	Good	Poor	Yes	Only 3 carbon steel FAC components (nozzles) in this run, all others are CrMo or valves. Downstream of control valve criteria fulfilled since components downstream are Cr-Mo.
FWH 26 DRNS USCV	Yes	8	0	Good	0.998	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.
HTR DRN PMP DISCH	Yes	9	0	Good	0.955	Good	Good	Yes	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.
HTR DRN TANK DRN	No	4	0	Good	1.182	Good	Good	N/A	Within minimum number of inspection locations range. Additional inspections recommended.
MSDT DRNS TO HDT	No	22	3	Good	1.164	Good	Poor	N/A	Only 12 carbon steel FAC components (nozzles) in this run, all others are stainless steel or valves. Multiple uninspected trains.
MSR SHELL DRAINS	No	12	0	Good	3.898	Fair	Poor	N/A	Many uninspected lines, including no inspections to MSDT 23B. LCF is outside desired range.
RHTR DRN TK 21A USCV <i>Reheat Drain Tank 21A Drain to CV</i>	Yes	25	6	Moderate	1.522	Good	Good	Yes	During 2R16 update, a separate run was made for each train from the reheater drain tanks due to the number of inspections performed. 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.

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
RHTR DRN TK 21B USCV <i>Reheat Drain Tank 21B Drain to CV</i>	Yes	14	3	Moderate	1.307	Good	Good	Yes	During 2R16 update, a separate run was made for each train from the reheater drain tanks due to the number of inspections performed. 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.
RHTR DRN TK 22A USCV <i>Reheat Drain Tank 22A Drain to CV</i>	Yes	19	4	Good	2.047	Good	Good	Yes	During 2R16 update, a separate run was made for each train from the reheater drain tanks due to the number of inspections performed. 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.
RHTR DRN TK 22B USCV <i>Reheat Drain Tank 22B Drain to CV</i>	Yes	12	2	Good	3.165	Good	Good	Yes	During 2R16 update, a separate run was made for each train from the reheater drain tanks due to the number of inspections performed. Run can be considered calibrated based on good correlation between predicted and measured wear and fulfillment of all other criterion. LCF is outside desired range. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
RHTR DRN TK 23A USCV <i>Reheat Drain Tank 23A Drain to CV</i>	No	9	0	Good	1.540	Good	Good	No	During 2R16 update, a separate run was made for each train from the reheater drain tanks due to the number of inspections performed. Inspection required immediately downstream of MS-3A16FE.

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
RHTR DRN TK 23B USCV <i>Reheat Drain Tank 23B Drain to CV</i>	Yes	20	7	Moderate	1.562	Good	Good	Yes	During 2R16 update, a separate run was made for each train from the reheater drain tanks due to the number of inspections performed. Outliers below error bar are due to short service life on replaced components. Run can be considered calibrated despite moderate correlation between predicted and measured wear and high percentage of outliers. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
RHTR DTK A DRN DSCV <i>Reheater Drain Tank A Drain D/S CV</i>	Yes	48	10	Good	1.664	Good	Good	Yes	During 2R16 update, two runs were made for the "A" and "B" trains due to the number of inspections performed. Downstream of control valve criteria fulfilled since components downstream are 16% Cr. 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.
RHTR DTK B DRN DSCV <i>Reheater Drain Tank B Drain D/S CV</i>	Yes	34	14	Moderate	1.808	Good	Good	Yes	During 2R16 update, two runs were made for the "A" and "B" trains due to the number of inspections performed. Downstream of control valve criteria fulfilled since components downstream are 16% Cr. Can be considered calibrated since many outliers are on replaced components. Future inspections should be done in accordance with FAC program guidelines for Pass 2 runs.
RHTR TO RHTR DRN TK	No	6	0	Moderate	0.953	Poor	Poor	N/A	Two uninspected trains.

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

Appendix C
CHECWORKS Global Data

Table C.1 Original Power Level Input Data

CHECWORKS Field	Power Level	
	100.00%	Reference
Steam Rate (Mlb/hr)	13.205620	7.3.1
Pressure (psia)	754.0	7.3.1
Temp (F)	511.4	7.3.1
Blowdown Rate (Mlb/hr)	0.0542	7.3.1
Carryover (%)	0.01	7.3.1
Feedwater Vent Rate (%)	x	7.7
Reheater Vent Rate (%)	x	7.7
Moisture Separator Carryunder (%)	x	7.7
Notes: Original Power Level 3090.2 MWt		

x - Field should be left blank for a PWR.

Table C.2 Appendix K Power Level Input Data

CHECWORKS Field	Power Level	
	101.19%	Reference
Steam Rate (Mlb/hr)	13.383160	7.3.2
Pressure (psia)	765.0	7.3.2
Temp (F)	513.1	7.3.2
Blowdown Rate (Mlb/hr)	0.0542	7.3.2
Carryover (%)	0.02	7.3.2
Feedwater Vent Rate (%)	x	7.7
Reheater Vent Rate (%)	x	7.7
Moisture Separator Carryunder (%)	x	7.7
Notes: Stretch Power Uprate. 3127.0MWt		

x - Field should be left blank for a PWR.

Table C.3 SPU Power Level Input Data

CHECWORKS Field	Power Level	
	104.48%	Reference
Steam Rate (Mlb/hr)	13.903750	7.3.3
Pressure (psia)	765.0	7.3.3
Temp (F)	513.1	7.3.3
Blowdown Rate (Mlb/hr)	0.0542	7.3.3
Carryover (%)	0.02	7.3.3
Feedwater Vent Rate (%)	x	7.7
Reheater Vent Rate (%)	x	7.7
Moisture Separator Carryunder (%)	x	7.7
Notes: Stretch Power Uprate. 3228.5 MWt		

x - Field should be left blank for a PWR.

Table C.4 Original 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	424.4	7.3.1
FWHTR 2	Tube side outlet	x	x	x	379.5	7.3.1
FWHTR 3	Tube side outlet	x	x	x	298.3	7.3.1
FWHTR 4	Tube side outlet	x	x	x	253.7	7.3.1
FWHTR 5	Tube side outlet	x	x	x	202.6	7.3.1
FWHTR 6	Tube side outlet	x	x	x	155.4	7.3.1
SPUMP 1	Driven steam and drain enthalpy and pressure	0.138423	967.3	1.0	x	7.3.1
MSEP 1	Moist Sep & Moist PreSep Drains ²	0.740767	354.5	200.6	x	7.3.1
TANK 1	Heater Drain Tank exiting steam	0	330.6	220.7	x	Note 4
TANK 2	Blowdown tank exiting steam	0	501.6	754.0	x	Note 4
RHTR 1	Reheater Drain	1.032256	503.3	619.9	x	Note 6
HPEXTLINE 1	Conditions in line to FWH 6	0.693459	1147.5	372.9	x	7.3.1
HPEXTLINE 2	Conditions in line (Presep Outlet to FWH 5) ³	1.021481	1138.9	206.5	x	7.3.1
LPEXTLINE 1	Conditions in line to FWH 4	0.446424	1192.3	72.58	x	7.3.1
LPEXTLINE 2	Conditions in line to FWH 3	0.509995	1087.1	34.86	x	Note 5
LPEXTLINE 3	Conditions in line to FWH 2	0.507215	931.9	14.04	x	Note 5
LPEXTLINE 4	Conditions in line to FWH 1	0.729863	899.9	5.52	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 26 at Indian Point 2). 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 [7.8].

(3) HPEXTLINE 2 is a fictitious high-pressure extraction line representing the steam lines between the pre-separator and main separator as recommended by EPRI Guidelines [7.8].

(4) Flow rate is for exiting steam flow was entered as zero as recommended by EPRI Guidelines [7.8]. Pressure and enthalpy were obtained from the Appendix K PEPSE model [7.3.2].

(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.

(6) Reheater drain flow was entered as the sum of the flow through the reheater drain tanks and the vent chamber drains [7.3.2]. Pressure and enthalpy were entered as the conditions through the reheater drain tank [7.3.2].

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	425.2	7.3.2
FWHTR 2	Tube side outlet	x	x	x	380.5	7.3.2
FWHTR 3	Tube side outlet	x	x	x	299.0	7.3.2
FWHTR 4	Tube side outlet	x	x	x	251.4	7.3.2
FWHTR 5	Tube side outlet	x	x	x	203.3	7.3.2
FWHTR 6	Tube side outlet	x	x	x	156.8	7.3.2
SPUMP 1	Driven steam and drain enthalpy and pressure	0.142106	966.9	1.0	x	7.3.2
MSEP 1	Moist Sep & Moist PreSep Drains ²	0.754560	355.7	203.4	x	7.3.2
TANK 1	Heater Drain Tank exiting steam	0	332.6	222.8	x	Note 4
TANK 2	Blowdown tank exiting steam	0	503.6	765.0	x	Note 4
RHTR 1	Reheater Drain	1.048264	506.8	656.0	x	Note 6
HPEXTLINE 1	Conditions in line to FWH 6	0.688561	1147.0	378.3	x	7.3.2
HPEXTLINE 2	Conditions in line (Presep Outlet to FWH 5) ³	1.041833	1138.9	209.4	x	7.3.2
LPEXTLINE 1	Conditions in line to FWH 4	0.453736	1191.5	73.47	x	7.3.2
LPEXTLINE 2	Conditions in line to FWH 3	0.518228	1085.2	35.32	x	Note 5
LPEXTLINE 3	Conditions in line to FWH 2	0.508950	929.5	14.23	x	Note 5
LPEXTLINE 4	Conditions in line to FWH 1	0.710848	887.5	5.62	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 26 at Indian Point 2). 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 [7.8].

(3) HPEXTLINE 2 is a fictitious high-pressure extraction line representing the steam lines between the pre-separator and main separator as recommended by EPRI Guidelines [7.8].

(4) Flow rate is for exiting steam flow was entered as zero as recommended by EPRI Guidelines [7.8]. Pressure and enthalpy were obtained from the Appendix K PEPSE model [7.3.2].

(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.

(6) Reheater drain flow was entered as the sum of the flow through the reheater drain tanks and the vent chamber drains [7.3.2]. Pressure and enthalpy were entered as the conditions through the reheater drain tank [7.3.2].

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	429.6	7.3.3
FWHTR 2	Tube side outlet	x	x	x	382.4	7.3.3
FWHTR 3	Tube side outlet	x	x	x	300.5	7.3.3
FWHTR 4	Tube side outlet	x	x	x	255.5	7.3.3
FWHTR 5	Tube side outlet	x	x	x	204.3	7.3.3
FWHTR 6	Tube side outlet	x	x	x	158.0	7.3.3
SPUMP 1	Driven steam and drain enthalpy and pressure	0.153175	969.1	1.0	x	7.3.3
MSEP 1	Moist Sep & Moist PreSep Drains ²	1.060624	359.2	210.7	x	7.3.3
TANK 1	Heater Drain Tank exiting steam	0	337.5	225.7	x	Note 4
TANK 2	Blowdown tank exiting steam	0	501.6	754.0	x	Note 4
RHTR 1	Reheater Drain	0.917845	506.8	656.0	x	7.3.3
HPEXTLINE 1	Conditions in line to FWH 6	0.799284	1142.0	400.7	x	7.3.3
HPEXTLINE 2	Conditions in line (Presep Outlet to FWH 5) ³	1.079704	1134.2	214.9	x	7.3.3
LPEXTLINE 1	Conditions in line to FWH 4	0.464923	1196.2	75.4	x	7.3.3
LPEXTLINE 2	Conditions in line to FWH 3	0.525277	1095.2	36.1	x	Note 5
LPEXTLINE 3	Conditions in line to FWH 2	0.513168	937.0	14.56	x	Note 5
LPEXTLINE 4	Conditions in line to FWH 1	0.702033	887.3	5.77	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 26 at Indian Point 2). 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 [7.8].

(3) HPEXTLINE 2 is a fictitious high-pressure extraction line representing the steam lines between the pre-separator and main separator as recommended by EPRI Guidelines [7.8].

(4) Flow rate is for exiting steam flow was entered as zero as recommended by EPRI Guidelines [7.8]. Pressure and enthalpy were obtained from the SPU PEPSE model [7.3.3].

(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.

Table C.7 CHEM_1 Water Treatment Input Data

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	5.00	ppb	7.4
Ammonia	Condensate	0.55	ppm	7.4
Hydrazine	Condensate	20.0	ppb	7.4
Hydrazine	SG Outlet	6.312	ppb	7.4
Hydrazine	MSR Drain	12.624	ppb	7.4

Note: This water treatment was used for Cycles 1-13.

See Assumption 4.1.5 concerning this water treatment.

Table C.8 Cycle 14 Water Treatment Input Data

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	5.00	ppb	7.4
ETA	Final Feedwater	2.25	ppm	7.4
Ammonia	Condensate	1.00	ppm	7.4
Hydrazine	Condensate	30.0	ppb	7.4
Hydrazine	SG Outlet	15.0	ppb	7.4
Hydrazine	MSR Drain	36.0	ppb	7.4

See Assumption 4.1.5 concerning this water treatment.

Table C.9 Cycle 15 Water Treatment Input Data

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	5.00	ppb	7.4
ETA	Final Feedwater	2.25	ppm	7.4
Ammonia	Condensate	3.00	ppm	7.4
Hydrazine	Condensate	100.0	ppb	7.4
Hydrazine	SG Outlet	60.0	ppb	7.4
Hydrazine	MSR Drain	120.0	ppb	7.4

See Assumption 4.1.5 concerning this water treatment.

Table C.10 Cycle 16 Water Treatment Input Data

Species	Sample Location	Concentration	Units	Reference
Dissolved Oxygen	Condensate	3.73	ppb	7.15.2
ETA	Final Feedwater	2.68	ppm	7.15.1
Ammonia	Final Feedwater	2.81	ppm	7.15.1
Hydrazine	Final Feedwater	131.0	ppb	7.15.1
Hydrazine	SG Outlet	78.6	ppb	7.15.1
Hydrazine	MSR Drain	157.2	ppb	7.15.1

Table C.11 Plant Period Input Data

Period	Start Date	End Date	Type	Water Treatment	Power Level	Operating Hours	Notes	Ref
							CYCLE GENERATED AS WORKAROUND TO CHECWORKS PROBLEM. (REF. CHECWORKS FAC VERSION 1.0E OPEN ISSUES MEMO)	
CYCLE 1A	5/21/1973	5/22/1973	Op.	CHEM_1	100	0		7.4
CYCLE 1	5/22/1973	3/30/1976	Op.	CHEM_1	100	12432		7.4
REFUEL 1	3/31/1976	9/20/1976	Maint.	----	----	----		7.4
CYCLE 2	9/21/1976	2/13/1978	Op.	CHEM_1	100	8040		7.4
REFUEL 2	2/14/1978	5/22/1978	Maint.	----	----	----		7.4
CYCLE 3	5/23/1978	6/16/1979	Op.	CHEM_1	100	8136		7.4
REFUEL 3	6/17/1979	9/10/1979	Maint.	----	----	----		7.4
CYCLE 4	9/11/1979	10/17/1980	Op.	CHEM_1	100	7416		7.4
REFUEL 4	10/18/1980	5/20/1981	Maint.	----	----	----		7.4
CYCLE 5	5/21/1981	9/18/1982	Op.	CHEM_1	100	9288		7.4
REFUEL 5	9/19/1982	12/28/1982	Maint.	----	----	----		7.4
CYCLE 6	12/29/1982	6/2/1984	Op.	CHEM_1	100	10080		7.4
REFUEL 6	6/3/1984	10/16/1984	Maint.	----	----	----		7.4
CYCLE 7	10/17/1984	1/13/1986	Op.	CHEM_1	100	9552		7.4
REFUEL 7	1/14/1986	3/11/1986	Maint.	----	----	----		7.4
CYCLE 8	3/12/1986	10/5/1987	Op.	CHEM_1	100	10584		7.4
REFUEL 8	10/6/1987	1/18/1988	Maint.	----	----	----		7.4
CYCLE 9	1/19/1988	3/18/1989	Op.	CHEM_1	100	8808		7.4
REFUEL 9	3/19/1989	6/30/1989	Maint.	----	----	----		7.4
CYCLE 10	7/1/1989	2/1/1991	Op.	CHEM_1	100	9216		7.4
REFUEL 10	2/2/1991	7/11/1991	Maint.	----	----	----		7.4
CYCLE 11	7/12/1991	1/30/1993	Op.	CHEM_1	100	12576		7.4
REFUEL 11	1/31/1993	4/19/1993	Maint.	----	----	----		7.4
CYCLE 12	4/20/1993	2/4/1995	Op.	CHEM_1	100	12960		7.4
REFUEL 12	2/5/1995	6/5/1995	Maint.	----	----	----		7.4
CYCLE 13A	6/6/1995	2/9/1996	Op.	CHEM_1	100	6371		7.4
CYCLE 13B	1/20/1996	4/28/1997	Op.	CHEM_1	100	11149		7.4
INTERIM 13	2/10/1996	2/19/1996	Maint.	----	----	----		7.4
REFUEL 13	4/28/1997	7/10/1997	Maint.	----	----	----		7.4
							Steam Generator tube rupture occurred 2/15/00. Plant rolled into the refueling outage as a result.	
CYCLE 14	7/11/1997	2/15/2000	Op.	Cycle 14	100	12964.7		7.4
REFUEL 14	2/16/2000	1/2/2001	Maint.	----	----	----		7.4
							Mid cycle outage 10/27/01 due to pwr leak	
CYCLE 15A	1/3/2001	10/27/2001	Op.	Cycle 15	100	7148.9		7.4
INTERIM 15	10/28/2001	11/5/2001	Maint.	----	----	----	MID CYCLE OUTAGE.	7.4
							Total Cycle 15 turbine on line hours provided by e-mail from Hazel Pearsall to Scot Blodgett dated 10/28/02. The length of Cycle 15B was determined by subtracting the hours at Cycle 15A from the total operating hours for the cycle (15539.70).	
CYCLE 15B	11/5/2001	10/26/2002	Op.	Cycle 15	100	8390.8		7.4
REFUEL 15	10/26/2002	11/27/2002	Maint.	----	----	----	32 DAY OUTAGE	7.4

Period	Start Date	End Date	Type	Water Treatment	Power Level	Operating Hours	Notes	Ref
CYCLE 16A	11/27/2002	5/22/2003	Op.	Cycle 16	100	4132	Start/End Dates & Op Hrs. based on IP-PCE-05-004	7.5.4
CYCLE 16B	5/23/2003	10/22/2004	Op.	Cycle 16	101.19	12232	Appendix K Uprate implementation	7.5.3 7.5.4
REFUEL 16	10/23/2004	11/18/2004	Maint.	----	----	----		7.5.4 7.5.5
CYCLE 17	11/19/2004	4/15/2006	Op.	Cycle 16	104.48	12300	Stretch Power Uprate (SPU) implementation. Cycle length and hours estimated. Water chem estimated as same as previous cycle (Cycle 16).	
REFUEL 17	4/16/2006	5/16/2006	Maint.	----	----	----	Start and End Dates Estimated.	

Appendix D
CHECWORKS Modeled Lines

CHECWORKS Line Name	Line Description	Wear Rate Analysis Run Name	Flow Diagram No.	Op Cond Source	Flow Factor	Duty Factor
CD80-1-FWH 23A to FWH 24A	Feedwater Heater 23A to Feedwater Heater 24A	CND FWH 23 TO FWH 24	A235307-29	HBD	0.333	1.000
CD80-2-FWH 23B to FWH 24B	Feedwater Heater 23B to Feedwater Heater 24B	CND FWH 23 TO FWH 24	A235307-29	HBD	0.333	1.000
CD80-3-FWH 23C to FWH 24C	Feedwater Heater 23C to Feedwater Heater 24C	CND FWH 23 TO FWH 24	A235307-29	HBD	0.333	1.000
CD80A-1-FWH 22A to HEADER	Feedwater Heater 22A to Header	CND FWH 22 TO FWH 23	A235307-29	HBD	0.333	1.000
CD80A-2-FWH 22B to HEADER	Feedwater Heater 22B to Header	CND FWH 22 TO FWH 23	A235307-29	HBD	0.333	1.000
CD80A-3-FWH 22C to HEADER	Feedwater Heater 22C to Header	CND FWH 22 TO FWH 23	A235307-29	HBD	0.333	1.000
CD80A-4-FWH 22 OUTLET HEADER	Feedwater Heater 22 Outlet Header Between 22BT and 22CT	CND FWH 22 TO FWH 23	A235307-29	HBD	0.667	1.000
CD80A-5-FWH 22 to FWH 23 HEAD	Feedwater Heater 22 Outlet Header to Feedwater Heater 23 Inlet Header	CND FWH 22 TO FWH 23	A235307-29	HBD	1.000	1.000
CD80A-6-FWH 23 INLET HEADER	Feedwater Heater 22 Inlet Header Between 23CT and 23BT	CND FWH 22 TO FWH 23	A235307-29	HBD	0.667	1.000
CD80A-7-HEADER to FWH 23A	Feedwater Heater 23 Inlet Header to Feedwater Heater 23A	CND FWH 22 TO FWH 23	A235307-29	HBD	0.333	1.000
CD80A-8-HEADER to FWH 23B	Feedwater Heater 23 Inlet Header to Feedwater Heater 23B	CND FWH 22 TO FWH 23	A235307-29	HBD	0.333	1.000
CD80A-9-HEADER to FWH 23C	Feedwater Heater 23 Inlet Header to Feedwater Heater 23C	CND FWH 22 TO FWH 23	A235307-29	HBD	0.333	1.000
CD81-1-FWH 24A to FWH 25A	Feedwater Heater 24A to Feedwater Heater 25A	CND FWH 24 TO FWH 25	A235307-29	HBD	0.333	1.000
CD81-2-FWH 24B to FWH 25B	Feedwater Heater 24B to Feedwater Heater 25B	CND FWH 24 TO FWH 25	A235307-29	HBD	0.333	1.000
CD81-3-FWH 24C to FWH 25C	Feedwater Heater 24C to Feedwater Heater 25C	CND FWH 24 TO FWH 25	A235307-29	HBD	0.333	1.000
CD82-1-FWH 25A to HDR	Feedwater Heater 25A to Header	CND FWH 25 TO HEADER	A235307-29	HBD	0.333	1.000
CD82-2-FWH 25B to HDR	Feedwater Heater 25B to Header	CND FWH 25 TO HEADER	A235307-29	HBD	0.333	1.000
CD82-3-FWH 25C to HDR	Feedwater Heater 25C to Header	CND FWH 25 TO HEADER	A235307-29	HBD	0.333	1.000
CD82-4-HDR 25BT to 25CT	Feedwater Heater 25 Outlet Header Between 25B Tee and 25C Tee	CND FWH 25 TO HEADER	A235307-29	HBD	0.667	1.000
CD82-5-HDR 25CT to HDP OUT	Feedwater Heater 25 Outlet Header Between 25C Tee and Heater Drain Pump Outlet Connection	CND FWH 25 TO HEADER	A235307-29	HBD	1.000	1.000

CHECWORKS Line Name	Line Description	Wear Rate Analysis Run Name	Flow Diagram No.	Op Cond Source	Flow Factor	Duty Factor
CD83-1-HDR HDP to BFP21T	Feedwater Heater 25 Outlet Header Between Connection from HDP Discharge and Boiler Feed Pump 21 Tee	CND DWNSTRM HDPD	A235307-29	Z-type	1.000	1.000
CD83-2-HDR to BFP21	Feedwater Heater Header to Boiler FeedPump21	CND DWNSTRM HDPD	A235307-29	Z-type	0.500	1.000
CD83-3-HDR to BFP22	Feedwater Heater Header to Boiler FeedPump22	CND DWNSTRM HDPD	A235307-29	Z-type	0.500	1.000
ES1-1-3RDPT ES to FWH 23A	Condenser Outlet 3rd Point Extraction Steam to Tee Upstream of Feedwater Heater 23A	3RD POINT EXTRAC STM	9321-F-2020-41	HBD	0.333	1.000
ES1-2-3RDPT ES to FWH 23A	3rd Point Extraction Steam Tee to Feedwater Heater 23A (Line 1 of 2)	3RD POINT EXTRAC STM	9321-F-2020-41	HBD	0.167	1.000
ES1-3-3RDPT ES to FWH 23A	3rd Point Extraction Steam Tee to Feedwater Heater 23A (Line 2 of 2)	3RD POINT EXTRAC STM	9321-F-2020-41	HBD	0.167	1.000
ES2-1-3RDPT ES to FWH 23B	Condenser Outlet 3rd Point Extraction Steam to Tee Upstream of Feedwater Heater 23B	3RD POINT EXTRAC STM	9321-F-2020-41	HBD	0.333	1.000
ES2-2-3RDPT ES to FWH 23B	3rd Point Extraction Steam Tee to Feedwater Heater 23B (Line 1 of 2)	3RD POINT EXTRAC STM	9321-F-2020-41	HBD	0.167	1.000
ES2-3-3RDPT ES to FWH 23B	3rd Point Extraction Steam Tee to Feedwater Heater 23B (Line 2 of 2)	3RD POINT EXTRAC STM	9321-F-2020-41	HBD	0.167	1.000
ES3-1-3RDPT ES to FWH 23C	Condenser Outlet 3rd Point Extraction Steam to Tee Upstream of Feedwater Heater 23C	3RD POINT EXTRAC STM	9321-F-2020-41	HBD	0.333	1.000
ES3-2-3RDPT ES to FWH 23C	3rd Point Extraction Steam Tee to Feedwater Heater 23C (Line 1 of 2)	3RD POINT EXTRAC STM	9321-F-2020-41	HBD	0.167	1.000
ES3-3-3RDPT ES to FWH 23C	3rd Point Extraction Steam Tee to Feedwater Heater 23C (Line 2 of 2)	3RD POINT EXTRAC STM	9321-F-2020-41	HBD	0.167	1.000
ES4-1-4THPT ES to FWH 24A	Condenser Outlet 4th Point Extraction Steam to Feedwater Heater 24A	4TH POINT EXTRAC STM	9321-F-2020-41	HBD	0.333	1.000
ES5-1-4THPT ES to FWH 24B	Condenser Outlet 4th Point Extraction Steam to Feedwater Heater 24B	4TH POINT EXTRAC STM	9321-F-2020-41	HBD	0.333	1.000
ES6-1-4THPT ES to FWH 24C	Condenser Outlet 4th Point Extraction Steam to Feedwater Heater 24C	4TH POINT EXTRAC STM	9321-F-2020-41	HBD	0.333	1.000

CHECWORKS Line Name	Line Description	Wear Rate Analysis Run Name	Flow Diagram No.	Op Cond Source	Flow Factor	Duty Factor
ES7-1-5THPT ES to FWH 25ABC	5th Point Extraction Steam Header to Feedwater Heater 25A,B,C	5TH POINT EXTRAC STM	9321-F-2020-41	HBD	1.000	1.000
ES7-2-5THPT ESHDR to FWH 25C	5th Point Extraction Steam Header to Feedwater Heater 25C	5TH POINT EXTRAC STM	9321-F-2020-41	HBD	0.333	1.000
ES7-3-5THPT ESHDR 25CT to BT	5th Point Extraction Steam Header Between Tee to Feedwater Heater 25C and Feedwater Heater 25B	5TH POINT EXTRAC STM	9321-F-2020-41	HBD	0.667	1.000
ES7-4-5THPT ESHDR to FWH 25B	5th Point Extraction Steam Header to Feedwater Heater 25B	5TH POINT EXTRAC STM	9321-F-2020-41	HBD	0.333	1.000
ES7-5-5THPT ESHDR to FWH 25A	5th Point Extraction Steam Header to Feedwater Heater 25A	5TH POINT EXTRAC STM	9321-F-2020-41	HBD	0.333	1.000
ES7A-1-SEP TKA VNT to FWH25	Moisture Preseparator Separating Tank A Vent to Header Upstream of Feedwater Heaters 25A,B,C	5TH POINT EXTRAC STM	A228272-15	HBD	0.500	1.000
ES7A-2-SEP TKB VNT to FWH25	Moisture Preseparator Separating Tank B Vent to Header Upstream of Feedwater Heaters 25A,B,C	5TH POINT EXTRAC STM	A228272-15	HBD	0.500	1.000
ES8-1-6THPT ES to HDR	HP Turbine 6th Point Extraction Steam to Header	6TH POINT EXTRAC STM	9321-F-2020-41	HBD	0.500	1.000
ES8-2-6THPT ES to HDR	HP Turbine 6th Point Extraction Steam to Header	6TH POINT EXTRAC STM	9321-F-2020-41	HBD	0.500	1.000
ES8-3-6THPT ESHDR to FWH 26	HP Turbine 6th Point Extraction Steam Header to Feedwater Heater 26A,B,C	6TH POINT EXTRAC STM	9321-F-2020-41	HBD	1.000	1.000
ES8-4-6THPT ESHDR to FWH 26C	HP Turbine 6th Point Extraction Steam Header to Feedwater Heater 26C	6TH POINT EXTRAC STM	9321-F-2020-41	HBD	0.333	1.000
ES8-5-6THPT ESHDR 26CT to BT	HP Turbine 6th Point Extraction Steam to Header Between Tee to Feedwater Heater 26C and Feedwater Heater 26B	6TH POINT EXTRAC STM	9321-F-2020-41	HBD	0.667	1.000
ES8-6-6THPT ESHDR to FWH 26B	HP Turbine 6th Point Extraction Steam Header to Feedwater Heater 26B	6TH POINT EXTRAC STM	9321-F-2020-41	HBD	0.333	1.000
ES8-7-6THPT ESHDR to FWH 26A	HP Turbine 6th Point Extraction Steam Header to Feedwater Heater 26A	6TH POINT EXTRAC STM	9321-F-2020-41	HBD	0.333	1.000
FW71-1-BFP21 DISCH to HDR	Boiler Feedpump 21 Discharge to Header	FW BFP TO FWH 26	9321-F-2019-110	Z-type	0.500	1.000

CHECWORKS Line Name	Line Description	Wear Rate Analysis Run Name	Flow Diagram No.	Op Cond Source	Flow Factor	Duty Factor
FW72-1-BFP22 DISCH to HDR	Boiler Feedpump 22 Discharge to Header	FW BFP TO FWH 26	9321-F-2019-110	Z-type	0.500	1.000
FW73-1-BFPHDR to FWH26ABC	Boiler Feedpump Header to Feedwater Heater 26A,B,C Between BFP Discharge Tee and High Pressure Feedwater Heater Bypass Tee	FW BFP TO FWH 26	9321-F-2019-110	Z-type	1.000	1.000
FW73-2-BFPHDR to FWH26ABC	Boiler Feedpump Header to Feedwater Heater 26A,B,C Between High Pressure Feedwater Heater Bypass Tee and Feedwater Heater 26C Tee	FW BFP TO FWH 26	9321-F-2019-110	Z-type	1.000	1.000
FW73-3-BFPHDR to FWH26C	Boiler Feedpump Header to Feedwater Heater 26C	FW BFP TO FWH 26	9321-F-2019-110	Z-type	0.333	1.000
FW73-4-BFPHDR to FWH26ABC	Boiler Feedpump Header to Feedwater Heater 26A,B,C Between Feedwater Heater 26C Tee and Feedwater Heater 26B Tee	FW BFP TO FWH 26	9321-F-2019-110	Z-type	0.667	1.000
FW73-5-BFPHDR to FWH26B	Boiler Feedpump Header to Feedwater Heater 26B	FW BFP TO FWH 26	9321-F-2019-110	Z-type	0.333	1.000
FW73-6-BFPHDR to FWH26A	Boiler Feedpump Header to Feedwater Heater 26A	FW BFP TO FWH 26	9321-F-2019-110	Z-type	0.333	1.000
FW74-1-FWH26A to DISHDR	Feedwater Heater 26A to Heater Discharge Header	FW FWH 26 TO STM GEN	9321-F-2019-110	HBD	0.333	1.000
FW74-2-FWH26B to DISHDR	Feedwater Heater 26B to Heater Discharge Header	FW FWH 26 TO STM GEN	9321-F-2019-110	HBD	0.333	1.000
FW74-3-FWH26 to DISHDR	Feedwater Heater 26 Discharge Header Between 26B Tee and 26C Tee	FW FWH 26 TO STM GEN	9321-F-2019-110	HBD	0.667	1.000
FW74-4-FWH26C to DISHDR	Feedwater Heater 26C to Heater Discharge Header	FW FWH 26 TO STM GEN	9321-F-2019-110	HBD	0.333	1.000
FW74-5-FWH26 to DISHDR	Feedwater Heater 26 Discharge Header Between 26C Tee and Steam Generator Takeoff	FW FWH 26 TO STM GEN	9321-F-2019-110	HBD	1.000	1.000
FW75-1-DISHDR to SG21	Feedwater Heater 26 Discharge Header to Steam Generator 21	FW FWH 26 TO STM GEN	9321-F-2019-110	HBD	0.250	1.000
FW76-1-DISHDR to SG22	Feedwater Heater 26 Discharge Header to Steam Generator 22	FW FWH 26 TO STM GEN	9321-F-2019-110	HBD	0.250	1.000

CHECWORKS Line Name	Line Description	Wear Rate Analysis Run Name	Flow Diagram No.	Op Cond Source	Flow Factor	Duty Factor
FW77-1-DISHDR to SG24	Feedwater Heater 26 Discharge Header to Steam Generator 24	FW FWH 26 TO STM GEN	9321-F-2019-110	HBD	0.250	1.000
FW78-1-DISHDR to SG23	Feedwater Heater 26 Discharge Header to Steam Generator 23	FW FWH 26 TO STM GEN	9321-F-2019-110	HBD	0.250	1.000
HD12-1-FWH26A to CV	Feedwater Heater 26A to CV Upstream of Heater Drain Tank	FWH 26 DRNS USCV	9321-F-2022-52	Z-type	0.333	1.000
HD12-2-FWH26B to CV	Feedwater Heater 26B to CV Upstream of Heater Drain Tank	FWH 26 DRNS USCV	9321-F-2022-52	Z-type	0.333	1.000
HD12-3-FWH26C to CV	Feedwater Heater 26C to CV Upstream of Heater Drain Tank	FWH 26 DRNS USCV	9321-F-2022-52	Z-type	0.333	1.000
HD12-4-FWH26A CV to HTR DR TK	Feedwater Heater 26A CV to Heater Drain Tank	FWH 26 DRNS DSCV	9321-F-2022-52	Z-type	0.333	1.000
HD12-5-FWH26B CV to HTR DR TK	Feedwater Heater 26B CV to Heater Drain Tank	FWH 26 DRNS DSCV	9321-F-2022-52	Z-type	0.333	1.000
HD12-6-FWH26C CV to HTR DR TK	Feedwater Heater 26C CV to Heater Drain Tank	FWH 26 DRNS DSCV	9321-F-2022-52	Z-type	0.333	1.000
HD19-1-HDT to HDP 21 SUCT	Heater Drain Tank to Heater Drain Pump 21	HTR DRN TANK DRN	9321-F-2022-52	HBD	0.500	1.000
HD19-2-HDT to HDP 22 SUCT	Heater Drain Tank to Heater Drain Pump 22	HTR DRN TANK DRN	9321-F-2022-52	HBD	0.500	1.000
HD20-1-HDP21 to BFP SUCTION	Heater Drain Pump 21 to Boiler Feed Pump Suction	HTR DRN PMP DISCH	9321-F-2022-52	HBD	0.500	1.000
HD20-2-HDP22 to BFP SUCTION	Heater Drain Pump 22 to Boiler Feed Pump Suction	HTR DRN PMP DISCH	9321-F-2022-52	HBD	0.500	1.000
HD20-3-HDP DIS T to BFP SUC	Heater Drain Pump Discharge Tee to Boiler Feed Pump Suction	HTR DRN PMP DISCH	9321-F-2022-52	HBD	1.000	1.000
HD21A-1-FWH24A to CV	Feedwater Heater 24A to CV Upstream of Feedwater Heater 23A	FWH 24 DRNS USCV	A235304-23	Z-type	0.333	1.000
HD21A-2-FWH24A CV to FWH23A	Feedwater Heater 24A CV to Feedwater Heater 23A	FWH 24 DRNS DSCV	A235304-23	Z-type	0.333	1.000
HD22A-1-FWH24B to CV	Feedwater Heater 24B to CV Upstream of Feedwater Heater 23B	FWH 24 DRNS USCV	A235304-23	Z-type	0.333	1.000
HD22A-2-FWH24B CV to FWH23B	Feedwater Heater 24B CV to Feedwater Heater 23B	FWH 24 DRNS DSCV	A235304-23	Z-type	0.333	1.000

CHECWORKS Line Name	Line Description	Wear Rate Analysis Run Name	Flow Diagram No.	Op Cond Source	Flow Factor	Duty Factor
HD23A-1-FWH24C to CV	Feedwater Heater 24C to CV Upstream of Feedwater Heater 23C	FWH 24 DRNS USCV	A235304-23	Z-type	0.333	1.000
HD23A-2-FWH24C CV to FWH23C	Feedwater Heater 24C CV to Feedwater Heater 23C	FWH 24 DRNS DSCV	A235304-23	Z-type	0.333	1.000
HD242A-1-FWH23A CV to FWH22A	Feedwater Heater 23A CV to Feedwater Heater 22A	FWH 23 DRNS DSCV	A235304-23	Z-type	0.333	1.000
HD243A-1-FWH23B CV to FWH22B	Feedwater Heater 23B CV to Feedwater Heater 22B	FWH 23 DRNS DSCV	A235304-23	Z-type	0.333	1.000
HD244A-1-FWH23C CV to FWH22C	Feedwater Heater 23C CV to Feedwater Heater 22C	FWH 23 DRNS DSCV	A235304-23	Z-type	0.333	1.000
HD24A-1-FWH23A to CV	Feedwater Heater 23A to CV Upstream of Feedwater Heater 22A	FWH 23 DRNS USCV	A235304-23	Z-type	0.333	1.000
HD25A-1-FWH23B to CV	Feedwater Heater 23B to CV Upstream of Feedwater Heater 22B	FWH 23 DRNS USCV	A235304-23	Z-type	0.333	1.000
HD26A-1-FWH23C to CV	Feedwater Heater 23C to CV Upstream of Feedwater Heater 22C	FWH 23 DRNS USCV	A235304-23	Z-type	0.333	1.000
HD9-1-FWH25A to HTR DRN TK	Feedwater Heater 25A Drain to Heater Drain Tank	FWH 25 DRNS TO HDT	9321-F-2022-52	Z-type	0.333	1.000
HD9-2-FWH25B to HTR DRN TK	Feedwater Heater 25B Drain to Heater Drain Tank	FWH 25 DRNS TO HDT	9321-F-2022-52	Z-type	0.333	1.000
HD9-3-FWH25C to HTR DRN TK	Feedwater Heater 25C Drain to Heater Drain Tank	FWH 25 DRNS TO HDT	9321-F-2022-52	Z-type	0.333	1.000
MS56-1-PRESEP to MSR-A	Pre-Separator to Moisture Separator Reheater - A (Line 1 of 2)	CROSSUNDER	A235308	Z-type	0.250	1.000
MS56-2-PRESEP to MSR-A	Pre-Separator to Moisture Separator Reheater - A (Line 2 of 2)	CROSSUNDER	A235308	Z-type	0.250	1.000
MS56-3-PRESEP to MSR-A	Pre-Separator to Moisture Separator Reheater - A	CROSSUNDER	A235308	Z-type	0.500	1.000
MS56-4-PRESEP to MSR23A	Pre-Separator to Moisture Separator Reheater - 23A	CROSSUNDER	A235308	Z-type	0.167	1.000
MS56-5-PRESEP to MSR-A	Pre-Separator to Moisture Separator Reheater - A	CROSSUNDER	A235308	Z-type	0.333	1.000
MS56-6-PRESEP to MSR22A	Pre-Separator to Moisture Separator Reheater - 22A	CROSSUNDER	A235308	Z-type	0.167	1.000

CHECWORKS Line Name	Line Description	Wear Rate Analysis Run Name	Flow Diagram No.	Op Cond Source	Flow Factor	Duty Factor
MS56-7-PRESEP to MSR21A	Pre-Separator to Moisture Separator Reheater - 21A	CROSSUNDER	A235308	Z-type	0.167	1.000
MS57-1-PRESEP to MSR-B	Pre-Separator to Moisture Separator Reheater - B (Line 1 of 2)	CROSSUNDER	A235308	Z-type	0.250	1.000
MS57-2-PRESEP to MSR-B	Pre-Separator to Moisture Separator Reheater - B (Line 2 of 2)	CROSSUNDER	A235308	Z-type	0.250	1.000
MS57-3-PRESEP to MSR-B	Pre-Separator to Moisture Separator Reheater - B	CROSSUNDER	A235308	Z-type	0.500	1.000
MS57-4-PRESEP to MSR23B	Pre-Separator to Moisture Separator Reheater - 23B	CROSSUNDER	A235308	Z-type	0.167	1.000
MS57-5-PRESEP to MSR-B	Pre-Separator to Moisture Separator Reheater - B	CROSSUNDER	A235308	Z-type	0.333	1.000
MS57-6-PRESEP to MSR22B	Pre-Separator to Moisture Separator Reheater - 22B	CROSSUNDER	A235308	Z-type	0.167	1.000
MS57-7-PRESEP to MSR21B	Pre-Separator to Moisture Separator Reheater - 21B	CROSSUNDER	A235308	Z-type	0.167	1.000
MSD27-1-MS21A to MSDT 21A	Moisture Separator 21A to Header Upstream of Moisture Separator Drain Tank 21A (Line 1 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000
MSD27-2-MS21A to MSDT 21A	Moisture Separator 21A to Header Upstream of Moisture Separator Drain Tank 21A (Line 2 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000
MSD27-3-MS21A to MSDT 21A	Moisture Separator 21A to Header Upstream of Moisture Separator Drain Tank 21A (Line 3 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000
MSD27-4-MS21A to MSDT 21A	Moisture Separator 21A Header Upstream of Moisture Separator Drain Tank 21A	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.112	1.000
MSD27-5-MS21A to MSDT 21A	Moisture Separator 21A Header to Moisture Separator Drain Tank 21A	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.167	1.000
MSD28-1-MS22A to MSDT 22A	Moisture Separator 22A to Header Upstream of Moisture Separator Drain Tank 22A (Line 1 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000

CHECWORKS Line Name	Line Description	Wear Rate Analysis Run Name	Flow Diagram No.	Op Cond Source	Flow Factor	Duty Factor
MSD28-2-MS22A to MSDT 22A	Moisture Separator 22A to Header Upstream of Moisture Separator Drain Tank 22A (Line 2 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000
MSD28-3-MS22A to MSDT 22A	Moisture Separator 22A to Header Upstream of Moisture Separator Drain Tank 22A (Line 3 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000
MSD28-4-MS22A to MSDT 22A	Moisture Separator 22A Header Upstream of Moisture Separator Drain Tank 22A	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.112	1.000
MSD28-5-MS22A to MSDT 22A	Moisture Separator 22A Header to Moisture Separator Drain Tank 22A	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.167	1.000
MSD29-1-MS23A to MSDT 23A	Moisture Separator 23A to Header Upstream of Moisture Separator Drain Tank 23A (Line 1 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000
MSD29-2-MS23A to MSDT 23A	Moisture Separator 23A to Header Upstream of Moisture Separator Drain Tank 23A (Line 2 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000
MSD29-3-MS23A to MSDT 23A	Moisture Separator 23A to Header Upstream of Moisture Separator Drain Tank 23A (Line 3 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000
MSD29-4-MS23A to MSDT 23A	Moisture Separator 23A Header Upstream of Moisture Separator Drain Tank 23A	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.112	1.000
MSD29-5-MS23A to MSDT 23A	Moisture Separator 23A Header to Moisture Separator Drain Tank 23A	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.167	1.000
MSD30-1-MS21B to MSDT 21B	Moisture Separator 21B to Header Upstream of Moisture Separator Drain Tank 21B (Line 1 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000
MSD30-2-MS21B to MSDT 21B	Moisture Separator 21B to Header Upstream of Moisture Separator Drain Tank 21B (Line 2 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000
MSD30-3-MS21B to MSDT 21B	Moisture Separator 21B to Header Upstream of Moisture Separator Drain Tank 21B (Line 3 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000

CHECWORKS Line Name	Line Description	Wear Rate Analysis Run Name	Flow Diagram No.	Op Cond Source	Flow Factor	Duty Factor
MSD30-4-MS21B to MSDT 21B	Moisture Separator 21B Header Upstream of Moisture Separator Drain Tank 21B	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.112	1.000
MSD30-5-MS21B to MSDT 21B	Moisture Separator 21B Header to Moisture Separator Drain Tank 21B	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.167	1.000
MSD31-1-MS22B to MSDT 22B	Moisture Separator 22B to Header Upstream of Moisture Separator Drain Tank 22B (Line 1 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000
MSD31-2-MS22B to MSDT 22B	Moisture Separator 22B to Header Upstream of Moisture Separator Drain Tank 22B (Line 2 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000
MSD31-3-MS22B to MSDT 22B	Moisture Separator 22B to Header Upstream of Moisture Separator Drain Tank 22B (Line 3 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000
MSD31-4-MS22B to MSDT 22B	Moisture Separator 22B Header Upstream of Moisture Separator Drain Tank 22B	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.112	1.000
MSD31-5-MS22B to MSDT 22B	Moisture Separator 22B Header to Moisture Separator Drain Tank 22B	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.167	1.000
MSD32-1-MS23B to MSDT 23B	Moisture Separator 23B to Header Upstream of Moisture Separator Drain Tank 23B (Line 1 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000
MSD32-2-MS23B to MSDT 23B	Moisture Separator 23B to Header Upstream of Moisture Separator Drain Tank 23B (Line 2 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000
MSD32-3-MS23B to MSDT 23B	Moisture Separator 23B to Header Upstream of Moisture Separator Drain Tank 23B (Line 3 of 3)	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.056	1.000
MSD32-4-MS23B to MSDT 23B	Moisture Separator 23B Header Upstream of Moisture Separator Drain Tank 23B	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.112	1.000
MSD32-5-MS23B to MSDT 23B	Moisture Separator 23B Header to Moisture Separator Drain Tank 23B	MSR SHELL DRAINS	9321-F-2023-31	Z-type	0.167	1.000
MSD33A-1-MSDT 21A to HDT	Moisture Separator Drain Tank 21A to Heater Drain Tank	MSDT DRNS TO HDT	9321-F-2023-31	Z-type	0.167	1.000

CHECWORKS Line Name	Line Description	Wear Rate Analysis Run Name	Flow Diagram No.	Op Cond Source	Flow Factor	Duty Factor
MSD34A-1-MSDT 22A to HDT	Moisture Separator Drain Tank 22A to Heater Drain Tank	MSDT DRNS TO HDT	9321-F-2023-31	Z-type	0.167	1.000
MSD35A-1-MSDT 23A to HDT	Moisture Separator Drain Tank 23A to Heater Drain Tank	MSDT DRNS TO HDT	9321-F-2023-31	Z-type	0.167	1.000
MSD36A-1-MSDT 21B to HDT	Moisture Separator Drain Tank 21B to Heater Drain Tank	MSDT DRNS TO HDT	9321-F-2023-31	Z-type	0.167	1.000
MSD37A-1-MSDT 22B to HDT	Moisture Separator Drain Tank 22B to Heater Drain Tank	MSDT DRNS TO HDT	9321-F-2023-31	Z-type	0.167	1.000
MSD38A-1-MSDT 23B to HDT	Moisture Separator Drain Tank 23B to Heater Drain Tank	MSDT DRNS TO HDT	9321-F-2023-31	Z-type	0.167	1.000
MSD39-1-RHTR 21A to RHDT 21A	Moisture Separator Reheater 21A to Moisture Separator Reheater Drain Tank 21A	RHTR TO RHTR DRN TK	9321-F-2023-31	HBD	0.167	1.000
MSD40-1-RHTR 22A to RHDT 22A	Moisture Separator Reheater 22A to Moisture Separator Reheater Drain Tank 22A	RHTR TO RHTR DRN TK	9321-F-2023-31	HBD	0.167	1.000
MSD41-1-RHTR 23A to RHDT 23A	Moisture Separator Reheater 23A to Moisture Separator Reheater Drain Tank 23A	RHTR TO RHTR DRN TK	9321-F-2023-31	HBD	0.167	1.000
MSD42-1-RHTR 21B to RHDT 21B	Moisture Separator Reheater 21B to Moisture Separator Reheater Drain Tank 21B	RHTR TO RHTR DRN TK	9321-F-2023-31	HBD	0.167	1.000
MSD43-1-RHTR 22B to RHDT 22B	Moisture Separator Reheater 22B to Moisture Separator Reheater Drain Tank 22B	RHTR TO RHTR DRN TK	9321-F-2023-31	HBD	0.167	1.000
MSD44-1-RHTR 23B to RHDT 23B	Moisture Separator Reheater 23B to Moisture Separator Reheater Drain Tank 23B	RHTR TO RHTR DRN TK	9321-F-2023-31	HBD	0.167	1.000
MSD45A-1-RHDT21A to CV	Reheater Drain Tank 21A to CV Upstream of Feedwater Heater 26 Header	RHTR DRN TK 21A US CV	9321-F-2023-31	HBD	0.167	1.000
MSD45B-1-RHDT21A CV to FWH26	Reheater Drain Tank 21A CV to Feedwater Heater 26 Header	RHTR DTK A DRN DSCV	9321-F-2023-31	HBD	0.167	1.000
MSD45C-1-RHDT A HDR to FWH26	Reheater Drain Tank A Header to Feedwater Heater 26 Between RHDT 22A and RHDT 23A Connections	RHTR DTK A DRN DSCV	9321-F-2023-31	HBD	0.167	1.000

CHECWORKS Line Name	Line Description	Wear Rate Analysis Run Name	Flow Diagram No.	Op Cond Source	Flow Factor	Duty Factor
MSD45C-2-RHDT A HDR to FWH26	Reheater Drain Tank A Header to Feedwater Heater 26 Between RHDT 23A and RHDT 21A Connections	RHTR DTK A DRN DSCV	9321-F-2023-31	HBD	0.333	1.000
MSD45C-3-RHDT A HDR to FWH26	Reheater Drain Tank A Header to Feedwater Heater 26 Between RHDT 21A Connection and Feedwater Heater 26C Tee	RHTR DTK A DRN DSCV	9321-F-2023-31	HBD	0.500	1.000
MSD45C-4-RHDT A HDR to FWH26C	Reheater Drain Tank A Header to Feedwater Heater 26C	RHTR DTK A DRN DSCV	9321-F-2023-31	HBD	0.167	1.000
MSD45C-5-RHDT A HDR to FWH26	Reheater Drain Tank A Header Between Feedwater Heater 26C Tee and Feedwater Heater 26B Tee	RHTR DTK A DRN DSCV	9321-F-2023-31	HBD	0.333	1.000
MSD45D-1-RHDT A HDR to FWH26B	Reheater Drain Tank A Header to Feedwater Heater 26B	RHTR DTK A DRN DSCV	9321-F-2023-31	HBD	0.167	1.000
MSD45D-2-RHDT A HDR to FWH26A	Reheater Drain Tank A Header to Feedwater Heater 26A	RHTR DTK A DRN DSCV	9321-F-2023-31	HBD	0.167	1.000
MSD46A-1-RHDT22A to CV	Reheater Drain Tank 22A to CV Upstream of Feedwater Heater 26 Header	RHTR DRN TK 22A USCV	9321-F-2023-31	HBD	0.167	1.000
MSD46A-2-RHDT22A CV to FWH26	Reheater Drain Tank 22A CV to Feedwater Heater 26 Header	RHTR DTK A DRN DSCV	9321-F-2023-31	HBD	0.167	1.000
MSD47-1-RHDT23A to CV	Reheater Drain Tank 23A to CV Upstream of Feedwater Heater 26 Header	RHTR DRN TK 23A USCV	9321-F-2023-31	HBD	0.167	1.000
MSD47-2-RHDT23A CV to FWH26	Reheater Drain Tank 23A CV to Feedwater Heater 26 Header	RHTR DTK A DRN DSCV	9321-F-2023-31	HBD	0.167	1.000
MSD48A-1-RHDT21B to CV	Reheater Drain Tank 21B to CV Upstream of Feedwater Heater 26 Header	RHTR DRN TK 21B USCV	9321-F-2023-31	HBD	0.167	1.000
MSD48B-1-RHDT21B CV to FWH26	Reheater Drain Tank 21B CV to Feedwater Heater 26 Header	RHTR DTK B DRN DSCV	9321-F-2023-31	HBD	0.167	1.000
MSD48B-2-RHDT B HDR to FWH26	Reheater Drain Tank B Header to Feedwater Heater 26 Between RHDT 23B and RHDT 22B Connections	RHTR DTK B DRN DSCV	9321-F-2023-31	HBD	0.333	1.000

CHECWORKS Line Name	Line Description	Wear Rate Analysis Run Name	Flow Diagram No.	Op Cond Source	Flow Factor	Duty Factor
MSD49A-1-RHDT22B to CV	Reheater Drain Tank 22B to CV Upstream of Feedwater Heater 26 Header	RHTR DRN TK 22B USCV	9321-F-2023-31	HBD	0.167	1.000
MSD49B-1-RHDT22B CV to FWH26	Reheater Drain Tank 22B CV to Feedwater Heater 26 Header	RHTR DTK B DRN DSCV	9321-F-2023-31	HBD	0.167	1.000
MSD49C-1-RHDT B HDR to FWH26	Reheater Drain Tank B Header to Feedwater Heater 26 Between RHDT Connections and Feedwater Heater 26 Connections	RHTR DTK B DRN DSCV	9321-F-2023-31	HBD	0.500	1.000
MSD49C-2-RHDT B HDR to FWH26C	Reheater Drain Tank B Header to Feedwater Heater 26C	RHTR DTK B DRN DSCV	9321-F-2023-31	HBD	0.167	1.000
MSD49C-3-RHDT B HDR	Reheater Drain Tank B Header Between Feedwater Heater 26C Tee and Feedwater Heater 26B Tee	RHTR DTK B DRN DSCV	9321-F-2023-31	HBD	0.333	1.000
MSD49C-4-RHDT B HDR to FWH26B	Reheater Drain Tank B Header to Feedwater Heater 26B	RHTR DTK B DRN DSCV	9321-F-2023-31	HBD	0.167	1.000
MSD49C-5-RHDT B HDR to FWH26A	Reheater Drain Tank B Header to Feedwater Heater 26A	RHTR DTK B DRN DSCV	9321-F-2023-31	HBD	0.167	1.000
MSD50A-1-RHDT23B to CV	Reheater Drain Tank 23B to CV Upstream of Feedwater Heater 26 Header	RHTR DRN TK 23B USCV	9321-F-2023-31	HBD	0.167	1.000
MSD50C-1-RHDT23B CV to FWH26	Reheater Drain Tank 23B CV to Feedwater Heater 26 Header	RHTR DTK B DRN DSCV	9321-F-2023-31	HBD	0.167	1.000
SG51-1-CONT PEN to SGBFTK	Steam Generator Blowdown from SG 21 to SG Blowdown Flash Tank	BLOWDOWN	9321-F-2729-66	Z-type	0.250	1.000
SG52-1-CONT PEN to SGBFTK	Steam Generator Blowdown from SG 22 to SG Blowdown Flash Tank	BLOWDOWN	9321-F-2729-66	Z-type	0.250	1.000
SG53-1-CONT PEN to SGBFTK	Steam Generator Blowdown from SG 23 to SG Blowdown Flash Tank	BLOWDOWN	9321-F-2729-66	Z-type	0.250	1.000
SG54-1-CONT PEN to SGBFTK	Steam Generator Blowdown from SG 24 to SG Blowdown Flash Tank	BLOWDOWN	9321-F-2729-66	Z-type	0.250	1.000

Appendix E

Component Summary Report

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Company: ENTERGY NUCLEAR NORTHEAST
 Plant: INDIAN POINT
 Unit: 2
 DB Name: IP2

Report Date: 02-MAY-2005 Time: 14:09:59
 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. D/S Mn. Branch (Mlbm/hr)	Orifice/ valve size (in)	Valve Coef.
Line Name : CD80-1-FWH 23A to FWH 24A													
CD-11N	0.000	0.00	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-11	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-12	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-12P	0.000	0.00	180.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-1	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-1P	0.000	0.00	135.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-2	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-2P	0.000	0.00	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-17	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-17P	0.000	0.00	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-5	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-5P	0.000	0.00	0.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-41	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-41N	0.000	0.00	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----

Line Name : CD80-2-FWH 23B to FWH 24B

CD-14N	0.000	0.00	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-14	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-13	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-13P US	0.000	0.00	180.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-3	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-4	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-4P	0.000	0.00	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-19	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-19P	0.000	0.00	0.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-42	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-42N	0.000	0.00	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----

Line Name : CD80-3-FWH 23C to FWH 24C

CD-16N	0.000	0.00	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----
CD-16	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----

CD-15	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----	-----	-----
CD-15P US	0.000	0.00	180.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----	-----	-----
CD-39	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----	-----	-----
CD-40	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----	-----	-----
CD-40P	0.000	0.00	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----	-----	-----
CD-22	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----	-----	-----
CD-22P	0.000	0.00	0.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----	-----	-----
CD-43	0.000	1.50	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----	-----	-----
CD-43N	0.000	0.00	90.00	0.00	665.00	400.00	460.00	249.40	0.000	0.000	3.3252	----	----	-----	-----

Line Name : CD80A-1-FWH 22A to HEADER

CD-101N	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-101P	0.000	0.00	30.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-102	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-102P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-VALVE-CD-8	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
CD-103	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-104	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-104P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-105	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-105P	0.000	0.00	16.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-106	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-106P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-107P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-107	14.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----

Line Name : CD80A-2-FWH 22B to HEADER

CD-108N	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-108P	0.000	0.00	30.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-109	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-109P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-110	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-111	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-VALVE-CD-8-1	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
CD-111P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
CD-112	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-112P	0.000	0.00	0.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : CD80A-3-FWH 22C to HEADER

CD-113N	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-113P	0.000	0.00	30.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-114	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-114P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-115	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-116	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-116P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-VALVE-CD-8-2	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
CD-116P-1	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
CD-117	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
CD-117P	0.000	0.00	0.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : CD80A-4-FWH 22 OUTLET HEADER

CD-118T	14.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----	-----
CD-118P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-119P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-120	20.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	-----	-----	-----	

Line Name : CD80A-5-FWH 22 to FWH 23 HEAD

CD-121	14.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----	-----
CD-121P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-122	12.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----	-----
CD-122P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-123	0.000	1.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-124	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-124P	0.000	0.00	180.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-125	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-125P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-126	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-126P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-127P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-128	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-128P	0.000	0.00	180.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-129	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-129P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-130	18.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----	-----
CD-130P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-131	20.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	-----	-----	-----	
CD-VALVE-CD-1110	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	0.000	0.00	
CD-131P-1	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	0.000	0.00	
CD-132	20.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	-----	-----	-----	
CD-132P	0.000	0.00	0.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-133	0.000	1.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-134	18.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----	-----
CD-135	14.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----	-----

Line Name : CD80A-6-FWH 23 INLET HEADER

CD-136	12.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----	-----
CD-136P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-137	14.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----	-----

Line Name : CD80A-7-HEADER to FWH 23A

CD-137P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-138	14.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----	-----
CD-138P	0.000	0.00	0.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-139	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-139P	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-VALVE-CD-16	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	0.000	0.00	
CD-140	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-140P	0.000	0.00	0.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-141	0.000	1.50	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	
CD-141N	0.000	0.00	90.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----	

Line Name : CD80A-8-HEADER to FWH 23B

Line Name : CD81-3-FWH 24C to FWH 25C

CD-24N	0.000	0.00	90.00	0.00	665.00	400.00	460.00	298.20	0.000	0.000	3.3252	----	----	-----	-----
CD-24	0.000	1.50	90.00	0.00	665.00	400.00	460.00	298.20	0.000	0.000	3.3252	----	----	-----	-----
CD-23	0.000	1.50	90.00	0.00	665.00	400.00	460.00	298.20	0.000	0.000	3.3252	----	----	-----	-----
CD-23P	0.000	0.00	180.00	0.00	665.00	400.00	460.00	298.20	0.000	0.000	3.3252	----	----	-----	-----
CD-53	0.000	1.50	90.00	0.00	665.00	400.00	460.00	298.20	0.000	0.000	3.3252	----	----	-----	-----
CD-53P	0.000	0.00	90.00	0.00	665.00	400.00	460.00	298.20	0.000	0.000	3.3252	----	----	-----	-----
CD-54	0.000	1.50	90.00	0.00	665.00	400.00	460.00	298.20	0.000	0.000	3.3252	----	----	-----	-----
CD-54P	0.000	0.00	180.00	0.00	665.00	400.00	460.00	298.20	0.000	0.000	3.3252	----	----	-----	-----
CD-55	0.000	1.50	90.00	0.00	665.00	400.00	460.00	298.20	0.000	0.000	3.3252	----	----	-----	-----
CD-55P	0.000	0.00	90.00	0.00	665.00	400.00	460.00	298.20	0.000	0.000	3.3252	----	----	-----	-----
CD-30	0.000	1.50	90.00	0.00	665.00	400.00	460.00	298.20	0.000	0.000	3.3252	----	----	-----	-----
CD-30P	0.000	0.00	0.00	0.00	665.00	400.00	460.00	298.20	0.000	0.000	3.3252	----	----	-----	-----
CD-45	0.000	1.50	90.00	0.00	665.00	400.00	460.00	298.20	0.000	0.000	3.3252	----	----	-----	-----
CD-45N	0.000	0.00	90.00	0.00	665.00	400.00	460.00	298.20	0.000	0.000	3.3252	----	----	-----	-----

Line Name : CD82-1-FWH 25A to HDR

CD-32N	0.000	0.00	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-32	0.000	1.50	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-31	0.000	1.50	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-31P	0.000	0.00	180.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-VALVE-CD-18	0.000	0.00	180.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	13.250	0.00
CD-31P-1 US	0.000	0.00	180.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	0.000	0.00
CD-31P-1 DS	0.000	0.00	180.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	0.000	0.00
CD-60	0.000	1.50	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-60P	0.000	0.00	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-61	0.000	1.50	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-61P	0.000	0.00	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-61R	14.000	0.00	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	3.3252	----	-----	-----

Line Name : CD82-2-FWH 25B to HDR

CD-34N	0.000	0.00	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-34	0.000	1.50	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-33	0.000	1.50	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-33P	0.000	0.00	180.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-VALVE-CD-18-1	0.000	0.00	180.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	13.250	0.00
CD-33P-1 US	0.000	0.00	180.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	0.000	0.00
CD-33P-1 DS	0.000	0.00	180.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	0.000	0.00
CD-62	0.000	1.50	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-62P	0.000	0.00	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----

Line Name : CD82-3-FWH 25C to HDR

CD-36N	0.000	0.00	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-36	0.000	1.50	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-35	0.000	1.50	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-35P	0.000	0.00	180.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-VALVE-CD-18-2	0.000	0.00	180.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	13.250	0.00
CD-35P-1	0.000	0.00	180.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	0.000	0.00
CD-63	0.000	1.50	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
CD-58	0.000	1.50	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----

CD-58P	0.000	0.00	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	----	----	-----	-----
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Line Name : CD82-4-HDR 25BT to 25CT

CD-62T	14.000	0.00	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	3.3252	6.6504	3.3252	-----	-----
CD-62P-1	0.000	0.00	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	6.6504	----	----	-----	-----

Line Name : CD82-5-HDR 25CT to HDP OUT

CD-59T	14.000	0.00	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	6.6504	9.9755	3.3252	-----	-----
CD-59	0.000	1.50	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	9.9755	----	----	-----	-----
CD-59P	0.000	0.00	180.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	9.9755	----	----	-----	-----
CD-80T	24.000	0.00	90.00	0.00	665.00	400.00	460.00	384.30	0.000	0.000	9.9755	0.0000	9.9755	-----	-----

Line Name : CD83-1-HDR HDP to BFP21T

CD-81T	16.000	0.00	90.00	0.00	665.00	400.00	460.00	386.40	0.000	0.000	9.9755	13.2630	3.2874	-----	-----
CD-82T	24.000	0.00	0.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	13.2630	6.6315	6.6315	-----	-----

Line Name : CD83-2-HDR to BFP21

CD-9P	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-9	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-66P	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-66	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-67P	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-67	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-VALVE-CD-21	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	23.000	0.00
CD-68P	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	0.000	0.00
CD-68	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-69P	0.000	0.00	180.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-69	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-70P	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-70	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-71P	0.000	0.00	0.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-71	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-38P	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-38	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-8P	0.000	0.00	180.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-8	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-72	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-72P US	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-72P DS	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-72FE	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	18.100	-----
CD-72P-1 US	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	18.100	-----
CD-72P-1 DS	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	18.100	-----
CD-73	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-73P	0.000	0.00	0.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-7	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-7P	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-74	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-64	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-64P	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-65	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-65P	0.000	0.00	180.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----

CD-65R	18.000	0.00	180.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	6.6315	----	-----	-----
CD-65N	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----

Line Name : CD83-3-HDR to BFP22

CD-82R	24.000	0.00	90.00	0.00	665.00	400.00	460.00	386.40	0.000	0.000	6.6315	6.6315	----	-----	-----
CD-82P US	0.000	0.00	90.00	0.00	665.00	400.00	460.00	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-83T	12.750	0.00	90.00	0.00	665.00	400.00	460.00	386.40	0.000	0.000	6.6315	6.6315	0.0000	-----	-----
CD-84T	24.000	0.00	90.00	0.00	665.00	400.00	460.00	386.40	0.000	0.000	6.6315	0.0000	6.6315	-----	-----
CD-84 C	0.000	0.00	90.00	0.00	665.00	400.00	460.00	386.40	0.000	0.000	0.000000	----	----	-----	-----
CD-VALVE-CD-21-1	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	23.000	0.00
CD-6	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-76P US	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-76FE	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	18.100	-----
CD-76P DS	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	18.100	-----
CD-76	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-10P DS	0.000	0.00	0.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-10	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-75P US	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-75	0.000	1.50	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-75P	0.000	0.00	180.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----
CD-75R	18.000	0.00	180.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	6.6315	----	-----	-----
CD-75N	0.000	0.00	90.00	0.00	665.00	400.00	324.50	386.40	0.000	0.000	6.6315	----	----	-----	-----

Line Name : ES1-1-3RDPT ES to FWH 23A

3EXA-14N	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXA-14P	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXA-VALVE 3EX-1	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	24.000	0.00
3EXA-13P	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	0.000	0.00
3EXA-VALVE 3EX-2	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	27.375	0.00
3EXA-12P	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	0.000	0.00
3EXA-10	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXA-9P	0.000	0.00	180.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXA-9	0.000	1.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXA-8P	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXA-8	0.000	1.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXA-7P	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXA-7	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXA-6P DS	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXA-6	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXA-5P	0.000	0.00	180.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXA-5	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXA-4P US	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXA-4	20.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	0.0884	0.0884	-----	-----

Line Name : ES1-2-3RDPT ES to FWH 23A

3EXA-1P	0.000	0.00	0.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXA-1A	0.000	0.00	0.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXA-1	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXA-1N	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----

Line Name : ES1-3-3RDPT ES to FWH 23A

3EXA-11R	20.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	0.0884	----	-----	-----
3EXA-11RP	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXA-3	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXA-2P	0.000	0.00	0.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXA-2A	0.000	0.00	0.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXA-2	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXA-2N	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----

Line Name : ES2-1-3RDPT ES to FWH 23B

3EXB-10N	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXB-10P	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXB-VALVE 3EX-3	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	24.000	0.00
3EXB-9P	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	0.000	0.00
3EXB-VALVE 3EX-4	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	27.375	0.00
3EXB-9A	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	0.000	0.00
3EXB-9	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXB-8	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXB-7P	0.000	0.00	135.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXB-7	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXB-6P US	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXB-6P DS	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXB-6	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXB-5P	0.000	0.00	180.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXB-5	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXB-4A US	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXB-4A DS	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXB-4	20.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	0.0884	0.0884	-----	-----

Line Name : ES2-2-3RDPT ES to FWH 23B

3EXB-4P US	0.000	0.00	0.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXB-1A	0.000	0.00	0.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXB-1	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXB-1N	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----

Line Name : ES2-3-3RDPT ES to FWH 23B

3EXB-10R	20.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	0.0884	----	-----	-----
3EXB-3P US	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXB-3P DS	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXB-3	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXB-2P US	0.000	0.00	0.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXB-2P DS	0.000	0.00	0.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXB-2A	0.000	0.00	0.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXB-2	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXB-2N	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----

Line Name : ES3-1-3RDPT ES to FWH 23C

3EXC-14N	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXC-14P	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXC-VALVE 3EX-5	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	24.000	0.00
3EXC-13P	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	0.000	0.00
3EXC-VALVE 3EX-6	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	27.375	0.00

3EXC-13R	24.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	0.1769	----	-----	-----
3EXC-VALVE PCV-1161	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	0.000	0.00
3EXC-12R	24.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	0.1769	----	-----	-----
3EXC-12P	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXC-10	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXC-9P	0.000	0.00	180.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXC-9	0.000	1.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXC-8P	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXC-8	0.000	1.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXC-7P	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXC-7	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXC-6P	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXC-6	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXC-5P	0.000	0.00	180.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXC-5	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXC-4P	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	----	----	-----	-----
3EXC-4	20.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.1769	0.0884	0.0884	-----	-----

Line Name : ES3-2-3RDPT ES to FWH 23C

3EXC-4P-1 US	0.000	0.00	0.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXC-1A	0.000	0.00	0.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXC-1	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXC-1N	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----

Line Name : ES3-3-3RDPT ES to FWH 23C

3EXC-11R	20.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	0.0884	----	-----	-----
3EXC-3P	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXC-3	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXC-2P	0.000	0.00	0.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXC-2A	0.000	0.00	0.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXC-2	0.000	1.50	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----
3EXC-2N	0.000	0.00	90.00	0.00	50.00	300.00	19.18	0.00	1125.600	0.000	0.0884	----	----	-----	-----

Line Name : ES4-1-4THPT ES to FWH 24A

4EXA-15N	0.000	0.00	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXA-14P	0.000	1.50	0.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXA-14	0.000	1.50	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXA-13	0.000	1.50	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXA-VALVE-4EX-1	0.000	0.00	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	20.000	0.00
4EXA-12P	0.000	0.00	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	0.000	0.00
4EXA-VALVE-4EX-2	0.000	0.00	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	19.500	0.00
4EXA-12A	0.000	0.00	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	0.000	0.00
4EXA-12	0.000	1.50	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXA-11P	0.000	0.00	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXA-11	0.000	1.50	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXA-10P	0.000	0.00	180.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXA-10	0.000	1.50	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXA-9P	0.000	0.00	135.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXA-9	0.000	1.50	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXA-8P	0.000	0.00	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXA-8	0.000	1.50	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXA-8A	0.000	0.00	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXA-7	0.000	1.00	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----

4EXC-15N	0.000	0.00	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXC-15P	0.000	0.00	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXC-15	0.000	1.50	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXC-14	0.000	1.50	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXC-14P-1	0.000	0.00	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	-----	-----
4EXC-VALVE-4EX-5	0.000	0.00	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	20.000	0.00
4EXC-14P	0.000	0.00	90.00	0.00	100.00	400.00	59.27	0.00	1172.900	0.000	0.1756	----	----	0.000	0.00

IPEC00024533

[illegible]

Line Name : ES7-1-5THPT ES to FWH 25ABC

5EX-18C	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.000000	----	----	-----	-----
5EX-18	20.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	1.1638	0.5819	-----	-----
5EX-VALVE-5EX-1	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	23.000	0.00
5EX-17P	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	0.000	0.00
5EX-VALVE-5EX-3	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	0.000	0.00
5EX-17P-1	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	0.000	0.00
5EX-VALVE-5EX-4	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	0.000	0.00
5EX-17	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-16P US	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-16P DS	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-16	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-15P US	0.000	0.00	180.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-15P DS	0.000	0.00	180.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-15	0.000	1.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-14P	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-14	0.000	1.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-13P US	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-13P	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-13P DS	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-13	0.000	1.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-12	0.000	1.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-11P	0.000	0.00	0.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-11	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----

5EX-8P US	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-8P DS	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	----	----	-----	-----
5EX-8	18.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	1.1638	0.7759	0.3879	-----	-----

Line Name : ES7-2-5THPT ESHDR to FWH 25C

5EX-VALVE 5EX-5-2	0.000	0.00	0.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	17.000	0.00
5EX-9	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	-----	-----
5EX-9-10	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	-----	-----
5EX-10	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	-----	-----
5EX-10N	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	-----	-----

Line Name : ES7-3-5THPT ESHDR 25CT to BT

5EX-5P US	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.7739	----	----	-----	-----
5EX-5P DS	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.7739	----	----	-----	-----
5EX-5	18.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.7759	0.3879	0.3879	-----	-----

Line Name : ES7-4-5THPT ESHDR to FWH 25B

5EX-6P1	0.000	0.00	0.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	-----	-----
5EX-VALVE 5EX-5-1	0.000	0.00	0.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	17.000	0.00
5EX-6	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	-----	-----
5EX-6-7	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	-----	-----
5EX-7	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	-----	-----
5EX-7N	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	-----	-----

Line Name : ES7-5-5THPT ESHDR to FWH 25A

5EX-4	18.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	0.0000	----	-----	-----
5EX-3P US	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	-----	-----
5EX-3	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	-----	-----
5EX-2P	0.000	0.00	0.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	-----	-----
5EX-VALVE 5EX-5	0.000	0.00	0.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	17.000	0.00
5EX-2	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	-----	-----
5EX-1-2	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	-----	-----
5EX-1	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	-----	-----
5EX-1N	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.3879	----	----	-----	-----

Line Name : ES7A-1-SEP TKA VNT to FWH25

MOPS1	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----
MOPS2	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----
MOPS3	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----
MOPS4	0.000	0.00	0.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----
MOPS5	0.000	1.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----
MOPS6	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----
MOPS7	0.000	1.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----
MOPS8	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----

Line Name : ES7A-2-SEP TKB VNT to FWH25

MOPS9	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----
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MOPS10	0.000	0.00	0.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----
MOPS11	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----
MOPS12	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----
MOPS13	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----
MOPS14	0.000	0.00	0.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----
MOPS15	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----
MOPS16	0.000	0.00	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----
MOPS17	0.000	1.50	90.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----
MOPS18	0.000	0.00	120.00	0.00	250.00	400.00	223.40	0.00	1137.900	0.000	0.5819	----	----	-----	-----

Line Name : ES8-1-6THPT ES to HDR

6EX-28N	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	----	----	-----	-----
6EX-28	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	----	----	-----	-----
6EX-27P	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	----	----	-----	-----
6EX-27	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	----	----	-----	-----
6EX-23P	0.000	0.00	180.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	----	----	-----	-----
6EX-23	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	----	----	-----	-----
6EX-22P	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	----	----	-----	-----
6EX-22R	12.750	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	0.3163	----	-----	-----
6EX-22A	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	----	----	-----	-----

Line Name : ES8-2-6THPT ES to HDR

6EX-26-1N	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	----	----	-----	-----
6EX-26-1	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	----	----	-----	-----
6EX-26P	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	----	----	-----	-----
6EX-26-2	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	----	----	-----	-----
6EX-25P	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	----	----	-----	-----
6EX-25	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	----	----	-----	-----
6EX-24P	0.000	0.00	180.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	----	----	-----	-----
6EX-24	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	----	----	-----	-----

Line Name : ES8-3-6THPT ESHDR to FWH 26

6EX-22	12.750	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.3163	0.6325	0.3163	-----	-----
6EX-21P	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	-----	-----
6EX-21	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	-----	-----
6EX-21C	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	-----	-----
6EX-VALVE-6EX-1	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	17.000	0.00
6EX-20B	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	0.000	0.00
6EX-VALVE-6EX-3	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	17.125	0.00
6EX-20A	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	0.000	0.00
6EX-VALVE-6EX-4	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	17.125	0.00
6EX-20	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	-----	-----
6EX-19P	0.000	0.00	180.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	-----	-----
6EX-19	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	-----	-----
6EX-18P	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	-----	-----
6EX-18	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	-----	-----
6EX-17P	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	-----	-----
6EX-17	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	-----	-----
6EX-16P	0.000	0.00	0.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	-----	-----
6EX-16	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	-----	-----
6EX-46P	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	----	----	-----	-----
6EX-14	12.750	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.6325	0.4217	0.2108	-----	-----

Line Name : ES8-4-6THPT ESHDR to FWH 26C

6EX-14R	12.750	0.00	180.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	0.2108	----	-----	-----
6EX-14P	0.000	0.00	180.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-15	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-15P	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-13C	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-13	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-13P	0.000	0.00	0.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-VALVE-6EX-5-2	0.000	0.00	0.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	12.000	0.00
6EX-12P	0.000	0.00	0.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	0.000	0.00
6EX-12	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-11	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-11N	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----

Line Name : ES8-5-6THPT ESHDR 26CT to BT

6EX-10P	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.4217	----	----	-----	-----
6EX-10	12.750	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.4217	0.2108	0.2108	-----	-----

Line Name : ES8-6-6THPT ESHDR to FWH 26B

6EX-10R	12.750	0.00	180.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	0.2108	----	-----	-----
6EX-9P	0.000	0.00	180.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-9	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-8BP	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-8B	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-8	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-6P	0.000	0.00	0.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-VALVE-6EX-5-1	0.000	0.00	0.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	12.000	0.00
6EX-7P	0.000	0.00	0.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	0.000	0.00
6EX-7	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-6	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-6N	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----

Line Name : ES8-7-6THPT ESHDR to FWH 26A

6EX-51	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-5A	12.750	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	0.2108	----	-----	-----
6EX-5P	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-5	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-4P	0.000	0.00	180.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-4	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-3P	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-3	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-1P	0.000	0.00	0.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-VALVE-6EX-5	0.000	0.00	0.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	12.000	0.00
6EX-2P	0.000	0.00	0.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	0.000	0.00
6EX-2	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-1	0.000	1.50	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----
6EX-1N	0.000	0.00	90.00	0.00	450.00	450.00	361.90	0.00	1172.600	0.000	0.2108	----	----	-----	-----

Line Name : FW71-1-BFP21 DISCH to HDR

BFD-14N	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-14P	0.000	0.00	0.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-14R	16.000	0.00	0.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	6.6314	----	-----	-----
BFD-14	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-14P-1	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD VALVE-BFD-1	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	16.375	0.00
BFD-14P-2	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	0.000	0.00
BFD VALVE-BFD-2-21	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	16.438	0.00
BFD-2	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-2P US	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-2P DS	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-4	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-4P US	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-5	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	1127.30	----	-----	-----
BFD-5P	0.000	0.00	0.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-6	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-6P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	1127.30	----	-----	-----
BFD-7	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-7P US	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-7P DS	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	1127.30	----	-----	-----
BFD-8	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-8P	0.000	0.00	180.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	1127.30	----	-----	-----
BFD-9	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-9P US	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	1127.30	----	-----	-----
BFD-9P DS	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	1127.30	----	-----	-----
BFD-10	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-10P US	0.000	0.00	0.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-10P DS	0.000	0.00	0.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----

Line Name : FW72-1-BFP22 DISCH to HDR

[illegible]

IPEC00024538

BFD-22	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-22P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	----	----	-----	-----
BFD-23R	20.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	6.6314	----	-----	-----

Line Name : FW73-1-BFPHDR to FWH26ABC

BFD-11	20.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	6.6314	13.2628	6.6314	-----	-----
BFD-23	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	----	----	-----	-----
BFD-24	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	----	----	-----	-----
BFD-24P DS	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	----	----	-----	-----
BFD-25	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	----	----	-----	-----
BFD-25P	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	----	----	-----	-----
BFD-26	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	----	----	-----	-----
BFD-26P US	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	----	----	-----	-----
BFD-27	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	----	----	-----	-----
BFD-27P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	----	----	-----	-----
BFD-28	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	----	----	-----	-----
BFD-28P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	----	----	-----	-----
BFD-29	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	----	----	-----	-----
BFD-29P	0.000	0.00	180.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	----	----	-----	-----
BFD-32	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	----	----	-----	-----
BFD-32P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	----	----	-----	-----
BFD-32T	18.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	13.2628	0.0000	-----	-----

Line Name : FW73-2-BFPHDR to FWH26ABC

BFD-32P-1	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	----	----	-----	-----
BFD-32T-C	18.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	13.2628	8.8419	4.4209	-----	-----

Line Name : FW73-3-BFPHDR to FWH26C

BFD-40P US	0.000	0.00	0.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	-----	-----
BFD-40	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	-----	-----
BFD-41P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	-----	-----
BFD-VALVE-BFD-3-2	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	0.000	0.00
BFD-41P-1	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	0.000	0.00
BFD-41	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	-----	-----
BFD-42P	0.000	0.00	0.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	-----	-----
BFD-42	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	-----	-----
BFD-42N	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	-----	-----

Line Name : FW73-4-BFPHDR to FWH26ABC

BFD-32P-2	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	8.8419	----	----	-----	-----
BFD-32T-B	18.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	8.8419	4.4209	4.4209	-----	-----

Line Name : FW73-5-BFPHDR to FWH26B

BFD-37P	0.000	0.00	0.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	-----	-----
BFD-37	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	-----	-----
BFD-38P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	-----	-----
BFD-VALVE-BFD-3-1	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	0.000	0.00
BFD-38P-1	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	0.000	0.00
BFD-38	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	-----	-----

BFD-39P	0.000	0.00	0.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	----	----
BFD-39	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	----	----
BFD-39N	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	----	----

Line Name : FW73-6-BFPHDR to FWH26A

BFD-33R	18.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	4.4209	----	----	----
BFD-33P-1 DS	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	----	----
BFD-33	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	----	----
BFD-33P US	0.000	0.00	0.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	----	----
BFD-33P DS	0.000	0.00	0.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	----	----
BFD-34	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	----	----
BFD-34P US	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	----	----
BFD-34P DS	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	----	----
BFD-VALVE-BFD-3	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	0.000	0.00
BFD-34P-1	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	0.000	0.00
BFD-35	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	----	----
BFD-35P	0.000	0.00	0.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	----	----
BFD-36	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	----	----
BFD-36N	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	4.4209	----	----	----	----

Line Name : FW74-1-FWH26A to DISHDR

BFD-55N	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-55	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-55P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-56	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-VALVE-BFD-4	0.000	0.00	180.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	0.000	0.00
BFD-56P-1	0.000	0.00	180.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	0.000	0.00
BFD-57	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-57P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-58	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-58P	0.000	0.00	180.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-59	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-59P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-59R	18.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	4.4209	----	----	----

Line Name : FW74-2-FWH26B to DISHDR

BFD-51N	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-51	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-51P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-52	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-52P	0.000	0.00	180.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-VALVE-BFD-4-1	0.000	0.00	180.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	0.000	0.00
BFD-52P-1	0.000	0.00	180.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	0.000	0.00
BFD-53	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-53P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-54	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-54P	0.000	0.00	180.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----

Line Name : FW74-3-FWH26 to DISHDR

BFD-54T	18.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	8.8419	4.4209	----	----
BFD-54P-1	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	8.8419	----	----	----	----

Line Name : FW74-4-FWH26C to DISHDR

BFD-47N	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-47	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-47P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-48	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-48P	0.000	0.00	180.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-VALVE-BFD-4-2	0.000	0.00	180.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	0.000	0.00
BFD-48P-1	0.000	0.00	180.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	0.000	0.00
BFD-49	0.000	1.50	180.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-49P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-50	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-50P US	0.000	0.00	180.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----
BFD-50P DS	0.000	0.00	180.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	4.4209	----	----	----	----

Line Name : FW74-5-FWH26 to DISHDR

BFD-50T	18.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	8.8419	13.2628	4.4209	----	----
BFD-50P-1	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-46T	18.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	13.2628	0.0000	----	----
BFD-46P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-60	0.000	1.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-30	0.000	1.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-30P US	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-30P DS	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-31	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-31P US	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-61	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-61P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-62	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-62P US	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-62P DS	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-63	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-63P US	0.000	0.00	0.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-63P DS	0.000	0.00	0.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-64	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-64P	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-65	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-65P-1	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----
BFD-HEADER	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	13.2628	----	----	----	----

Line Name : FW75-1-DISHDR to SG21

BFD-72P US	0.000	0.00	180.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-72P DS	0.000	0.00	180.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-72	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-72P-1 US	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-72P-1 DS	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-VALVE-BFD-5	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	3.3157	----	----	0.000	0.00
BFD-72R	12.750	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	3.3157	3.3157	----	----	----
BFD-VALVE-FCV-417	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	3.3157	----	----	0.000	0.00
BFD-71R	12.750	0.00	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	3.3157	3.3157	----	----	----
BFD-71	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-70P US	0.000	0.00	0.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-70P DS	0.000	0.00	0.00	0.00	1440.00	450.00	1127.30	428.80	0.000	0.000	3.3157	----	----	----	----

Line Name : FW78-1-DISHDR to SG23

Calculation No. 050714b-01, Revision 0, Appendix E

IPEC00024543

BFD-86	0.000	1.50	90.00	0.00	1085.00	450.00	1000.00	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-85	0.000	1.50	90.00	0.00	1085.00	450.00	1000.00	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-100P	0.000	0.00	90.00	0.00	1085.00	450.00	1000.00	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-100	0.000	1.50	90.00	0.00	1085.00	450.00	1000.00	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-101P	0.000	0.00	90.00	0.00	1085.00	450.00	1000.00	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-101	0.000	1.50	90.00	0.00	1085.00	450.00	1000.00	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-102P	0.000	0.00	45.00	0.00	1085.00	450.00	1000.00	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-102	0.000	1.50	90.00	0.00	1085.00	450.00	1000.00	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-102P-1	0.000	5.00	0.00	0.00	1085.00	450.00	1000.00	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-102P-2	0.000	5.00	0.00	0.00	1085.00	450.00	1000.00	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-103	0.000	5.00	90.00	0.00	1085.00	450.00	1000.00	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-103P	0.000	0.00	90.00	0.00	1085.00	450.00	1000.00	428.80	0.000	0.000	3.3157	----	----	----	----
BFD-103N	0.000	0.00	90.00	0.00	1085.00	450.00	1000.00	428.80	0.000	0.000	3.3157	----	----	----	----

Line Name : HD12-1-FWH26A to CV

6EXD-9N	0.000	0.00	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-9P US	0.000	0.00	180.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-8	0.000	1.50	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-8P	0.000	0.00	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-7	0.000	1.50	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-7P	0.000	0.00	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-6	0.000	1.50	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-6P	0.000	0.00	180.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-1	0.000	1.50	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-1P	0.000	0.00	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-1-1R	6.625	0.00	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	0.4435	----	----	----

Line Name : HD12-2-FWH26B to CV

6EXD-13N	0.000	0.00	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-13P	0.000	0.00	180.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-12	0.000	1.50	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-12P	0.000	0.00	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-11	0.000	1.50	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-11P	0.000	0.00	180.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-2	0.000	1.50	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-2P	0.000	0.00	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-2-1R	6.625	0.00	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	0.4435	----	----	----

Line Name : HD12-3-FWH26C to CV

6EXD-18N	0.000	0.00	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-18P	0.000	0.00	180.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-18	0.000	1.50	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-17P	0.000	0.00	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-17	0.000	1.50	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-16P	0.000	0.00	180.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-16	0.000	1.50	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-15P-1	0.000	0.00	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-15	0.000	1.50	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-15P	0.000	0.00	180.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-3	0.000	1.50	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-3P	0.000	0.00	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	----	----	----	----
6EXD-3-1R	6.625	0.00	90.00	0.00	450.00	450.00	343.10	0.00	373.400	0.000	0.4435	0.4435	----	----	----

Line Name : HD12-4-FWH26A CV to HTR DR TK

6EX1D-VALVE-LCV-1101	0.000	0.00	90.00	0.00	450.00	450.00	203.90	0.00	373.400	0.000	0.4435	----	----	0.000	0.00
6EX1D-R2	6.625	0.00	90.00	0.00	450.00	450.00	203.90	0.00	373.400	0.000	0.4435	0.0000	----	----	----
6EX1D-P2	0.000	0.00	90.00	0.00	450.00	450.00	203.90	0.00	373.400	0.000	0.4435	----	----	----	----
6EX1D-N2	0.000	0.00	90.00	0.00	450.00	450.00	203.90	0.00	373.400	0.000	0.4435	----	----	----	----

Line Name : HD12-5-FWH26B CV to HTR DR TK

6EX2D-VALVE-LCV-1102	0.000	0.00	90.00	0.00	450.00	450.00	203.90	0.00	373.400	0.000	0.4435	----	----	0.000	0.00
6EX2D-R2	6.625	0.00	90.00	0.00	450.00	450.00	203.90	0.00	373.400	0.000	0.4435	0.0000	----	----	----
6EX2D-P2	0.000	0.00	90.00	0.00	450.00	450.00	203.90	0.00	373.400	0.000	0.4435	----	----	----	----
6EX2D-N2	0.000	0.00	90.00	0.00	450.00	450.00	203.90	0.00	373.400	0.000	0.4435	----	----	----	----

Line Name : HD12-6-FWH26C CV to HTR DR TK

6EX3D-VALVE-LCV-1103	0.000	0.00	90.00	0.00	450.00	450.00	203.90	0.00	373.400	0.000	0.4435	----	----	0.000	0.00
6EX3D-R2	6.625	0.00	90.00	0.00	450.00	450.00	203.90	0.00	373.400	0.000	0.4435	0.0000	----	----	----
6EX3D-P2	0.000	0.00	90.00	0.00	450.00	450.00	203.90	0.00	373.400	0.000	0.4435	----	----	----	----
6EX3D-N2	0.000	0.00	90.00	0.00	450.00	450.00	203.90	0.00	373.400	0.000	0.4435	----	----	----	----

Line Name : HD19-1-HDT to HDP 21 SUCT

5EX-21N	0.000	0.00	90.00	0.00	202.00	389.00	190.00	388.00	0.000	0.000	1.6438	----	----	----	----
5EX-21P	0.000	0.00	180.00	0.00	202.00	389.00	190.00	388.00	0.000	0.000	1.6438	----	----	----	----
5EX-21	18.000	1.50	90.00	0.00	202.00	389.00	190.00	388.00	0.000	0.000	1.6438	1.6438	----	----	----
5EX-22	0.000	1.50	90.00	0.00	202.00	389.00	190.00	388.00	0.000	0.000	1.6438	----	----	----	----
5EX-22P	0.000	0.00	90.00	0.00	202.00	389.00	190.00	388.00	0.000	0.000	1.6438	----	----	----	----
5EX-VALVE-5EX-16	0.000	0.00	90.00	0.00	202.00	389.00	190.00	388.00	0.000	0.000	1.6438	----	----	0.000	0.00
5EX-23P-1	0.000	0.00	90.00	0.00	202.00	389.00	190.00	388.00	0.000	0.000	1.6438	----	----	0.000	0.00
5EX-23N	0.000	0.00	90.00	0.00	202.00	389.00	190.00	388.00	0.000	0.000	1.6438	----	----	----	----

Line Name : HD19-2-HDT to HDP 22 SUCT

5EX-26N	0.000	0.00	90.00	0.00	202.00	389.00	190.00	388.00	0.000	0.000	1.6438	----	----	----	----
5EX-26P	0.000	0.00	180.00	0.00	202.00	389.00	190.00	388.00	0.000	0.000	1.6438	----	----	----	----
5EX-26	18.000	1.50	90.00	0.00	202.00	389.00	190.00	388.00	0.000	0.000	1.6438	1.6438	----	----	----
5EX-27P	0.000	0.00	90.00	0.00	202.00	389.00	190.00	388.00	0.000	0.000	1.6438	----	----	----	----
5EX-VALVE-5EX-16-1	0.000	0.00	90.00	0.00	202.00	389.00	190.00	388.00	0.000	0.000	1.6438	----	----	0.000	0.00
5EX-28P-1	0.000	0.00	90.00	0.00	202.00	389.00	190.00	388.00	0.000	0.000	1.6438	----	----	0.000	0.00
5EX-28N	0.000	0.00	90.00	0.00	202.00	389.00	190.00	388.00	0.000	0.000	1.6438	----	----	----	----

Line Name : HD20-1-HDP21 to BFP SUCTION

HD-8N	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	----	----
HD-VALVE-HD-1	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	0.000	0.00
HD-8P	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	0.000	0.00
HD-VALVE-LCV-1127	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	0.000	0.00
HD-7	8.625	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	0.0000	----	----	----
HD-VALVE-HD-2	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	0.000	0.00
HD-3P	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	----	----
HD-3	0.000	1.50	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	----	----
HD-3P-1	0.000	0.00	0.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	----	----

HD-5P US	0.000	0.00	0.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	-----	-----
HD-5P DS	0.000	0.00	0.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	-----	-----

Line Name : HD20-2-HDP22 to BFP SUCTION

HD-10N	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	-----	-----
HD-VALVE-HD-1-1	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	0.000	0.00
HD-10P	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	0.000	0.00
HD-VALVE-LCV-1127A	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	0.000	0.00
HD-9	8.625	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	1.6438	----	----	-----
HD-VALVE-HD-2-1	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	0.000	0.00
HD-4P	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	0.000	0.00
HD-4	0.000	1.50	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	-----	-----
HD-4A	0.000	0.00	0.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	-----	-----
HD-6P DS	0.000	0.00	0.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	-----	-----
HD-6	12.750	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	0.0000	1.6438	-----	-----
HD-6C	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	0.000000	-----	-----	-----	-----
HD-5AP US	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	-----	-----
HD-5AP DS	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	----	----	-----	-----

Line Name : HD20-3-HDP DIS T to BFP SUC

HD-5	12.750	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	1.6438	3.2877	1.6438	-----	-----
HD-11P DS	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-11	0.000	1.50	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-2P US	0.000	0.00	180.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-2	0.000	1.50	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-12P	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-12	0.000	1.50	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-13P	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-13	0.000	1.50	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-14P	0.000	0.00	0.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-14	0.000	1.50	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-15P	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-15	0.000	1.50	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-15P-1 DS	0.000	0.00	180.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-16	0.000	1.50	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-16P US	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-17	14.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	0.0000	0.0000	-----	-----
HD-17P	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-1	0.000	1.50	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----
HD-1P	0.000	0.00	90.00	0.00	730.00	400.00	550.00	388.00	0.000	0.000	3.2877	-----	-----	-----	-----

Line Name : HD21A-1-FWH24A to CV

4EXD-13N	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-13P	0.000	0.00	180.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-13T	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	0.1756	0.0000	-----	-----
4EXD-13P-1	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	-----	-----	-----	-----
4EXD-13	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	-----	-----	-----	-----
4EXD-12	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	-----	-----	-----	-----
4EXD-11P	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	-----	-----	-----	-----
4EXD-11	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	-----	-----	-----	-----
4EXD-10P	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	-----	-----	-----	-----
4EXD-10	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	-----	-----	-----	-----
4EXD-9P	0.000	0.00	0.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	-----	-----	-----	-----

CSI TECHNOLOGIES, INC.

IP2 CHECWORKS FAC Model

4EXD-9	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-8P	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-8	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-7P	0.000	0.00	0.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-7	4.500	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	0.1756	----	-----	-----
4EXD-VALVE-4EX-8	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	4.000	0.00
4EXD-6	3.500	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	0.1756	----	-----	-----
4EXD-6P	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----

Line Name : HD21A-2-FWH24A CV to FWH23A

4EXD-VALVE- LCV-1115	0.000	0.00	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	0.000	0.00
4EXD-5	3.500	0.00	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	0.1756	----	-----	-----
4EXD-4	6.625	0.00	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	0.0000	0.1756	-----	-----
4EXD-4P	0.000	0.00	0.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-1-1	0.000	1.50	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-1	0.000	1.50	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-1P	0.000	0.00	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-1N	0.000	0.00	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	-----	-----

Line Name : HD22A-1-FWH24B to CV

4EXD-48N	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-48P	0.000	0.00	180.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-48	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-47P	0.000	0.00	135.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-47	6.625	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	0.0000	0.1756	-----	-----
4EXD-46P	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-46	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-45P	0.000	0.00	180.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-45	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-44	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-44P	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-43	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-42P	0.000	0.00	0.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-42	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-41P	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-41	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-40P US	0.000	0.00	0.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-40P DS	0.000	0.00	0.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-40	4.500	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	0.1756	----	-----	-----
4EXD-VALVE-4EX-8-1	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	4.000	0.00
4EXD-39	3.500	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	0.1756	----	-----	-----
4EXD-39P	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	-----	-----

Line Name : HD22A-2-FWH24B CV to FWH23B

4EXD-VALVE-LCV-1116	0.000	0.00	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	0.000	0.00
4EXD-38	3.500	0.00	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	0.1756	----	-----	-----
4EXD-37	6.625	0.00	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	0.0000	0.1756	-----	-----
4EXD-37P US	0.000	0.00	0.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-2-1	0.000	1.50	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-2	0.000	1.50	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-2P	0.000	0.00	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	-----	-----
4EXD-2N	0.000	0.00	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	-----	-----

Line Name : HD23A-1-FWH24C to CV

4EXD-71N	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-71P	0.000	0.00	180.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-71	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-70P	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-70	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-69	6.625	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	0.0000	0.1756	----	----
4EXD-69P	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-68	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-67P	0.000	0.00	180.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-67	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-66P	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-66	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-65P	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-65	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-64P	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-64	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-63P	0.000	0.00	0.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-63	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-62P	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-62	0.000	1.50	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-61P	0.000	0.00	0.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-61	4.500	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	0.1756	----	----	----
4EXD-VALVE-4EX-8-2	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	4.000	0.00
4EXD-60	3.500	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	0.1756	----	----	----
4EXD-60P	0.000	0.00	90.00	0.00	100.00	400.00	55.57	0.00	228.100	0.000	0.1756	----	----	----	----

Line Name : HD23A-2-FWH24C CV to FWH23C

4EXD-VALVE-LCV-1117	0.000	0.00	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	0.000	0.00
4EXD-59	3.500	0.00	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	0.1756	----	----	----
4EXD-58	6.625	0.00	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	0.0000	0.1756	----	----
4EXD-58P	0.000	0.00	0.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-3-1	0.000	1.50	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-3	0.000	1.50	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-3P	0.000	0.00	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	----	----
4EXD-3N	0.000	0.00	90.00	0.00	100.00	400.00	17.48	0.00	228.100	0.000	0.1756	----	----	----	----

Line Name : HD242A-1-FWH23A CV to FWH22A

242-VALVE-LCV-1118	0.000	0.00	90.00	0.00	50.00	300.00	-2.89	206.20	0.000	0.000	0.3713	----	----	0.000	0.00
242-8R	6.625	0.00	90.00	0.00	50.00	300.00	-2.89	206.20	0.000	0.000	0.3713	0.3713	----	----	----
242-VALVE-3EX-9	0.000	0.00	90.00	0.00	50.00	300.00	-2.89	206.20	0.000	0.000	0.3713	----	----	8.000	0.00
242-9P	0.000	0.00	90.00	0.00	50.00	300.00	-2.89	206.20	0.000	0.000	0.3713	----	----	0.000	0.00
242-10T	8.625	0.00	90.00	0.00	50.00	300.00	-2.89	206.20	0.000	0.000	0.3713	0.0000	0.3713	----	----
242-11P	0.000	0.00	90.00	0.00	50.00	300.00	-2.89	206.20	0.000	0.000	0.3713	----	----	----	----
242-12N	8.625	0.00	90.00	0.00	50.00	300.00	-2.89	206.20	0.000	0.000	0.3713	0.3713	----	----	----

Line Name : HD243A-1-FWH23B CV to FWH22B

243-VALVE-LCV-1119	0.000	0.00	90.00	0.00	50.00	300.00	-2.89	206.20	0.000	0.000	0.3713	----	----	0.000	0.00
243-9R	6.625	0.00	90.00	0.00	50.00	300.00	-2.89	206.20	0.000	0.000	0.3713	0.3713	----	----	----
243-VALVE-3EX-9-1	0.000	0.00	90.00	0.00	50.00	300.00	-2.89	206.20	0.000	0.000	0.3713	----	----	8.000	0.00
243-10P	0.000	0.00	90.00	0.00	50.00	300.00	-2.89	206.20	0.000	0.000	0.3713	----	----	0.000	0.00

242-3P	0.000	0.00	45.00	0.00	50.00	300.00	17.48	206.20	0.000	0.000	0.3713	----	----	-----	-----
242-4E	0.000	1.50	90.00	0.00	50.00	300.00	17.48	206.20	0.000	0.000	0.3713	----	----	-----	-----
242-5E	0.000	1.50	90.00	0.00	50.00	300.00	17.48	206.20	0.000	0.000	0.3713	----	----	-----	-----
242-6P	0.000	0.00	0.00	0.00	50.00	300.00	17.48	206.20	0.000	0.000	0.3713	----	----	-----	-----
242-7E	0.000	1.50	90.00	0.00	50.00	300.00	17.48	206.20	0.000	0.000	0.3713	----	----	-----	-----
242-7R	6.625	0.00	90.00	0.00	50.00	300.00	17.48	206.20	0.000	0.000	0.3713	0.3713	----	-----	-----

Line Name : HD25A-1-FWH23B to CV

[illegible]

Line Name : HD26A-1-FWH23C to CV

3EXD-43N	0.000	0.00	90.00	0.00	50.00	300.00	17.48	206.20	0.000	0.000	0.3713	----	----	-----	-----
3EXD-43P	0.000	0.00	180.00	0.00	50.00	300.00	17.48	206.20	0.000	0.000	0.3713	----	----	-----	-----
3EXD-43	0.000	1.50	90.00	0.00	50.00	300.00	17.48	206.20	0.000	0.000	0.3713	----	----	-----	-----
3EXD-43P	0.000	0.00	90.00	0.00	50.00	300.00	17.48	206.20	0.000	0.000	0.3713	----	----	-----	-----

[illegible]

Line Name : HD9-1-FWH25A to HTR DRN TK

5EXD-21N	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-21P	0.000	0.00	180.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-21	0.000	1.50	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-15P	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-15	0.000	1.50	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-16P	0.000	0.00	180.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-16	0.000	1.50	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-17P US	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-17P DS	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-17	0.000	1.50	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-18P	0.000	0.00	180.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-18	0.000	1.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-19P	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-19	0.000	1.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-20P	0.000	0.00	0.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-20P DS	0.000	0.00	0.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-20	0.000	1.50	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----
5EXD-VALVE-5EX-8	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	10.000	0.00
5EXD-20N	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	----	----

Line Name : HD9-2-FWH25B to HTR DRN TK

5EXD-9N	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-9P	0.000	0.00	180.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-9	0.000	1.50	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-10P DS	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-10	0.000	1.50	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-11P US	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-11	0.000	1.50	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-12P	0.000	0.00	180.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-12	0.000	1.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-13P	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-13	0.000	1.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-14P	0.000	0.00	0.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-14P DS	0.000	0.00	0.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-14	0.000	1.50	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-VALVE-5EX-8-1	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	10.000	0.00
5EXD-14N	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----

Line Name : HD9-3-FWH25C to HTR DRN TK

5EXD-1N	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-1P	0.000	0.00	180.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-3	0.000	1.50	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-2P	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-4	0.000	1.50	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-3P US	0.000	0.00	180.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-3P DS	0.000	0.00	180.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-5	0.000	1.50	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-4P	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-1	0.000	1.50	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-5P	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-2	0.000	1.50	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-6P	0.000	0.00	180.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-6	0.000	1.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-7	0.000	1.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-8P	0.000	0.00	0.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-8	0.000	1.50	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----
5EXD-VALVE-5EX-8-2	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	10.000	0.00
5EXD-8N	0.000	0.00	90.00	0.00	250.00	400.00	203.90	389.30	0.000	0.000	0.3879	----	----	-----	-----

Line Name : MS56-1-PRESEP to MSR-A

5EX-49N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-49P1	0.000	0.00	180.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-49	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-49EJ1	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	32.000	-----
5EX-49P2	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-49EJ2	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	32.000	-----
5EX-52	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-52P	0.000	0.00	61.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-53	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-53R	33.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	2.6870	----	-----	-----
5EX-53P	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----

Line Name : MS56-2-PRESEP to MSR-A

5EX-50N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-50P1	0.000	0.00	180.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-50	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-50P2	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-62	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-50EJ1	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	32.000	-----
5EX-50P3	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-50EJ2	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	32.000	-----
5EX-51	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-51P	0.000	0.00	61.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----

Line Name : MS56-3-PRESEP to MSR-A

5EX-54	33.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	5.3740	2.6870	-----	-----
5EX-54P	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	5.3740	-----	-----	-----	-----
5EX-55	27.500	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	5.3740	3.5826	1.7913	-----	-----

Line Name : MS56-4-PRESEP to MSR23A

5EX-55EJ1	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	26.500	-----
5EX-55EJ2	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	26.500	-----
5EX-56	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-56P	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-56N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----

Line Name : MS56-5-PRESEP to MSR-A

5EX-55R	38.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	3.5826	3.5826	----	-----	-----
5EX-55P-1	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	3.5826	-----	-----	-----	-----
5EX-57	27.500	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	3.5826	1.7913	1.7913	-----	-----

Line Name : MS56-6-PRESEP to MSR22A

5EX-57EJ1	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	26.500	-----
5EX-57EJ2	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	26.500	-----
5EX-58	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-58P	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-58N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----

Line Name : MS56-7-PRESEP to MSR21A

5EX-57R	27.750	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	1.7913	----	-----	-----
5EX-57P2	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-59	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-59EJ1	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	26.500	-----
5EX-59P	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	26.500	-----
5EX-59EJ2	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	26.500	-----
5EX-60	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-60P	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-60N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----

Line Name : MS57-1-PRESEP to MSR-B

5EX-37N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-37P1	0.000	0.00	180.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-37	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-37EJ1	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	32.000	-----
5EX-37P2	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-37EJ2	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	32.000	-----
5EX-40	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-40P	0.000	0.00	61.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-41	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-41R	33.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	2.6870	----	-----	-----

Line Name : MS57-2-PRESEP to MSR-B

5EX-38N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-38P	0.000	0.00	180.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-38	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-61P1	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-61	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-61EJ1	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	32.000	-----
5EX-61P2	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-61EJ2	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	32.000	-----
5EX-39	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-39P	0.000	0.00	61.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----

Line Name : MS57-3-PRESEP to MSR-B

5EX-42	33.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	5.3740	2.6870	-----	-----
5EX-41P	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	5.3740	-----	-----	-----	-----
5EX-43	27.500	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	5.3740	3.5826	1.7913	-----	-----

Line Name : MS57-4-PRESEP to MSR23B

5EX-43EJ1	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	26.500	-----
5EX-43EJ2	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	26.500	-----
5EX-44	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-44N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----

Line Name : MS57-5-PRESEP to MSR-B

5EX-43R	38.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	3.5826	3.5826	----	-----	-----
5EX-43P1	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	3.5826	-----	-----	-----	-----
5EX-45	27.500	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	3.5826	1.7913	1.7913	-----	-----

Line Name : MS57-6-PRESEP to MSR22B

5EX-45EJ1	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	26.500	-----
5EX-45EJ2	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	26.500	-----
5EX-46	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-46N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----

Line Name : MS57-7-PRESEP to MSR21B

5EX-45R	27.750	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	1.7913	----	-----	-----
5EX-47P2	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-47	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-47EJ1	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	25.000	-----
5EX-47EJ2	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	25.000	-----
5EX-48	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-48N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----

Line Name : MSD27-1-MS21A to MSDT 21A

1A-16N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----
1A-16P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----
1A-16	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0000	0.0441	-----	-----
1A-16P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----

Line Name : MSD27-2-MS21A to MSDT 21A

1A-17N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----
1A-17P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----

Line Name : MSD27-3-MS21A to MSDT 21A

1A-19N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----
1A-19P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----
1A-19	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0000	0.0441	-----	-----
1A-19P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----

Line Name : MSD27-4-MS21A to MSDT 21A

1A-17	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0881	0.0441	-----	-----
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Line Name : MSD27-5-MS21A to MSDT 21A

1A-18	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0881	0.0441	0.1322	-----	-----
1A-18P US	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-18P DS	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-20	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-VALVE-5EX-19L	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	12.250	0.00
1A-20P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	0.000	0.00
1A-VALVE-5EX-19M	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	12.250	0.00
1A-20P-1	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	0.000	0.00
1A-20N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----

Line Name : MSD28-1-MS22A to MSDT 22A

2A-16N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----
2A-16P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----
2A-16	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0000	0.0441	-----	-----
2A-16P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----

Line Name : MSD28-2-MS22A to MSDT 22A

2A-17N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----
2A-17P1	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0881	----	----	-----	-----

Line Name : MSD28-3-MS22A to MSDT 22A

2A-19N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----
2A-19P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----
2A-19	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0000	0.0441	-----	-----
2A-19P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----

Line Name : MSD28-4-MS22A to MSDT 22A

2A-17	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0881	0.0441	-----	-----
2A-17P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----

Line Name : MSD28-5-MS22A to MSDT 22A

2A-18	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0881	0.0441	0.1322	-----	-----
2A-18P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-20	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-VALVE-5EX-19J	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	12.250	0.00
2A-20P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	0.000	0.00
2A-VALVE-5EX-19K	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	12.250	0.00
2A-20P-1	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	0.000	0.00
2A-20N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----

Line Name : MSD29-1-MS23A to MSDT 23A

3A-16N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----
3A-16P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----
3A-16	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0000	0.0441	-----	-----
3A-16P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----

Line Name : MSD29-2-MS23A to MSDT 23A

3A-17N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----
3A-17P1	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0881	----	----	-----	-----

Line Name : MSD29-3-MS23A to MSDT 23A

3A-19N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----
3A-19P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----
3A-19	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0000	0.0441	-----	-----
3A-19P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----

Line Name : MSD29-4-MS23A to MSDT 23A

3A-17	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0881	0.0441	-----	-----
3A-17P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----

Line Name : MSD29-5-MS23A to MSDT 23A

3A-18	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0881	0.0441	0.1322	-----	-----
3A-18P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	-----	-----
3A-20	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	-----	-----
3A-VALVE-5EX-19G	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	12.250	0.00
3A-20P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	0.000	0.00
3A-VALVE-5EX-19H	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	12.250	0.00
3A-20P-1 US	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	0.000	0.00
3A-20P-1 DS	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	0.000	0.00
3A-21	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	-----	-----
3A-21P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	-----	-----
3A-21N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	-----	-----

Line Name : MSD30-1-MS21B to MSDT 21B

1B-16N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	-----	-----	-----	-----
1B-16P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	-----	-----	-----	-----
1B-16	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0000	0.0441	-----	-----
1B-16P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	-----	-----	-----	-----

Line Name : MSD30-2-MS21B to MSDT 21B

1B-18N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	-----	-----	-----	-----
1B-18P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	-----	-----	-----	-----

Line Name : MSD30-3-MS21B to MSDT 21B

1B-19N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	-----	-----	-----	-----
1B-19P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	-----	-----	-----	-----
1B-19	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0000	0.0441	-----	-----
1B-19P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	-----	-----	-----	-----

Line Name : MSD30-4-MS21B to MSDT 21B

1B-18	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0881	0.0441	-----	-----
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Line Name : MSD30-5-MS21B to MSDT 21B

1B-17	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0881	0.0441	0.1322	-----	-----
1B-17P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	-----	-----
1B-20	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	-----	-----
1B-VALVE-5EX-19	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	12.250	0.00
1B-20P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	0.000	0.00
1B-VALVE-5EX-19F	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	12.250	0.00
1B-20P-1	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	0.000	0.00
1B-20N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	-----	-----	-----	-----

Line Name : MSD31-1-MS22B to MSDT 22B

2B-16N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	-----	-----	-----	-----
2B-16P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	-----	-----	-----	-----
2B-16	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0000	0.0441	-----	-----
2B-16P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	-----	-----	-----	-----

Line Name : MSD31-2-MS22B to MSDT 22B

2B-18N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	----	----
2B-18P1	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0881	----	----	----	----

Line Name : MSD31-3-MS22B to MSDT 22B

2B-19N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	----	----
2B-19P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	----	----
2B-19	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0000	0.0441	----	----
2B-19P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	----	----

Line Name : MSD31-4-MS22B to MSDT 22B

2B-18	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0881	0.0441	----	----
2B-18P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	----	----

Line Name : MSD31-5-MS22B to MSDT 22B

2B-17	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0881	0.0441	0.1322	----	----
2B-17P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
2B-20	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
2B-VALVE-5EX-19D	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	12.250	0.00
2B-20P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	0.000	0.00
2B-VALVE-5EX-19E	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	12.250	0.00
2B-20P-1	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	0.000	0.00
2B-20N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----

Line Name : MSD32-1-MS23B to MSDT 23B

3B-16N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	----	----
3B-16P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	----	----
3B-16	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0000	0.0441	----	----
3B-16P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	----	----

Line Name : MSD32-2-MS23B to MSDT 23B

3B-18N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	----	----
3B-18P1	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0881	----	----	----	----

Line Name : MSD32-3-MS23B to MSDT 23B

3B-19N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	----	----
3B-19P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	----	----
3B-19	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0000	0.0441	----	----
3B-19P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	----	----

Line Name : MSD32-4-MS23B to MSDT 23B

3B-18	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	0.0881	0.0441	----	----
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3B-18P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0441	----	----	-----	-----
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Line Name : MSD32-5-MS23B to MSDT 23B

3B-17	12.750	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.0881	0.0441	0.1322	-----	-----
3B-17P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3B-20	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3B-VALVE-5EX-19B	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	12.250	0.00
3B-20P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	0.000	0.00
3B-VALVE-5EX-19C	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	12.250	0.00
3B-20P-1	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	0.000	0.00
3B-21	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3B-21P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3B-21N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----

Line Name : MSD33A-1-MSDT 21A to HDT

1A-12N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-12P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-12	6.625	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	0.1322	0.0000	-----	-----
1A-12P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-11	6.625	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	0.1322	-----	-----	-----
1A-11P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-10	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-10P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-1	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-VALVE-5EX-29-1	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	6.065	0.00
1A-2	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-2P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-3	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-3P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-4	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-4P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-5	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-5P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-6	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-6P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-7	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-7P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-8	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-8P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-9	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-9P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-13	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-13P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-15	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1A-15N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----

Line Name : MSD34A-1-MSDT 22A to HDT

2A-3N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-3P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-3	6.625	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	0.1322	0.0000	-----	-----
2A-3P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-4	6.625	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	0.1322	-----	-----	-----
2A-4P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----

2A-5	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-5P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-1	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-VALVE-5EX-29-2	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	6.065	0.00
2A-2P	0.000	90.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	0.000	0.00
2A-2	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-2P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-6	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-6P	0.000	0.00	135.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-7	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-7P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-8	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-8P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-9	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-9P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-10	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-10P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-12	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-12P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-13	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-13P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-15	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2A-15N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----

Line Name : MSD35A-1-MSDT 23A to HDT

3A-16N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-16P US	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-16	6.625	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	0.1322	0.0000	-----	-----
3A-1P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-1	6.625	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	0.1322	-----	-----	-----
3A-VALVE-5EX-29-3	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	6.065	0.00
3A-2P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	0.000	0.00
3A-2	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-3	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-3P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-17	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-17P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-18	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-18P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-19	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-19P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-20	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-20P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-21	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-21P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-13	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-13P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-15	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
3A-15N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----

Line Name : MSD36A-1-MSDT 21B to HDT

1B-3N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-3P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-3	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-4P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----

CSI TECHNOLOGIES, INC.

IP2 CHECWORKS FAC Model

1B-4	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-5	6.625	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	0.1322	0.0000	-----	-----
1B-5R	6.625	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	0.1322		-----	-----
1B-5P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-1	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-VALVE-5EX-29-4	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	6.065	0.00
1B-2P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	0.000	0.00
1B-2	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-6P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-6	0.000	1.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-7P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-7	0.000	1.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-7P-1	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-8	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-8P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-9	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-9P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-10	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-10P US	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-10P DS	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-11	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-11P US	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-11P DS	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-12	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-12P US	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-12P DS	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-14	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-14P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-13	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-13P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-15	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-15P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
1B-15N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----

Line Name : MSD37A-1-MSDT 22B to HDT

2B-1N	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-1P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-1	6.625	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	0.1322	0.0000	-----	-----
2B-2P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-2	6.625	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	0.1322	----	-----	-----
2B-3	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-3P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-4	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-VALVE-5EX-29-5	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	6.065	0.00
2B-4P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	0.000	0.00
2B-5	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-5P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-6	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-6P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-7	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-7P US	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-7P DS	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-8	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-8P US	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-8P DS	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-9	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----
2B-9P US	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	-----	-----

IPEC00024561

CSI TECHNOLOGIES, INC.

IP2 CHECWORKS FAC Model

2B-9P DS	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
2B-10	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
2B-10P US	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
2B-10P DS	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
2B-11	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
2B-11P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
2B-12	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
2B-12P US	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
2B-12P DS	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
2B-13	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
2B-13P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
2B-15	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
2B-15P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
2B-15N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----

Line Name : MSD38A-1-MSDT 23B to HDT

3B-3N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-3P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-3	6.625	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	0.1322	0.0000	----	----
3B-4P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-4	6.625	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	0.1322	----	----	----
3B-5	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-5P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-1	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-VALVE-5EX-29-6	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	6.065	0.00
3B-2P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	0.000	0.00
3B-2	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-2P-1	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-6	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-6P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-7	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-7P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-8	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-8P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-9	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-9P DS	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-10	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-10P US	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-10P DS	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-11	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-11P US	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-11P DS	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-12	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-12P US	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-14	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-14P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-13	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-13P	0.000	0.00	180.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-15	0.000	1.50	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-15P	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----
3B-15N	0.000	0.00	90.00	0.00	202.00	389.00	200.00	0.00	365.000	0.000	0.1322	----	----	----	----

Line Name : MSD39-1-RHTR 21A to RHDT 21A

MS-1AN	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A0P	0.000	0.00	165.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----

MS-1AN-1	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
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Line Name : MSD40-1-RHTR 22A to RHDT 22A

MS-2AN	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2AOP	0.000	0.00	165.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2AN-1	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----

Line Name : MSD41-1-RHTR 23A to RHDT 23A

MS-3AN	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3AOP	0.000	0.00	165.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3AN-1	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----

Line Name : MSD42-1-RHTR 21B to RHDT 21B

MS-1BN	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1BOP	0.000	0.00	165.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1BN-1	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----

Line Name : MSD43-1-RHTR 22B to RHDT 22B

MS-2BN	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2BOP	0.000	0.00	165.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2BN-1	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----

Line Name : MSD44-1-RHTR 23B to RHDT 23B

MS-3BN	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3BOP	0.000	0.00	165.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3BN-1	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----

Line Name : MSD45A-1-RHDT21A to CV

MS-1A11N	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A11P-1	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A11	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A11P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A11P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A12	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A12P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A12P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A13	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A13P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A13P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A14	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A14P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A14AP	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A14P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A14A	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A15	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A15P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A15P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----

MS-1A16	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A16P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A17	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A17P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A17P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A18	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A18P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A19	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A20	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A20P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A21	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A21P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A21P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A21R	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.1118	----	----	----
MS-1A21P-1	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A22	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A22P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A22P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A22P-1	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A23	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A24	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A24P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A24R	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.1118	----	----	----
MS-1A24P-1	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A24FE	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	5.761	----
MS-1A25P-1	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	5.705	----
MS-1A25	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.1118	0.0000	----	----
MS-1A25P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A26	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A26P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A27	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A27P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A28	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A28P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A28P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A29	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A29P US	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A29P DS	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A30	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A30P-1	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A30R-1	4.500	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.1118	----	----	----

Line Name : MSD45B-1-RHDT21A CV to FWH26

MS-1A-VALVE-LCV-1104	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	0.000	0.00
MS-1A30R2	4.500	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.1118	----	----	----
MS-1A30P2	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A31	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A31P	0.000	0.00	180.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A32	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A32P	0.000	0.00	135.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----

Line Name : MSD45C-1-RHDT A HDR to FWH26

MS-1A34T1	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.0000	0.1118	----	----
MS-1A34P1	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----

Line Name : MSD45C-2-RHDT A HDR to FWH26

MS-1A34T2	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.2237	0.1118	-----	-----
MS-1A34P2	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	-----	-----	-----	-----
MS-1A35	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	-----	-----	-----	-----

Line Name : MSD45C-3-RHDT A HDR to FWH26

MS-1A35T	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	0.3355	0.1118	-----	-----
MS-1A36	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	-----	-----	-----	-----
MS-1A36P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	-----	-----	-----	-----
MS-1A36P DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	-----	-----	-----	-----
MS-1A37	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	-----	-----	-----	-----
MS-1A37P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	-----	-----	-----	-----
MS-1A37P DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	-----	-----	-----	-----
MS-1A38	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	-----	-----	-----	-----
MS-1A38P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	-----	-----	-----	-----
MS-1A39	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	-----	-----	-----	-----
MS-1A39P	0.000	0.00	45.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	-----	-----	-----	-----
MS-1A40	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	-----	-----	-----	-----
MS-1A40P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	-----	-----	-----	-----
MS-1A41	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	0.2237	0.1118	-----	-----

Line Name : MSD45C-4-RHDT A HDR to FWH26C

MS-1A63P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	-----	-----	-----	-----
MS-1A63P DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	-----	-----	-----	-----
MS-1A63	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	-----	-----	-----	-----
MS-1A64P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	-----	-----	-----	-----
MS-1A64P DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	-----	-----	-----	-----
MS-1A64	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	-----	-----	-----	-----
MS-1A65P US	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	-----	-----	-----	-----
MS-1A65P DS	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	-----	-----	-----	-----
MS-1A65	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	-----	-----	-----	-----
MS-1A-VALVE-MS-14-2	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	-----	-----	5.761	0.00
MS-1A66P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	-----	-----	0.000	0.00
MS-1A66P DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	-----	-----	0.000	0.00
MS-1A66	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.0000	0.1118	-----	-----
MS-1A67P US	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	-----	-----	-----	-----
MS-1A67P DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	-----	-----	-----	-----
MS-1A67	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.0000	0.1118	-----	-----
MS-1A67P-1	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	-----	-----	-----	-----
MS-1A67R	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.1118	-----	-----	-----
MS-1A67N	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	-----	-----	-----	-----

Line Name : MSD45C-5-RHDT A HDR to FWH26

MS-1A41R	8.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	0.2237	-----	-----	-----
MS-1A41P-1 US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	-----	-----	-----	-----
MS-1A41P-1 DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	-----	-----	-----	-----
MS-1A42	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	-----	-----	-----	-----
MS-1A42P US	0.000	0.00	135.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	-----	-----	-----	-----
MS-1A42P DS	0.000	0.00	135.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	-----	-----	-----	-----
MS-1A43	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	-----	-----	-----	-----
MS-1A43P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	-----	-----	-----	-----

MS-1A43P DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	----	----	----	----
MS-1A44	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	----	----	----	----
MS-1A44P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	----	----	----	----
MS-1A44P DS	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	----	----	----	----
MS-1A45	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	----	----	----	----
MS-1A45P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	----	----	----	----
MS-1A68	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	0.1118	0.1118	----	----

Line Name : MSD45D-1-RHDT A HDR to FWH26B

MS-1A68P	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A55	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A55P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A56	0.000	1.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A57	0.000	1.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A57P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A57P DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A58	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A58P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A59	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A59P US	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A59P DS	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A60	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A-VALVE-MS-14-1	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	5.761	0.00
MS-1A60P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	0.000	0.00
MS-1A60P DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	0.000	0.00
MS-1A61	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.0000	0.1118	----	----
MS-1A61P US	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A61P DS	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A62	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.0000	0.1118	----	----
MS-1A61P-1	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A62R	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.1118	----	----	----
MS-1A62N	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----

Line Name : MSD45D-2-RHDT A HDR to FWH26A

MS-1A45R	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.1118	----	----	----
MS-1A45P-1 US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A45P-1 DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A46	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A46P	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A47	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A47P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A47P DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A48	0.000	1.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A49	0.000	1.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A49P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A49P DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A50	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A50P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A51	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A51P US	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A51P DS	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A52	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1A-VALVE-MS-14	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	5.761	0.00
MS-1A52P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	0.000	0.00
MS-1A52P DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	0.000	0.00

MS-1A53	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.0000	0.1118	-----	-----
MS-1A53P US	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-1A53P DS	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-1A54	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.0000	0.1118	-----	-----
MS-1A53P-1	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-1A54R	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.1118	----	-----	-----
MS-1A54N	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----

Line Name : MSD46A-1-RHDT22A to CV

[illegible]

IPEC00024567

Line Name : MSD46A-2-RHDT22A CV to FWH26

MS-2A-VALVE-LCV-1104A	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	0.000	0.00
MS-2A24R	4.500	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.1118	----	-----	-----
MS-2A23P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2A24	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2A24P	0.000	0.00	180.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2A25	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2A25P	0.000	0.00	135.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----

Line Name : MSD47-1-RHDT23A to CV

MS-3A11N	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A11P	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A11	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A12P	0.000	0.00	112.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A12	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A13P	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A13	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A14P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A14	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A15P-1 US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A15P-1 DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A15	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A15P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A16	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A16P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A16FE	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	5.761	-----
MS-3A17P-1	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	5.761	-----
MS-3A17R	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.0000	----	-----	-----
MS-3A17	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A17P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A18	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A18P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A19	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.1118	0.0000	-----	-----
MS-3A19R	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.0000	----	-----	-----
MS-3A19P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A19P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A20	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A21	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A21P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A21P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A22	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A22P	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A23	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A23R	4.500	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.0000	----	-----	-----

Line Name : MSD47-2-RHDT23A CV to FWH26

MS-3A-VALVE-LCV-1104B	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	0.000	0.00
MS-3A24R	4.500	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.1118	----	-----	-----
MS-3A23P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A24	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A24P	0.000	0.00	180.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A25	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-3A25P	0.000	0.00	135.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----

[illegible]

IPEC00024569

Line Name : MSD48B-1-RHDT21B CV to FWH26

MS-1B-VALVE-LCV-1105	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	0.000	0.00
MS-1B34R	4.500	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.1118	----	----	----
MS-1B33P-1	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1B34	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1B34P US	0.000	0.00	180.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1B34P DS	0.000	0.00	180.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1B35	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-1B35P	0.000	0.00	135.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----

Line Name : MSD48B-2-RHDT B HDR to FWH26

MS-1B36	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.2237	0.1118	----	----
MS-1B36P US	0.000	0.00	180.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	----	----	----	----
MS-1B36P DS	0.000	0.00	180.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	----	----	----	----
MS-1B37	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	----	----	----	----
MS-1B37P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	----	----	----	----
MS-1B38	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	----	----	----	----
MS-1B38P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	----	----	----	----
MS-1B39	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	----	----	----	----
MS-1B39P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	----	----	----	----

Line Name : MSD49A-1-RHDT22B to CV

MS-2B11N	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B11P-1	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B11	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B11P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B12	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B12P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B13	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B13P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B14	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B14P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B15	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B15P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B16	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B16P	0.000	0.00	135.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B17	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B17P-3	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B17R-1	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.0000	----	----	----
MS-2B17P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B17R-2	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.1118	----	----	----
MS-2B17P-1 US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B17FE	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	5.761	----
MS-2B17P-2 DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	5.761	----
MS-2B18R	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.1118	----	----	----
MS-2B18P-1 US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B18	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B18P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B19	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B19P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B20	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B20P	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-2B21	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----

MS-2B21P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B21P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B22	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B23	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B23P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B23P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B24	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B24P DS	0.000	0.00	0.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B25	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B25P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B26	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B26P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B27	8.625	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.1118	0.0000	-----	-----
MS-2B27P-1	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B27R	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.0000	----	-----	-----
MS-2B27P-2	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B28R	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.0000	----	-----	-----
MS-2B28P-1	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B28	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B28P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B29	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B29P	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B30	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B30R1	4.500	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.1118	----	-----	-----

Line Name : MSD49B-1-RHDT22B CV to FWH26

MS-2B-VALVE-LCV-1105A	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	0.000	0.00
MS-2B30R2	4.500	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.1118	----	-----	-----
MS-2B31P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B31	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B31P US	0.000	0.00	180.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B31P DS	0.000	0.00	180.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B32	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B32P US	0.000	0.00	135.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B32P DS	0.000	0.00	135.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B33	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----

Line Name : MSD49C-1-RHDT B HDR to FWH26

MS-2B34	8.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	0.3355	0.1118	-----	-----
MS-2B33P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	----	----	-----	-----
MS-2B35	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	----	----	-----	-----
MS-2B35P	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	----	----	-----	-----
MS-2B36	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	----	----	-----	-----
MS-2B36P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	----	----	-----	-----
MS-2B36P DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	----	----	-----	-----
MS-2B63	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.3355	0.2237	0.1118	-----	-----

Line Name : MSD49C-2-RHDT B HDR to FWH26C

MS-2B63P	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B50	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B50P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B51	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B52	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----

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IP2 CHECWORKS FAC Model

MS-2B52P US	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B52P DS	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B53	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B-VALVE-MS-15-2	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	5.761	0.00
MS-2B53P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	0.000	0.00
MS-2B53P DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	0.000	0.00
MS-2B54	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.0000	0.1118	-----	-----
MS-2B54P	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B55	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.0000	0.1118	-----	-----
MS-2B55P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B55R	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.1118	----	-----	-----

Line Name : MSD49C-3-RHDT B HDR

MS-2B63P-1 US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	----	----	-----	-----
MS-2B64	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.2237	0.1118	0.1118	-----	-----

Line Name : MSD49C-4-RHDT B HDR to FWH26B

MS-2B64P	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B44	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B44P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B45	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B45P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B45P DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B46	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B46P US	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B46P DS	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B47	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B-VALVE-MS-15-1	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	5.761	0.00
MS-2B47P US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	0.000	0.00
MS-2B47P DS	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	0.000	0.00
MS-2B48	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.0000	0.1118	-----	-----
MS-2B48P US	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B48P DS	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B49	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.0000	0.1118	-----	-----
MS-2B49P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B49R	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.1118	----	-----	-----
MS-2B49N	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----

Line Name : MSD49C-5-RHDT B HDR to FWH26A

MS-2B64R	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.1118	----	-----	-----
MS-2B64P-1 US	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B37	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B37P	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B38	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B38P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B39	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B39P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B40	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B40P US	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B40P DS	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B41	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B-VALVE-MS-15	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	5.761	0.00
MS-2B41P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	0.000	0.00

MS-2B42	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.0000	0.1118	-----	-----
MS-2B42P US	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B42P DS	0.000	0.00	0.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B43	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.0000	0.1118	-----	-----
MS-2B43P	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----
MS-2B43R	6.625	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.1118	----	-----	-----
MS-2B43N	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	-----	-----

Line Name : MSD50A-1-RHDT23B to CV

[illegible]

MS-3B31	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B31P	0.000	0.00	0.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B32	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B32P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B33	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B33P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B34	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.0000	0.1118	----	----
MS-3B34P	0.000	0.00	0.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B35	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B35P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B36	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B36P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B37	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B37P	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B38	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B38P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B38P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B39	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B40	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B40R	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.1118	----	----	----
MS-3B40P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B41	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B41P US	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B41P DS	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B42	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B42P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B42P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B42R	4.500	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.1118	0.1118	----	----	----

Line Name : MSD50C-1-RHDT23B CV to FWH26

MS-3B-VALVE-LCV-1105B	0.000	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	0.000	0.00
MS-3B43R	4.500	0.00	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	0.1118	----	----	----
MS-3B43	0.000	1.50	90.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----
MS-3B43P US	0.000	0.00	180.00	0.00	1085.00	600.00	343.10	0.00	462.300	0.000	0.1118	----	----	----	----

Line Name : SG51-1-CONT PEN to SGBFTK

MS46-1P-1	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS46-1	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS46-1P US	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS46-1P DS	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS46-2	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS46-2P-3	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS46-VALVE-PCV-1214	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS46-2P	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS46-VALVE-PCV-1214A	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS46-2P-1	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS46-2R	2.375	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0038	----	----	----
MS46-2P-2	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS46-3	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS46-3P	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS46-3FE	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	2.900	----
MS46-4P-1 US	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	2.900	----
MS46-4P-1 DS	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	2.900	----
MS46-4	2.375	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0038	----	----	----
MS46-4P US	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----

MS46-4P DS	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS46-5	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS46-5P	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS46-VALVE-MS-131-A	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS46-6P1	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS46-6	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS46-6P US	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS46-6-1	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS46-6-1P	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS46-7	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0038	0.0000	-----	-----
MS46-VALVE-HCV-5046	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0038	-----	0.000	0.00
MS46-7R	1.315	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0038	-----	-----	-----
MS46-7P2	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS46-Valve-MS-71-A	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00

Line Name : SG52-1-CONT PEN to SGBFTK

MS45-1P-1	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS45-1	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS45-1P	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS45-2	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS45-VALVE-PCV-1215	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS45-2P	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS45-VALVE-PCV-1215A	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS45-2P-1	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS45-2R	2.375	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0038	-----	-----	-----
MS45-2P-3	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS45-3	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS45-3P	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS45-3FE	3.500	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	2.175	-----
MS45-3P-1	3.500	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	2.175	-----
MS45-4	3.500	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS45-4P	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS45-5	2.375	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0000	-----	-----	-----
MS45-VALVE-MS-131-B	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS45-5P	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS45-6	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS45-6P	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS45-7	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0038	0.0000	-----	-----
MS45-VALVE-HCV-5047	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS45-7R	1.315	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0038	-----	-----	-----
MS45-7P2	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS45-VALVE-MS-71-B	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00

Line Name : SG53-1-CONT PEN to SGBFTK

MS47-1P-1	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-1	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-1P	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-2	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-VALVE-PCV-1216	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS47-2P	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS47-VALVE-PCV-1216A	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS47-2P-1	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS47-2R	2.375	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0038	-----	-----	-----
MS47-2P-2	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-3	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----

MS47-3P	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-3FE	2.375	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	2.900	-----
MS47-4P-1	2.375	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	2.900	-----
MS47-4	2.375	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0000	----	-----	-----
MS47-4P DS	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-5	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-5P US	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-6	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-6P	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-VALVE-MS-131C	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS47-7	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-7P1	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-8	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-8VP	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-9	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0038	0.0000	-----	-----
MS47-9P	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-10	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-VALVE-HCV-5048	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS47-10P1	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-10R	1.315	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0038	----	-----	-----
MS47-10P2	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	-----	-----
MS47-VALVE-MS-71C	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00

Line Name : SG54-1-CONT PEN to SGBFTK

MS48-1P-1	0.000	0.00	90.00	63.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0078	----	----	----	----
MS48-1	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-1P	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-2	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-1P-2	0.000	0.00	90.00	63.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0078	----	----	----	----
MS48-VALVE-PCV-1217	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS48-2P	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS48-VALVE-PCV-1217A	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS48-2P-1	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS48-2R	2.375	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0038	----	----	----
MS48-2P-2	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-3	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-3P	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-3FE	2.375	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	2.900	----
MS48-4P-1	2.375	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	2.900	----
MS48-4	2.375	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0000	----	----	----
MS48-4P	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-5	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-5P	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-6	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-6P	0.000	0.00	180.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-VALVE-MS-131D	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS48-7	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-7P1	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-8	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-8VP	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-9	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0038	0.0000	----	----
MS48-9P	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-10	0.000	1.50	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-10P1	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----
MS48-VALVE-HCV-5049	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
MS48-10R	1.315	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	0.0038	----	----	----
MS48-10P2	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	----	----

MS48-VALVE-MS-71D	0.000	0.00	90.00	0.00	1085.00	556.00	665.30	0.00	430.000	0.000	0.0038	----	----	0.000	0.00
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Line Name : xNCW_15 HDT VENT TO 25A

5EXV-13N	0.000	0.00	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-13P US	0.000	0.00	0.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-13P DS	0.000	0.00	0.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-13	0.000	1.50	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-12P	0.000	0.00	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-11	0.000	1.50	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-3	0.000	1.50	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-3N	0.000	0.00	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_15 HDT VENT TO 25B

5EXV-10N	0.000	0.00	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-10P	0.000	0.00	0.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-10	0.000	1.50	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-9P	0.000	0.00	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-9	0.000	1.50	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-8	0.000	1.50	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-2	0.000	1.50	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-2N	0.000	0.00	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_15 HDT VENT TO 25C

5EXV-7N	0.000	0.00	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-7P	0.000	0.00	0.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-7	0.000	1.50	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-6P	0.000	0.00	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-6	0.000	1.50	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-5	0.000	1.50	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-5P	0.000	0.00	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-4	0.000	1.50	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-1	0.000	1.50	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----
5EXV-1N	0.000	0.00	90.00	0.00	250.00	400.00	203.05	389.05	1137.900	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_151 Main Steam

MS21-1	0.000	1.50	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MS21-1 DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_153 Main Steam

MS23-1	0.000	1.20	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MS23-1 DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_18

5EXC-1P DS	0.000	0.00	180.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
5EXC-1	0.000	1.50	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
5EXC-2P US	0.000	0.00	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
5EXC-2P DS	0.000	0.00	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

5EXC-2	24.000	0.00	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
5EXC-3	14.000	0.00	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-2A	0.000	0.00	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-7P	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-8	10.750	0.00	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
5EXC-30	10.750	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
5EXC-11P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-11	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-11N	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-13P	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-14	0.000	1.50	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-15P	0.000	0.00	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-16	10.750	0.00	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
5EXC-31	10.750	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
5EXC-19P DS	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-19	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-19P-1	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-19N	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-21P-1 US	0.000	0.00	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-21P-1 DS	0.000	0.00	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-21P	0.000	0.00	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-29P DS	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-29	0.000	1.50	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-30P	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-25P	0.000	0.00	180.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	0.000	0.00
5EXC-27	14.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
5EXC-27P	0.000	0.00	0.00	60.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-17	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
5EXC-17P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
5EXC-25	10.750	0.00	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----

Line Name : xNCW_19 HTR DRN PMP VENT

5EX-30	0.000	1.50	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
5EX-29P DS	0.000	1.50	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
5EX-30P	0.000	1.50	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_200

200-6E	8.625	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
200-6P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
200-13E	8.625	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
200-13P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----

Line Name : xNCW_201

201-6E	8.625	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
201-6P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
201-13E	8.625	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
201-13P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----

Line Name : xNCW_202

202-6E	8.625	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
202-6P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----

202-13E	8.625	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
202-13P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----

Line Name : xNCW_203

203-6E	8.625	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
203-6P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
203-13E	8.625	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
203-13P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----

Line Name : xNCW_204

204-6E	8.625	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
204-6P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
204-13E	8.625	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
204-13P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----

Line Name : xNCW_205

205-5R	4.500	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
205-5P US	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
205-13R	4.500	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
205-13P US	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
205-14P DS	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
205-15T	8.625	0.00	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
205-15P US	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
205-22R	4.500	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
205-22P US	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
205-22P-1	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	0.000 0.00
205-5P-1 DS	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	0.000 0.00
205-23T	8.625	0.00	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
205-23P US	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
205-23P DS	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
205-24T	8.625	0.00	90.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
205-24P US	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----

Line Name : xNCW_206

206-6P	8.625	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	0.000 0.00
206-7E	8.625	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
206-8E	8.625	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
206-8P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
206-16E	8.625	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
206-16P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----

Line Name : xNCW_207

207-1R	2.375	0.00	0.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
207-9R	2.375	0.00	0.00	0.00	665.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----

Line Name : xNCW_208

208-1R	8.625	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
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208-1P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
208-3R	8.625	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	0.00
208-3P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
208-5R	8.625	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	0.00
208-5P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
208-6R	8.625	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	0.00
208-6P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00

Line Name : xNCW_209

209-5P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
209-5E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
209-1E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
209-1P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
209-3E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
209-3P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00

Line Name : xNCW_210

210-3P-1	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
210-3P-2	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
210-3P-3 DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
210-4E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
210-4P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
210-4P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
210-5E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
210-5P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00

Line Name : xNCW_211

211-15P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
211-16E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
211-16P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00

Line Name : xNCW_212

212-1E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
212-1P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
212-2P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
212-3P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00

Line Name : xNCW_213

213-1P	0.000	0.00	0.00	0.00	1440.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
213-3R	6.625	0.00	0.00	0.00	1440.00	450.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	0.00
213-3P	0.000	0.00	0.00	0.00	1440.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
213-4P	0.000	0.00	0.00	0.00	1440.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
213-6R	6.625	0.00	0.00	0.00	1440.00	450.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	0.00
213-6P	0.000	0.00	0.00	0.00	1440.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00

Line Name : xNCW_214

214-23P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
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CSI TECHNOLOGIES, INC.

IP2 CHECWORKS FAC Model

214-12P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
214-25P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
214-26E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
214-27P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_215

22BFPT	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-1P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-7P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-8E	0.000	1.50	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-8P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-6P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-9P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-10E	0.000	1.50	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-10P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-14R	2.375	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
215-15T	2.375	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
215-15P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-18P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-19E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-19P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-20E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-20P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-1P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-2E	0.000	1.50	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
215-2P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_216

216-1E	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
216-4P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
216-5E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
216-5P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
216-6N	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
216-4E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
216-4P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
216-3P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
216-2E	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
216-1P	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
216-1P-1	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
216-2P US	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_217

217-10P	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
217-11R	10.750	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
217-11P	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
217-12E	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
217-12P	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_218

218-7P	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
218-8E	0.000	1.50	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

218-8P	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
218-9R	10.750	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----

Line Name : xNCW_219

219-6E	0.000	1.50	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
219-6P	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
219-7R	10.750	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
219-7P US	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
219-7P DS	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
219-8E	0.000	1.50	90.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
219-8P US	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
219-13P	0.000	1.50	90.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
219-14E	0.000	1.50	90.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
219-14P	0.000	1.50	90.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
219-15N	0.000	1.50	90.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
219-10P DS	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
219-11E	0.000	1.50	90.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
219-11P US	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_21B

4EXD-34	0.000	0.00	0.00	0.00	100.00	400.00	55.57	259.40	0.000	0.000	0.0000	----	----	----	----
4EXD-34P DS	0.000	0.00	0.00	0.00	100.00	400.00	55.57	259.40	0.000	0.000	0.0000	----	----	----	----
4EXD-35	3.500	0.00	0.00	0.00	100.00	400.00	55.57	259.40	0.000	0.000	0.0000	0.0000	----	----	----
4EXD-36	3.500	0.00	0.00	0.00	100.00	400.00	55.57	259.40	0.000	0.000	0.0000	0.0000	----	----	----

Line Name : xNCW_220

220-1P DS	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
220-2E	0.000	1.50	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
220-2P US	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
220-7P	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
220-8E	0.000	1.50	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
220-8P	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
220-9R	10.750	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
220-9P US	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
220-9P DS	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
220-10E	0.000	1.50	90.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
220-10P US	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
220-14E	0.000	1.50	90.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
220-13P DS	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
220-14P US	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_221

221-10P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
221-11E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
221-12E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
221-13P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_222

222-1P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
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224-2P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
224-2P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
224-3E	0.000	1.50	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
224-4P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
224-5N	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
224-7P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
224-12P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
224-7P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
224-8E	0.000	1.50	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
224-9P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
224-10N	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
224-12P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
224-13E	0.000	1.50	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
224-14P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

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224-15N	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
Line Name : xNCW_225															
225-13P	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
225-14R	10.750	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
225-15P US	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
Line Name : xNCW_226															
226-6P	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
226-7R	10.750	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
226-7P US	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
226-9E	0.000	1.50	90.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
226-8P DS	0.000	0.00	90.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
226-9N	0.000	0.00	90.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
226-7P DS	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
226-8E	0.000	1.50	90.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
226-8P US	0.000	0.00	90.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
Line Name : xNCW_227															
227-1P	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
227-2C	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
227-3P	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
227-4E	2.375	1.50	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
227-5P	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
Line Name : xNCW_228															
228-5P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
228-8P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
228-11P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
228-11P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
228-12E	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
228-12P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
228-16E	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
228-16P1 DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
228-17E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
228-17P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
228-15P DS	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
228-16P US	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
Line Name : xNCW_229															
229-2P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
229-3E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
229-3P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
229-4E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
229-5E	0.000	1.50	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
229-6E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
229-9P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
229-6P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
229-10E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

229-10P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
229-10P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
229-11E	0.000	1.50	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
229-11P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_22B

4EXD-53P	0.000	0.00	0.00	0.00	100.00	400.00	55.57	259.40	0.000	0.000	0.0000	----	----	----	----
4EXD-54	0.000	0.00	0.00	0.00	100.00	400.00	55.57	259.40	0.000	0.000	0.0000	----	----	----	----
4EXD-54P	0.000	0.00	0.00	0.00	100.00	400.00	55.57	259.40	0.000	0.000	0.0000	----	----	----	----
4EXD-57	3.500	0.00	0.00	0.00	100.00	400.00	55.57	259.40	0.000	0.000	0.0000	0.0000	----	----	----
4EXD-57P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
4EXD-58	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_230

230-17P	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
230-18P	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
230-19E	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
230-19P	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00

Line Name : xNCW_231

231-2P DS	0.000	0.00	0.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
231-3E	0.000	0.00	0.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
231-3P	0.000	0.00	0.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
231-4E	0.000	0.00	0.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
231-4P US	0.000	0.00	0.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_232

232-1P	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
232-2C	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
232-3R	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
232-4R	2.375	1.50	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
232-5P US	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_233

233-7P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
233-9P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
233-10E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_234

234-2R	8.625	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
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Line Name : xNCW_235

235-3P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
235-4E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
235-5P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

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235-5P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
235-6E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
235-7P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_235308 (GLAND STM)

GS1	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
GS1R	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----

Line Name : xNCW_236

236-2P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
236-6P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
236-8P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
236-11P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00

Line Name : xNCW_237

237-2P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
237-5P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
237-8P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
237-12P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
237-15P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00

Line Name : xNCW_238

238-10P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	-----
238-35P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	-----

Line Name : xNCW_239

239-10P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	-----
239-35P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	-----
239-2P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
239-3E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
239-4P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_23B

4EXD-74	3.500	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
4EXD-78	3.500	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
4EXD-78P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
4EXD-78N	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_240

240-10P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	-----
240-35P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	-----

Line Name : xNCW_241

241-7N	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
241-8C	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
241-9R	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
241-10P	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
241-11E	2.375	1.50	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
241-12P US	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
241-1N	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
241-2C	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
241-3R	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
241-4P US	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
241-4P DS	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
241-5E	2.375	1.50	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
241-6P US	0.000	0.00	0.00	0.00	221.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_245

245-3P	0.000	0.00	90.00	0.00	1440.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	----
245-7P	0.000	0.00	90.00	0.00	1440.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	----
245-11P	0.000	0.00	90.00	0.00	1440.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	----
245-15P	0.000	0.00	90.00	0.00	1440.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	----

Line Name : xNCW_246

246-1N	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
246-2P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
246-3E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
246-4P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
246-5E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
246-6P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
246-6P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
246-7E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
246-8E	0.000	1.50	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
246-17P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
246-18E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
246-19P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
246-21P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
246-22E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
246-23P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_247

247-1N	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
247-2P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_248

248-12P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
248-13T	3.500	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
248-14P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
248-15C	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
248-16P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_249

CSI TECHNOLOGIES, INC.
IP2 CHECWORKS FAC Model

249-25R	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
249-26P	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
249-19R	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
249-20P	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
249-21P DS	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	0.000 0.00
249-28P	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
249-29T	10.750	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----
249-30P US	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----

Line Name : xNCW_24B

3EXD-15	0.000	1.50	90.00	0.00	50.00	300.00	55.26	259.12	0.000	0.000	0.0000	0.0000	----	-----	-----
3EXD-16	6.625	0.00	90.00	0.00	50.00	300.00	55.26	259.12	0.000	0.000	0.0000	0.0000	----	-----	-----
3EXD-16P	0.000	0.00	90.00	0.00	50.00	300.00	55.26	259.12	0.000	0.000	0.0000	0.0000	----	-----	-----
3EXD-17	6.625	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
3EXD-18	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----
3EXD-18P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----

Line Name : xNCW_250

250-17P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	0.000 0.00
250-1P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	0.000 0.00
250-18P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	0.000 0.00
250-18E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
250-21P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----

Line Name : xNCW_251

251-12E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
251-13P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
251-21P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	0.000 0.00
251-22E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
251-23P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----

Line Name : xNCW_252

252-2T	2.375	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
252-3T	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
252-4P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	-----	-----	-----
252-9P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	-----	-----	-----
252-9T	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
252-18P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	-----	-----	-----
252-10P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	-----	-----	-----
252-10T	2.375	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
252-11P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	-----	-----	-----
252-30E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----

Line Name : xNCW_253

253-1N	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
253-2E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
253-3PUS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
253-4P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	-----	-----	0.000 0.00
253-5T	3.500	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----

Line Name : xNCW_254

254-15E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
254-16P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
254-3E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
254-4P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
254-20P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
254-21E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
254-22P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
254-7E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_255

255-14P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
255-14E	0.000	1.50	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
255-15P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
255-15P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
255-16E	0.000	1.50	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
255-17P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
255-20T	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
255-24P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
255-19P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
255-25P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
255-13P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00

Line Name : xNCW_256

256-38E	0.000	0.00	0.00	0.00	1085.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
256-37P DS	0.000	0.00	0.00	0.00	1085.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
256-39P US	0.000	0.00	0.00	0.00	1085.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
256-28P	0.000	0.00	0.00	0.00	1085.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
256-39P DS	0.000	0.00	0.00	0.00	1085.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
256-41P US	0.000	0.00	0.00	0.00	1085.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
256-40T	0.000	0.00	0.00	0.00	1085.00	450.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	----	----

Line Name : xNCW_257

257-7R	2.875	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
257-8P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_258

258-6E	0.000	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
258-5P US	0.000	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_259

259-15E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
259-16P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
259-3E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
259-4P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
259-9E	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

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259-8P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
259-10P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_25B

3EXD-37	6.625	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
3EXD-38	8.625	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
3EXD-38P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	-----	-----	-----
3EXD-34P	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	-----	-----	-----

Line Name : xNCW_260

260-1R	6.625	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
260-2P US	0.000	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	----	-----	-----	-----

Line Name : xNCW_261

261-21P DS	0.000	0.00	0.00	0.00	150.00	225.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
261-14P	0.000	0.00	0.00	0.00	150.00	225.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00

Line Name : xNCW_262

262-17P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
262-18T	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
262-20E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	-----	-----	-----
262-33P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	-----	-----	-----
262-19R	4.500	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----

Line Name : xNCW_263

263-21P DS	0.000	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
263-23P US	0.000	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
263-25P US	0.000	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
263-22T	12.750	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
263-24R	10.750	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
263-14P DS	0.000	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
263-13R	3.500	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
263-12P US	0.000	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
263-19R	3.500	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
263-18P	0.000	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
263-17E	0.000	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
263-6R	3.500	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
263-5P US	0.000	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_264

264-1P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
264-2E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
264-3P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
264-9P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
264-10T	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
264-11P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
264-14P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_265

265-9P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
265-10T	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
265-11P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
265-14P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_266

266-9P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
266-11P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
266-14P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
266-10T	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
266-1P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
266-2E	0.000	1.50	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
266-3P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_267

267-6P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
267-6E1	0.000	1.50	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
267-6T	3.500	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
267-29E	3.500	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
267-30P	3.500	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
267-31R	3.500	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
267-32E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
267-33P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_268

268-10P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
268-16P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
268-12P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
268-11T	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
268-3E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
268-2P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
268-4P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_269

269-2P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
269-4P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
269-3E	0.000	1.50	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
269-10P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
269-12P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
269-16P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
269-11T	1.315	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----

Line Name : xNCW_26B

3EXD-52	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
3EXD-52P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

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3EXD-53	0.000	1.50	90.00	0.00	50.00	300.00	55.26	259.12	0.000	0.000	0.0000	----	----	-----	-----
3EXD-54	6.625	0.00	90.00	0.00	50.00	300.00	55.26	259.12	0.000	0.000	0.0000	0.0000	----	-----	-----
3EXD-55	6.625	0.00	90.00	0.00	50.00	300.00	55.26	259.12	0.000	0.000	0.0000	0.0000	----	-----	-----
3EXD-56	8.625	0.00	90.00	0.00	50.00	300.00	55.26	259.12	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
3EXD-56P US	0.000	0.00	31.00	0.00	50.00	300.00	55.26	259.12	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_270

270-2P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
270-4P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
270-3E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
270-10P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
270-12P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
270-17P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
270-11T	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----

Line Name : xNCW_271

271-17P DS	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
271-18R	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
271-19R	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
271-20P US	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
271-24R	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
271-25P US	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
271-27P US	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
271-26T	10.750	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
271-26P DS	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
271-21P	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_272

272-3P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
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Line Name : xNCW_273

273-9P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
273-10E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
273-1P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
273-7P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
273-8E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
273-9P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_274

274-25P DS	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
274-25N	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
274-1N	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
274-1C	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
274-1P	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_275

275-12P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
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CSI TECHNOLOGIES, INC.

IP2 CHECWORKS FAC Model

275-13E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
275-14N	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
275-10P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
275-11E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
275-12P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
275-8P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
275-9E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
275-10P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_276

276-1N	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
276-1P	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_277

277-22P DS	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
277-23N	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
277-20P DS	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
277-21E	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
277-22P US	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
277-18P DS	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
277-19E	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
277-20P US	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_278

278-1N	0.000	0.00	0.00	0.00	450.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
278-1C	0.000	0.00	0.00	0.00	450.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
278-1P	0.000	0.00	0.00	0.00	450.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
278-1E	0.000	0.00	0.00	0.00	450.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
278-2P	0.000	0.00	0.00	0.00	450.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_279

279-6R	2.375	0.00	0.00	0.00	450.00	220.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
279-6P	0.000	0.00	0.00	0.00	450.00	220.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----

Line Name : xNCW_280

280-8P US	0.000	0.00	0.00	0.00	300.00	420.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	-----
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Line Name : xNCW_281

281-13P DS	0.000	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
281-12E	0.000	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
281-11P US	0.000	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
281-4P	0.000	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
281-3E	0.000	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
281-2P US	0.000	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_282

282-23T	8.625	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----	-----
282-24R	4.500	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----	
282-22P DS	0.000	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----	
282-31P	0.000	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----	

Line Name : xNCW_283

283-7T	6.625	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
283-6P DS	0.000	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
283-8R	4.500	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
283-20R	4.500	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
283-21P US	0.000	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
283-9P US	0.000	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----

Line Name : xNCW_284

284-7R	4.500	0.00	0.00	0.00	300.00	420.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
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Line Name : xNCW_285

285-13P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
285-1B-VCD-XE	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
285-15P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----

Line Name : xNCW_286

286-3P DS	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
286-HV21C-1E	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
286-5P US	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----

Line Name : xNCW_287

287-17P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
287-16E	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----

Line Name : xNCW_288

288-2P DS	0.000	0.00	0.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
288-5EXV-DS-MS21A	0.000	0.00	0.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
288-4P US	0.000	0.00	0.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----

Line Name : xNCW_2R16 Misc Inspections

EST-18	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
FE-419	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	0.000
MST-49	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----

Line Name : xNCW_33B

1A-16P	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	0.0000	0.0000	-----	0.000	0.00
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CSI TECHNOLOGIES, INC.

IP2 CHECWORKS FAC Model

1A-16	0.000	1.50	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
1A-17P US	0.000	0.00	180.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
1A-17P DS	0.000	0.00	180.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
1A-17	0.000	1.50	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
1A-18P-1	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
1A-22R	4.500	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	0.0000	----	----	----
1A-22P	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
1A-21P DS	0.000	0.00	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
1A-22	0.000	0.00	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_34B

2A-16P	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
2A-16	0.000	1.50	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
2A-17P	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
2A-17	0.000	1.50	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
2A-18P	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
2A-21P DS	0.000	0.00	180.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
2A-22	0.000	1.50	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
2A-22P US	0.000	0.00	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
2A-27R	4.500	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	0.0000	----	----	----
2A-27R1	4.500	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	0.0000	----	----	----
2A-28P	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_35B

3A-14P	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
3A-3P1	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
3A-3	0.000	1.50	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
3A-3P US	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
3A-4	0.000	1.50	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
3A-4P	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
3A-5P US	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
3A-5P DS	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
3A-5	0.000	1.50	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
3A-6	0.000	1.50	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
3A-6P	0.000	0.00	180.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
3A-8P DS	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
3A-9	0.000	1.50	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
3A-9P US	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----
3A-12R	4.500	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	0.0000	----	----	----
3A-12P-1	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_36B

1B-16P US	0.000	0.00	180.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
1B-16P DS	0.000	0.00	180.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
1B-16	0.000	0.00	180.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
1B-16P1 US	0.000	0.00	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
1B-20P DS	0.000	0.00	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
1B-21P US	0.000	0.00	180.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
1B-22	0.000	1.50	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
1B-22P	0.000	0.00	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
1B-21	0.000	1.50	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
1B-23	0.000	1.50	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_37B

2B-13P DS	0.000	0.00	0.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
2B-14	0.000	0.00	0.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
2B-15P US	0.000	0.00	0.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
2B-19P-1 DS	0.000	0.00	0.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
2B-19	0.000	1.50	0.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
2B-20P-1 US	0.000	0.00	0.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
2B-20P-1 DS	0.000	0.00	180.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	-----	-----
2B-20	0.000	1.50	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	-----	-----
2B-20P US	0.000	0.00	90.00	0.00	202.00	389.00	207.40	380.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_38B

3B-21P DS	0.000	0.00	90.00	0.00	202.00	389.00	0.00	0.00	365.000	0.000	0.0000	----	----	-----	-----
3B-22	0.000	1.50	90.00	0.00	202.00	389.00	0.00	0.00	365.000	0.000	0.0000	----	----	-----	-----
3B-22P US	0.000	0.00	180.00	0.00	202.00	389.00	0.00	0.00	365.000	0.000	0.0000	----	----	-----	-----
3B-22P DS	0.000	0.00	90.00	0.00	202.00	389.00	0.00	0.00	365.000	0.000	0.0000	----	----	-----	-----
3B-23	0.000	1.50	90.00	0.00	202.00	389.00	0.00	0.00	365.000	0.000	0.0000	----	----	-----	-----
3B-23P US	0.000	0.00	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
3B-17P DS	0.000	1.50	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
3B-18	0.000	1.50	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
3B-19	0.000	1.50	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
3B-19P US	0.000	1.50	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
3B-24P	0.000	0.00	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
3B-24N	0.000	0.00	90.00	0.00	202.00	389.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_39

MS-1A3P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
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Line Name : xNCW_42

MS-1B2	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MS-1B2P DS	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MS-1B3P US	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_44

MS-3B4	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MS-3B4P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_45B

MS-1A25R	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	1198.680	0.000	0.0000	0.0000	----	-----	-----
MS-1A33	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	1198.680	0.000	0.0000	-----	----	-----	-----
MS-1A33P US	0.000	0.00	0.00	0.00	1085.00	600.00	541.60	0.00	1198.680	0.000	0.0000	-----	----	-----	-----
MS-1A33P DS	0.000	0.00	0.00	0.00	1085.00	600.00	541.60	0.00	1198.680	0.000	0.0000	-----	----	-----	-----
MS-1A34	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	0.00	1198.680	0.000	0.0000	-----	----	-----	-----
MS-1A34P-2	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	1198.680	0.000	0.0000	-----	----	-----	-----
MS-1A34R-1	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	1198.680	0.000	0.0000	0.0000	----	-----	-----
MS-1A34R-2	6.625	0.00	90.00	0.00	1085.00	600.00	-13.70	0.00	1198.680	0.000	0.0000	0.0000	----	-----	-----
MS-1A34P-1	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	-----	----	0.000	0.00

Line Name : xNCW_46B

MS-2A26P	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A26	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A26P-1 US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A26P-1 DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A27	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A27P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A27P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A28	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A28P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A29	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A29P	0.000	0.00	0.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A30	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A30P US	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A30P DS	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A31	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A31P	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A32	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A32P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A32R	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	0.0000	----	----	----
MS-2A33R	6.625	0.00	90.00	0.00	1085.00	600.00	-13.70	478.00	0.000	0.000	0.0000	0.0000	----	----	----
MS-2A33	0.000	0.00	90.00	0.00	1085.00	600.00	-13.70	478.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
MS-2A33P	0.000	0.00	180.00	0.00	1085.00	600.00	-13.70	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A34	0.000	0.00	180.00	0.00	1085.00	600.00	-13.70	478.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
MS-2A34P	0.000	0.00	90.00	0.00	1085.00	600.00	-13.70	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2A34N	0.000	0.00	90.00	0.00	1085.00	600.00	-13.70	478.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_47

MS-3A28R	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.0000	0.0000	----	----	----
MS-3A28	0.000	0.00	90.00	0.00	50.00	300.00	541.60	0.00	462.300	0.000	0.0000	0.0000	0.0000	----	----
MS-3A29	0.000	0.00	90.00	0.00	50.00	300.00	541.60	0.00	462.300	0.000	0.0000	0.0000	0.0000	----	----
MS-3A29P	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
MS-3A30N	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_48A

MS-1B41P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.0000	----	----	----	----
MS-1B42P	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
MS-1B41R	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	0.00	462.300	0.000	0.0000	0.0000	----	----	----

Line Name : xNCW_49B

MS-2B27P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2B56	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2B56P	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	----	----	----	----
MS-2B62P	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
MS-2B62R	6.625	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	0.0000	----	----	----
MS-2B61	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_50B

MS-3B44P1	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
MS-3B44R	6.625	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
MS-3B44P	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00

Line Name : xNCW_55A

BD3-13P	0.000	0.00	90.00	0.00	1085.00	600.00	665.30	499.00	0.000	0.000	0.0000	----	----	----	----
BD3-20	0.000	1.50	90.00	0.00	1085.00	600.00	665.30	499.00	0.000	0.000	0.0000	----	----	----	----
BD3-20P	0.000	0.00	0.00	0.00	1085.00	600.00	665.30	499.00	0.000	0.000	0.0000	----	----	0.000	0.00
BD3-21	0.000	1.50	0.00	0.00	1085.00	600.00	665.30	499.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_55B

BD3-21P	0.000	0.00	90.00	0.00	1085.00	600.00	665.30	499.00	0.000	0.000	0.0000	----	----	----	----
BD3-22	0.000	1.50	90.00	0.00	1085.00	600.00	665.30	499.00	0.000	0.000	0.0000	----	----	----	----
BD3-22P	0.000	0.00	0.00	0.00	1085.00	600.00	665.30	499.00	0.000	0.000	0.0000	----	----	----	----
BD3-23	0.000	1.50	90.00	0.00	1085.00	600.00	665.30	499.00	0.000	0.000	0.0000	----	----	----	----
BD3-23P	0.000	0.00	90.00	0.00	1085.00	600.00	665.30	499.00	0.000	0.000	0.0000	----	----	----	----
BD3-24	0.000	1.50	90.00	0.00	1085.00	600.00	665.30	499.00	0.000	0.000	0.0000	----	----	----	----
BD3-24P	0.000	0.00	0.00	0.00	1085.00	600.00	665.30	499.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_55C

BD3-47	0.000	0.00	90.00	0.00	1085.00	600.00	665.30	499.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
BD3-51R	1.900	0.00	90.00	0.00	1085.00	600.00	665.30	499.00	0.000	0.000	0.0000	0.0000	----	----	
BD3-52	0.000	1.50	90.00	0.00	1085.00	600.00	665.30	499.00	0.000	0.000	0.0000	----	----	----	
BD3-52P	0.000	0.00	90.00	0.00	1085.00	600.00	665.30	499.00	0.000	0.000	0.0000	----	----	----	
BD3-53P	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	
BD3-53R	1.900	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	
BD3-50	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	----	
BD3-50P US	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	
BD3-50P-1 DS	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	
BD3-49P-1	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	

Line Name : xNCW_56_CROSSUNDER (A)

5EX-49N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	----	----
5EX-49P1	0.000	0.00	180.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	----	----
5EX-49	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	----	----
5EX-49P2	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	----	----
5EX-52	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	----	----
5EX-52P	0.000	0.00	61.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	----	----
5EX-53	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	----	----
5EX-53R	33.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	2.6870	----	----	----
5EX-53P	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	----	----
5EX-50N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	----	----
5EX-50P1	0.000	0.00	180.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	----	----
5EX-50	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	----	----
5EX-50P2	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	----	----
5EX-62	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	----	----
5EX-50P3	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	----	----
5EX-51	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	----	----
5EX-51P	0.000	0.00	61.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	----	----
5EX-54	33.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	5.3740	2.6870	----	----
5EX-54P	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	5.3740	----	----	----	----

5EX-55	27.500	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	5.3740	3.5826	1.7913	-----	-----
5EX-55P	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-56	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-56P	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-56N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-55R	38.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	3.5826	3.5826	----	-----	-----
5EX-55P-1	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	3.5826	----	----	-----	-----
5EX-57	27.500	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	3.5826	1.7913	1.7913	-----	-----
5EX-57P1	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-58	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-58P	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-58N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-57R	27.500	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	1.7913	----	-----	-----
5EX-57P2	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-59	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-59P1	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-59P	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-59P2	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-60	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-60P	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-60N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----

Line Name : xNCW_57_CROSSUNDER (B)

5EX-37N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-37P1	0.000	0.00	180.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-37	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-37P2	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-40	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-40P	0.000	0.00	61.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-41	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-41R	33.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	2.6870	----	-----	-----
5EX-38N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-38P	0.000	0.00	180.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-38	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-61P1	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-61	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-61P2	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-39	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-39P	0.000	0.00	61.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	----	----	-----	-----
5EX-42	33.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	2.6870	5.3740	2.6870	-----	-----
5EX-41P	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	5.3740	----	----	-----	-----
5EX-43	27.500	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	5.3740	3.5826	1.7913	-----	-----
5EX-43P	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-44	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-44P	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-44N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-43R	38.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	3.5826	3.5826	----	-----	-----
5EX-43P1	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	3.5826	----	----	-----	-----
5EX-45	27.500	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	3.5826	1.7913	1.7913	-----	-----
5EX-45P	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-46	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-46P	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-46N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-45R	27.500	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	1.7913	----	-----	-----
5EX-47P2	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-47	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----
5EX-47P1	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	-----	-----

5EX-47P	0.000	0.00	71.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	----	----
5EX-48	0.000	1.50	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	----	----
5EX-48P	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	----	----
5EX-48N	0.000	0.00	90.00	0.00	221.00	400.00	210.80	0.00	1137.900	0.000	1.7913	----	----	----	----

Line Name : xNCW_65A

1A-VCD34	2.375	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	0.0000	----	----	----
1A-VCD1	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	----	----	----	----
1A-VCD1P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	----	----	----	----
1A-VCD2	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	----	----	----	----
1A-VCD4P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	----	----	----	----
1A-VCD13	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
1A-VCD15	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
1A-VCD15P	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_65B

1A-VCD32P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
1A-VCD33	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
1A-VCD33P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
1A-VCD23	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
1A-VCD28	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
1A-VCD27P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
1A-VCD28P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_66A

2A-VCD35	2.375	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	0.0000	----	----	----
2A-VCD1	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	----	----	----	----
2A-VCD1P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	----	----	----	----
2A-VCD2	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	----	----	----	----
2A-VCD3P	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	----	----	----	----
2A-VCD2P	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	----	----	----	----
2A-VCD4	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	----	----	----	----
2A-VCD4P	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	----	----	----	----
2A-VCD7	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
2A-VCD8	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
2A-VCD14	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
2A-VCD20	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
2A-VCD10	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
2A-VCD36P	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
2A-VCD36	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
2A-VCD36P-1 US	0.000	0.00	180.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
2A-VCD41P DS	0.000	0.00	180.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
2A-VCD42	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_66B

2A-VCD23	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
2A-VCD26P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
2A-VCD27	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
2A-VCD27P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
2A-VCD33P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
2A-VCD34P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

2A-VCD34	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
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Line Name : xNCW_67A

3A-VCD30	2.375	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	0.0000	----	-----	-----
3A-VCD1P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000		----	-----	-----
3A-VCD1	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000		----	-----	-----
3A-VCD1P-1 US	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000		----	-----	-----
3A-VCD2	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000		----	-----	-----
3A-VCD2P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000		----	-----	-----
3A-VCD7	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000		----	-----	-----
3A-VCD7P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000		----	-----	-----
3A-VCD9	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000		----	-----	-----
3A-VCD16	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000		----	-----	-----

Line Name : xNCW_67B

3A-VCD16	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
3A-VCD18P	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
3A-VCD21P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000		----	-----	-----
3A-VCD22	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000		----	-----	-----
3A-VCD22P	0.000	0.00	0.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000		----	-----	-----
3A-VCD28	0.000	1.50	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000		----	-----	-----
3A-VCD28P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000		----	-----	-----
3A-VCD29	0.000	1.50	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000		----	-----	-----
3A-VCD29P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000		----	-----	-----

Line Name : xNCW_68A

1B-VCD33	2.375	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	0.0000	----	-----	-----
1B-VCD1	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000		----	-----	-----
1B-VCD1P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000		----	-----	-----
1B-VCD2	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000		----	-----	-----
1B-VCD2P	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000		----	-----	-----
1B-VCD5	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000		----	-----	-----
1B-VCD11	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000		----	-----	-----
1B-VCD16P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000		----	-----	0.000 0.00
1B-VCD17	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000		----	-----	-----
1B-VCD17P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000		----	-----	0.000 0.00
1B-VCD4	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
1B-VCD4P US	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000		-----	-----	-----
1B-VCD3P DS	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000		-----	-----	0.000 0.00
1B-VCD18P	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000		-----	-----	0.000 0.00
1B-VCD19E	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000		-----	-----	-----
1B-VCD19P US	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000		-----	-----	-----

Line Name : xNCW_68B

1B-VCD19P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1B-VCD20	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1B-VCD20P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1B-VCD21	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1B-VCD-22P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1B-VCD-23	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1B-VCD-23P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

1B-VCD19	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1B-VCD19P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1B-VCD18P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1B-VCD32	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_69A

2B-VCD38	2.375	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD1	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD1P	0.000	0.00	135.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD2	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD2P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD8E	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD8P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	0.000	0.000	0.0000	0.0000	----	----	0.000	0.00
2B-VCD7P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD8P-2 US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD8	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----	-----
2B-VCD9	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD39P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	0.000	0.00
2B-VCD39	0.000	1.50	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----

Line Name : xNCW_69B

2B-VCD22P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD23	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD23P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD25P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD26	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD26P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD21P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD22	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD22P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
2B-VCD31	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----

Line Name : xNCW_70A

3B-VCD35	2.375	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	0.0000	----	----	-----	-----
3B-VCD1P	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	0.0000	----	----	-----	-----
3B-VCD2	0.000	1.50	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	0.0000	----	----	-----	-----
3B-VCD2P	0.000	0.00	180.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	0.0000	----	----	-----	-----
3B-VCD7P	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	0.000	0.00
3B-VCD7P2	0.000	0.00	90.00	0.00	1085.00	600.00	541.60	478.00	1128.000	0.000	0.0000	0.0000	----	----	0.000	0.00
3B-VCD7	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----	-----
3B-VCD7P1	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	0.000	0.00
3B-VCD6P1 DS	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
3B-VCD11	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
3B-VCD16P DS	0.000	0.00	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
3B-VCD17E	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----

Line Name : xNCW_70B

3B-VCD33P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
3B-VCD34	0.000	1.50	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
3B-VCD34P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
3B-VCD19P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----

3B-VCD20	0.000	1.50	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
3B-VCD20P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
3B-VCD26	0.000	1.50	90.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
3B-VCD28P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
3B-VCD29	0.000	1.50	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
3B-VCD29P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
3B-VCD29P DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
3B-VCD30	0.000	1.50	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
3B-VCD-30P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
3B-VCD17P	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
3B-VCD18	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
3B-VCD18P US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_74

BFD-46	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	0.0000	----	----	----	----
BFD-65A	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	0.0000	----	----	----	----
BFD-65Q	0.000	1.50	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	0.0000	----	----	----	----
BFD-65Q1	0.000	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	0.0000	----	----	----	----
EXNOZ_C	6.625	0.00	90.00	0.00	1440.00	450.00	1127.30	388.40	0.000	0.000	0.0000	0.0000	0.0000	----	----

Line Name : xNCW_79A

3EX-TELO1P	0.000	0.00	90.00	0.00	50.00	300.00	15.70	251.00	0.000	0.000	0.0000	----	----	----	----
3EX-TELO1	0.000	1.50	90.00	0.00	50.00	300.00	15.70	251.00	0.000	0.000	0.0000	----	----	----	----
3EX-TELO1R	3.500	0.00	90.00	0.00	50.00	300.00	15.70	251.00	0.000	0.000	0.0000	0.0000	----	----	----
3EX-TELO2	0.000	1.50	90.00	0.00	50.00	300.00	15.70	251.00	0.000	0.000	0.0000	----	----	----	----
3EX-TELO2P	0.000	0.00	0.00	0.00	50.00	300.00	15.70	251.00	0.000	0.000	0.0000	----	----	----	----
3EX-TELO9P	0.000	0.00	90.00	0.00	50.00	300.00	15.70	251.00	0.000	0.000	0.0000	----	----	----	----
3EX-TELO9	0.000	1.50	90.00	0.00	50.00	300.00	15.70	251.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_79B

3EX-TELO-23P DS	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
3EX-TELO-24	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
3EX-TELO-25P US	0.000	0.00	90.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_83

CD-85P	0.000	0.00	0.00	0.00	665.00	400.00	460.00	386.40	0.000	0.000	6.6315	----	----	----	----
CD-86P	0.000	0.00	0.00	0.00	665.00	400.00	460.00	386.40	0.000	0.000	6.6315	----	----	----	----
CD-87E	0.000	0.00	0.00	0.00	665.00	400.00	460.00	386.40	0.000	0.000	6.6315	----	----	----	----
CD-88P US	0.000	0.00	0.00	0.00	665.00	400.00	460.00	386.40	0.000	0.000	6.6315	----	----	----	----

Line Name : xNCW_85

GCD-1P	0.000	0.00	90.00	0.00	665.00	400.00	-13.70	210.00	0.000	0.000	0.0000	----	----	0.000	0.00
GCD-2	0.000	0.00	90.00	0.00	665.00	400.00	-13.70	210.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
GCD-2P US	0.000	0.00	0.00	0.00	665.00	400.00	-13.70	210.00	0.000	0.000	0.0000	----	----	----	----
GCD-2P DS	0.000	0.00	0.00	0.00	665.00	400.00	-13.70	210.00	0.000	0.000	0.0000	----	----	----	----
GCD-3	0.000	1.50	0.00	0.00	665.00	400.00	-13.70	210.00	0.000	0.000	0.0000	----	----	----	----
GCD-3P	0.000	0.00	90.00	0.00	665.00	400.00	-13.70	210.00	0.000	0.000	0.0000	----	----	----	----
GCD-4	0.000	1.50	90.00	0.00	665.00	400.00	-13.70	210.00	0.000	0.000	0.0000	----	----	----	----
GCD-4P	0.000	0.00	90.00	0.00	665.00	400.00	-13.70	210.00	0.000	0.000	0.0000	----	----	----	----

GCD-5	0.000	0.00	90.00	0.00	665.00	400.00	-13.70	210.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
GCD-5P	0.000	0.00	90.00	0.00	665.00	400.00	-13.70	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
GCD-12P	0.000	0.00	90.00	0.00	665.00	400.00	-13.70	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
GCD-14	0.000	1.50	0.00	0.00	665.00	400.00	-13.70	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
GCD-14P	0.000	0.00	90.00	0.00	665.00	400.00	-13.70	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
GCD-16	0.000	1.50	90.00	0.00	665.00	400.00	-13.70	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
GCD-15P	0.000	0.00	90.00	0.00	665.00	400.00	-13.70	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
GCD-16P	0.000	0.00	90.00	0.00	665.00	400.00	-13.70	210.00	0.000	0.000	0.0000	-----	-----	-----	-----

Line Name : xNCW_86

UH-3P	0.000	0.00	0.00	0.00	35.00	260.00	5.00	226.00	0.000	0.000	0.0000	-----	-----	-----	-----
UH-4	0.000	1.50	90.00	0.00	35.00	260.00	5.00	226.00	0.000	0.000	0.0000	-----	-----	-----	-----
UH-4P	0.000	0.00	90.00	0.00	35.00	260.00	5.00	226.00	0.000	0.000	0.0000	-----	-----	-----	-----
UH-4P-1	0.000	0.00	90.00	0.00	35.00	260.00	5.00	226.00	0.000	0.000	0.0000	-----	-----	0.000	0.00
UH-5	0.000	1.50	90.00	0.00	35.00	260.00	5.00	226.00	0.000	0.000	0.0000	-----	-----	-----	-----
UH-5P	0.000	0.00	90.00	0.00	35.00	260.00	5.00	226.00	0.000	0.000	0.0000	-----	-----	-----	-----
UH-6	0.000	1.50	90.00	0.00	35.00	260.00	5.00	226.00	0.000	0.000	0.0000	-----	-----	-----	-----
UH-6P	0.000	0.00	90.00	0.00	35.00	260.00	5.00	226.00	0.000	0.000	0.0000	-----	-----	-----	-----

Line Name : xNCW_86A

UH-10A	2.375	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
UH-10B	0.000	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	-----	-----	-----	-----

Line Name : xNCW_87

MST-10P	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-11	0.000	1.50	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-10	0.000	1.50	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-9P	0.000	0.00	135.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-9	4.500	1.50	135.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	0.0000	-----	-----	-----
MST-8P	0.000	0.00	135.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-8	0.000	1.50	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-7P US	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-7P DS	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-7	0.000	1.50	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-6P US	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-6P DS	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-6	0.000	1.50	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-5P US	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-5P DS	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-5	0.000	1.50	180.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-4P	0.000	0.00	180.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-4	6.625	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	0.0000	-----	-----	-----
MST-3P	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-3	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-2P	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-2	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	0.0000	-----	-----	-----
MST-1P	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-1	6.625	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
MST-1P-1 DS	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----
MST-1N	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	-----	-----	-----	-----

Line Name : xNCW_88

MST-16P	0.000	0.00	180.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-16	0.000	1.50	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-15P	0.000	0.00	180.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-15	0.000	1.50	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-14P	0.000	0.00	180.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-14	0.000	1.50	180.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-13P	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-13	0.000	1.50	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-12P	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-12	0.000	1.50	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-11P	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_89

MST-39P	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-39	0.000	1.50	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-38P	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-38	0.000	1.50	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-37P	0.000	0.00	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-37	0.000	1.50	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-36P	0.000	0.00	180.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-36	0.000	1.50	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-31	0.000	1.50	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-28P	0.000	0.00	180.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-28	0.000	1.50	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-27P	0.000	0.00	180.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
MST-27	0.000	1.50	90.00	0.00	1085.00	600.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_90

EST-1T	4.500	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
EST-1P-1	0.000	0.00	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_91

EST-33R	1.050	0.00	0.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	0.0000	----	----	----
EST-33	2.375	1.50	0.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	0.0000	----	----	----
EST-32	0.000	1.50	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-31P-1	0.000	0.00	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-31P US	0.000	0.00	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-31P DS	0.000	0.00	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-31T	0.000	1.50	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
EST-31	0.000	1.50	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-30P US	0.000	0.00	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-30P DS	0.000	0.00	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-30B	0.000	1.50	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-30AP	0.000	1.50	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-30A	0.000	1.50	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-29P	0.000	0.00	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-25	0.000	1.50	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-24P	0.000	0.00	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-24	0.000	1.50	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-23P	0.000	0.00	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-22P	0.000	0.00	180.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-22	0.000	1.50	180.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----

EST-21P US	0.000	0.00	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-21P DS	0.000	0.00	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-21	0.000	1.50	180.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-20P US	0.000	0.00	90.00	0.00	450.00	450.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-15	0.000	1.50	180.00	0.00	50.00	300.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-14P	0.000	1.50	0.00	0.00	50.00	300.00	10.00	210.00	0.000	0.000	0.0000	----	----	----	----
EST-14	0.000	1.50	0.00	0.00	50.00	300.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_9321-F-2027 Aux Steam

CONDR24-US Pipe	0.000	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
CONDR24-Elbow	0.000	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_9321-F-2586 Aux Steam

AS-DS-PCV-1250	3.500	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----
AS-DS Valve UH-64	0.000	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
AS-US PCV-1251	6.625	0.00	0.00	0.00	35.00	260.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	----

Line Name : xNCW_Extraction Steam Traps

EST2-Pipe 1	0.000	0.00	0.00	0.00	450.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST2-Elbow 1	0.000	0.00	0.00	0.00	450.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST2-Pipe 2 US	0.000	0.00	0.00	0.00	450.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST2-Pipe 2 DS	0.000	0.00	0.00	0.00	450.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST2-Pipe 3	0.000	0.00	0.00	0.00	450.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST2-Tee 1	1.050	0.00	0.00	0.00	450.00	450.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
EST2-Pipe 4	0.000	0.00	0.00	0.00	450.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST2-Pipe 5	0.000	0.00	0.00	0.00	450.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST2-Elbow2	0.000	0.00	0.00	0.00	450.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST2-Pipe 6	0.000	0.00	0.00	0.00	450.00	450.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST4-Pipe 1	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST4-Elbow 1	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST4-Pipe 2 US	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST4-Pipe 2 DS	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST4-Tee 1	1.050	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
EST4-Pipe 3	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST4-Pipe 4	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST4-Elbow 2	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST4-Pipe 5	0.000	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST5-Pipe 1	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST5-Elbow 1	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST5-Pipe 2 US	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST5-Pipe 2 DS	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST5-Tee 1	1.050	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	----	----
EST5-Pipe 3	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST5-Pipe 4	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST5-Elbow 2	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
EST5-Pipe 5	0.000	0.00	0.00	0.00	100.00	400.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

Line Name : xNCW_FEEDWATER HEATER SHELLS

FWH-23B-1	0.000	0.00	0.00	0.00	32.20	205.90	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
FWH-24A	0.000	0.00	0.00	0.00	100.00	325.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----
FWH-24B	0.000	0.00	0.00	0.00	100.00	325.00	0.00	0.00	0.000	0.000	0.0000	----	----	----	----

FWH-24C	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
FWH-25A	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
FWH-25C	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
FWH-26A	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
FWH-26C	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
FWH-23B-2	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_FWH 21&22 Nozzles

[illegible]

Line Name : xNCW_Main Steam Traps

MST24-Pipe 1	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MST24-Elbow 1	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MST24-Pipe 2 US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MST24-Pipe 2 DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MST24-Elbow 2	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MST24-Pipe 3 US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MST24-Pipe 3 DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MST24-Tee 1	1.315	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	-----	-----
MST24-Pipe 4	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
DS Valve MS-100-2	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
MST27-Pipe 1	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MST27-Elbow 1	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MST27-Pipe 2 US	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MST27-Pipe 2 DS	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MST27-Elbow 2	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_MICRO GRIDS

IPEC00024608

3EXC-12R MICRO	24.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
3EXA-13R MICRO	24.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
3EXA-13R MICRO1	24.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
3EXA-13R MICRO2	24.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
3EXA-13R MICRO3	24.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
3EXA-13R MICRO4	24.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
3EXA-13R MICRO5	24.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
3EXA-13R MICRO6	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
8-6EX-20A MICRO1	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
7-5EX-4 MICRO1	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
7-5EX-15 MICRO1	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
7-5EX-15 MICRO2	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1-3EXA-11R MICRO A	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1-3EXA-11R MICRO B	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1-3EXA-11R MICRO C	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1-3EXA-11R MICRO D	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1-3EXA-11RP MICRO1	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1-3EXA-11RP MICRO2	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1-3EXA-11RP MICRO3	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1-3EXA-11RP MICRO4	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1-3EXA-11RP MICRO5	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
1-3EXA-11RP MICRO6	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
8-6EX-20A (100% SCAN)	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
3-3EXC-3P MICRO1	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
3-3EXC-3P MICRO2	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
6-4EXC-15 MICRO1	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
6-4EXC-15 MICRO2	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
6-4EXC-15 MICRO3	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
4-EXB-14P M1	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
4-EXB-14P M2	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
4-EXB-14P M9	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
4-EXB-9P MA	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00
MS23-1 DS	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
MS21-1 DS	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Line Name : xNCW_MOPS DRAIN_A

MPSD2	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
MPSD8	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
MPSD9	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	0.000	0.00
MPSD10	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----	-----
MPSD11	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
MPSD12	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----

Line Name : xNCW_MOPS DRAIN_B

MPSD1	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
MPSD3	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
MPSD4	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	0.000	0.00
MPSD5	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	0.0000	0.0000	-----	-----
MPSD6	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
MPSD7	6.625	0.00	0.00	0.00	250.00	400.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----

Line Name : xNCW_P&ID_227780

COMP1	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	----	-----	-----
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CSI TECHNOLOGIES, INC.

IP2 CHECWORKS FAC Model

COMP2	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
COMP3	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
COMP4	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
COMP5	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
COMP7	0.000	0.00	0.00	0.00	1085.00	600.00	0.00	0.00	0.000	0.000	0.0000	----	----	0.000	0.00

Line Name : xNCW_P&ID_9321-F-2120

DS of Valve AF138	2.375	0.00	0.00	0.00	450.00	220.00	0.00	0.00	0.000	0.000	0.0000	0.0000	----	-----	-----
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Line Name : xNCW_P&ID_9321-F-2729

SGBTV-2E	0.000	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----
SGBTV-2E US Pipe	0.000	0.00	0.00	0.00	100.00	350.00	0.00	0.00	0.000	0.000	0.0000	----	----	-----	-----

Company: ENTERGY NUCLEAR NORTHEAST
 Plant: INDIAN POINT
 Unit: 2
 DB Name: IP2

Report Date: 02-MAY-2005 Time: 14:10:01
 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	Spec/Type/Class	No.	Cr. (%)	Cu. (%)	Mo. (%)	Sigma (psi)	OD (in)	Sch.	Pipe Size Tnom (in)	Tinit (in)	Tcrit (in)
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Line Name : CD80-1-FWH 23A to FWH 24A

CD-11N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-11	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-12	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-12P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-1	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-1P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-2P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-17	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-17P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-5	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-5P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-41	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-41N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305

Line Name : CD80-2-FWH 23B to FWH 24B

CD-14N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-14	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-13	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-13P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-3	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-4	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-4P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-19	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-19P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-42	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-42N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305

Line Name : CD80-3-FWH 23C to FWH 24C

CD-16N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-16	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305

CD-15	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-15P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-39	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-40	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-40P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-22	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-22P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-43	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-43N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305

Line Name : CD80A-1-FWH 22A to HEADER

CD-101N	EXIT NOZZLE	31	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-101P	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-102	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-102P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-VALVE-CD-8	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	14.000	40	0.438	0.000	0.326
CD-103	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-104	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-104P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-105	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-105P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-106	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-106P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-107P	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-107	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	40	0.594	0.000	0.436

Line Name : CD80A-2-FWH 22B to HEADER

CD-108N	EXIT NOZZLE	31	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-108P	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-109	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-109P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-110	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-111	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-VALVE-CD-8-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	14.000	40	0.438	0.000	0.326
CD-111P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-112	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-112P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305

Line Name : CD80A-3-FWH 22C to HEADER

CD-113N	EXIT NOZZLE	31	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-113P	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-114	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-114P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-115	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-116	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-116P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-VALVE-CD-8-2	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	14.000	40	0.438	0.000	0.326
CD-116P-1	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-117	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-117P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305

Line Name : CD80A-4-FWH 22 OUTLET HEADER

CD-118T	TEE	12	A106/B/	5	0.00	0.00	0.00	15000.0	20.000	40	0.594	0.000	0.436
CD-118P	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	20.000	40	0.594	0.000	0.436
CD-119P	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	20.000	40	0.594	0.000	0.436
CD-120	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523

Line Name : CD80A-5-FWH 22 to FWH 23 HEAD

CD-121	TEE	12	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-121P	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-122	TEE	15	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-122P	STRAIGHT PIPE	65	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-123	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-124	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-124P	STRAIGHT PIPE	53	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-125	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-125P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-126	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-126P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-127P	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-128	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-128P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-129	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-129P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-130	TEE	14	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-130P	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-131	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-VALVE-CD-1110	BUTTERFLY VALVE	23	A216/WCB/	93	0.00	0.00	0.00	14000.0	20.000	40	0.594	0.000	0.466
CD-131P-1	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	20.000	40	0.594	0.000	0.436
CD-132	90-DEG EXP. ELBOW	19	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-132P	STRAIGHT PIPE	69	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-133	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-134	TEE	12	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-135	TEE	14	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523

Line Name : CD80A-6-FWH 23 INLET HEADER

CD-136	TEE	15	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-136P	STRAIGHT PIPE	65	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-137	TEE	14	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523

Line Name : CD80A-7-HEADER to FWH 23A

CD-137P	STRAIGHT PIPE	64	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-138	TEE	14	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-138P	STRAIGHT PIPE	64	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-139	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-139P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-VALVE-CD-16	GATE VALVE	22	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-140	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-140P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-141	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-141N	INLET NOZZLE	30	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305

Line Name : CD80A-8-HEADER to FWH 23B

CD-141P	STRAIGHT PIPE	64	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-142	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-142P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-VALVE-CD-16-1	GATE VALVE	22	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-143	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-143P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-144	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-144N	INLET NOZZLE	30	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305

Line Name : CD80A-9-HEADER to FWH 23C

CD-144P	STRAIGHT PIPE	64	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-145	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-145P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-VALVE-CD-16-2	GATE VALVE	22	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-146	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-146P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-147	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-147N	INLET NOZZLE	30	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305

Line Name : CD81-1-FWH 24A to FWH 25A

CD-37N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-37	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-18	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-18P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-46	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-46P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-47	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-47P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-48	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-48P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-28	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-28P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-56	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-56N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305

Line Name : CD81-2-FWH 24B to FWH 25B

CD-21N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-21	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-20	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-20P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-49	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-50	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-50P	STRAIGHT PIPE	53	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-51	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-51P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-52	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-52P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-57	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-29	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-29P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-44	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-44N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305

Line Name : CD81-3-FWH 24C to FWH 25C

CD-24N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-24	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-23	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-23P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-53	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-53P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-54	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-54P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-55	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-55P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-30	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-30P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-45	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-45N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305

Line Name : CD82-1-FWH 25A to HDR

CD-32N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-32	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-31	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-31P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-VALVE-CD-18	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	14.000	40	0.438	0.000	0.326
CD-31P-1 US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-31P-1 DS	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-60	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-60P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-61	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-61P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-61R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523

Line Name : CD82-2-FWH 25B to HDR

CD-34N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-34	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-33	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-33P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-VALVE-CD-18-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	14.000	40	0.438	0.000	0.326
CD-33P-1 US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-33P-1 DS	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-62	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-62P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305

Line Name : CD82-3-FWH 25C to HDR

CD-36N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-36	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-35	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-35P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-VALVE-CD-18-2	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	14.000	40	0.438	0.000	0.326
CD-35P-1	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-63	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
CD-58	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305

CD-58P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	14.000	40	0.438	0.000	0.305
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Line Name : CD82-4-HDR 25BT to 25CT

CD-62T	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-62P-1	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523

Line Name : CD82-5-HDR 25CT to HDP OUT

CD-59T	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-59	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-59P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-80T	TEE	12	A155/KCF70/1	13	0.00	0.00	0.00	17500.0	30.000	SPE	0.626	0.000	0.561

Line Name : CD83-1-HDR HDP to BFP21T

CD-81T	TEE	12	A155/KCF70/1	13	0.00	0.00	0.00	17500.0	30.000	SPE	0.626	0.000	0.561
CD-82T	TEE	14	A155/KCF70/1	13	0.00	0.00	0.00	17500.0	30.000	SPE	0.626	0.000	0.561

Line Name : CD83-2-HDR to BFP21

CD-9P	STRAIGHT PIPE	64	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-9	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-66P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-66	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-67P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-67	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-VALVE-CD-21	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	24.000	40	0.688	0.000	0.559
CD-68P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-68	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-69P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-69	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-70P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-70	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-71P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-71	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-38P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-38	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-8P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-8	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-72	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-72P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-72P DS	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-72FE	ORIFICE	6	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-72P-1 US	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-72P-1 DS	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-73	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-73P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-7	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-7P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-74	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-64	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-64P	STRAIGHT PIPE	53	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-65	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-65P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523

CD-65R	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-65N	INLET NOZZLE	30	A106/B/	5	0.00	0.00	0.00	15000.0	18.000	40	0.562	0.000	0.392

Line Name : CD83-3-HDR to BFP22

CD-82R	CON. REDUCER	7	A234/WPB/	22	0.00	0.00	0.00	17500.0	30.000	SPE	0.626	0.000	0.561
CD-82P US	STRAIGHT PIPE	57	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-83T	TEE	15	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-84T	TEE	12	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-84 C	STRAIGHT PIPE	62	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-VALVE-CD-21-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	24.000	40	0.688	0.000	0.559
CD-6	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-76P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-76FE	ORIFICE	6	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-76P DS	STRAIGHT PIPE	56	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-76	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-10P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-10	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-75P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-75	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-75P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-75R	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	40	0.688	0.000	0.523
CD-75N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	40	0.562	0.000	0.392

Line Name : ES1-1-3RDPT ES to FWH 23A

3EXA-14N	EXIT NOZZLE	31	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.381	0.051
3EXA-14P	STRAIGHT PIPE	61	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.000	0.051
3EXA-VALVE 3EX-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	28.000	SPE	0.313	0.000	0.050
3EXA-13P	STRAIGHT PIPE	58	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.342	0.051
3EXA-VALVE 3EX-2	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	28.000	SPE	0.313	0.000	0.050
3EXA-12P	STRAIGHT PIPE	58	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.338	0.051
3EXA-10	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.413	0.047
3EXA-9P	STRAIGHT PIPE	52	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.345	0.051
3EXA-9	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.417	0.047
3EXA-8P	STRAIGHT PIPE	54	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.000	0.051
3EXA-8	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.434	0.047
3EXA-7P	STRAIGHT PIPE	54	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.000	0.051
3EXA-7	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	28.000	SPE	0.313	0.000	0.047
3EXA-6P DS	STRAIGHT PIPE	52	A691/2.25Cr/22	0	2.25	0.00	1.00	15000.0	28.000	SPE	0.313	0.000	0.047
3EXA-6	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.000	0.047
3EXA-5P	STRAIGHT PIPE	52	A691/2.25Cr/22	0	2.25	0.00	1.00	15000.0	28.000	SPE	0.313	0.000	0.047
3EXA-5	90-DEG ELBOW	4	A234/WP22/	18	1.90	0.00	0.87	15000.0	28.000	SPE	0.313	0.000	0.047
3EXA-4P US	STRAIGHT PIPE	54	A691/2.25Cr/22	0	2.25	0.00	1.00	15000.0	28.000	SPE	0.313	0.000	0.047
3EXA-4	TEE	14	A234/WP22/	18	1.90	0.00	0.87	15000.0	28.000	SPE	0.313	0.000	0.047

Line Name : ES1-2-3RDPT ES to FWH 23A

3EXA-1P	STRAIGHT PIPE	64	A335/P22/	26	1.90	0.00	0.87	15000.0	20.000	10	0.250	0.000	0.033
3EXA-1A	STRAIGHT PIPE	64	A335/P22/	26	1.90	0.00	0.87	15000.0	20.000	10	0.250	0.000	0.033
3EXA-1	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	20.000	10	0.250	0.000	0.033
3EXA-1N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.033

Line Name : ES1-3-3RDPT ES to FWH 23A

3EXA-11R	ECC. REDUCER	7	A234/WP22/	18	1.90	0.00	0.87	15000.0	28.000	SPE	0.313	0.000	0.047
3EXA-11RP	STRAIGHT PIPE	67	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.039
3EXA-3	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.388	0.033
3EXA-2P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.039
3EXA-2A	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.411	0.039
3EXA-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.033
3EXA-2N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.033

Line Name : ES2-1-3RDPT ES to FWH 23B

3EXB-10N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.000	0.047
3EXB-10P	STRAIGHT PIPE	61	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.000	0.051
3EXB-VALVE 3EX-3	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	28.000	SPE	0.313	0.000	0.050
3EXB-9P	STRAIGHT PIPE	58	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.333	0.051
3EXB-VALVE 3EX-4	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	28.000	SPE	0.313	0.000	0.050
3EXB-9A	STRAIGHT PIPE	58	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.000	0.051
3EXB-9	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.420	0.047
3EXB-8	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.403	0.047
3EXB-7P	STRAIGHT PIPE	53	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.322	0.051
3EXB-7	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.000	0.047
3EXB-6P US	STRAIGHT PIPE	51	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.349	0.051
3EXB-6P DS	STRAIGHT PIPE	51	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.338	0.051
3EXB-6	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.000	0.047
3EXB-5P	STRAIGHT PIPE	52	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.355	0.051
3EXB-5	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.414	0.047
3EXB-4A US	STRAIGHT PIPE	54	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.328	0.051
3EXB-4A DS	STRAIGHT PIPE	54	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.000	0.051
3EXB-4	TEE	14	A53/B/E	2	0.00	0.00	0.00	12800.0	28.000	SPE	0.313	0.000	0.055

Line Name : ES2-2-3RDPT ES to FWH 23B

3EXB-4P US	STRAIGHT PIPE	64	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.262	0.039
3EXB-1A	STRAIGHT PIPE	64	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.272	0.039
3EXB-1	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.367	0.033
3EXB-1N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.033

Line Name : ES2-3-3RDPT ES to FWH 23B

3EXB-10R	ECC. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.327	0.047
3EXB-3P US	STRAIGHT PIPE	57	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.039
3EXB-3P DS	STRAIGHT PIPE	57	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.039
3EXB-3	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.454	0.033
3EXB-2P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.402	0.039
3EXB-2P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.039
3EXB-2A	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.378	0.033
3EXB-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.477	0.033
3EXB-2N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.033

Line Name : ES3-1-3RDPT ES to FWH 23C

3EXC-14N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.440	0.047
3EXC-14P	STRAIGHT PIPE	61	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.000	0.051
3EXC-VALVE 3EX-5	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	28.000	SPE	0.313	0.000	0.050
3EXC-13P	STRAIGHT PIPE	58	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.000	0.051
3EXC-VALVE 3EX-6	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	28.000	SPE	0.313	0.000	0.050

3EXC-13R	CON. REDUCER	7	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	28.000	SPE	0.313	0.000	0.050
3EXC-VALVE PCV-1161	BUTTERFLY VALVE	23	A216/WCB/	93	0.00	0.00	0.00	14000.0	24.000	10	0.250	0.000	0.043
3EXC-12R	CON. EXPANDER	18	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	28.000	SPE	0.313	0.000	0.050
3EXC-12P	STRAIGHT PIPE	68	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.000	0.051
3EXC-10	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.415	0.047
3EXC-9P	STRAIGHT PIPE	52	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.364	0.051
3EXC-9	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.418	0.047
3EXC-8P	STRAIGHT PIPE	54	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.000	0.051
3EXC-8	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.000	0.047
3EXC-7P	STRAIGHT PIPE	54	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.314	0.051
3EXC-7	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.000	0.047
3EXC-6P	STRAIGHT PIPE	52	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.349	0.051
3EXC-6	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.443	0.047
3EXC-5P	STRAIGHT PIPE	52	A672/A55/11	0	0.00	0.00	0.00	13800.0	28.000	SPE	0.313	0.000	0.051
3EXC-5	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.000	0.047
3EXC-4P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	28.000	SPE	0.313	0.000	0.055
3EXC-4	TEE	14	A53/B/E	2	0.00	0.00	0.00	12800.0	28.000	SPE	0.313	0.000	0.055

Line Name : ES3-2-3RDPT ES to FWH 23C

3EXC-4P-1 US	STRAIGHT PIPE	64	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.267	0.039
3EXC-1A	STRAIGHT PIPE	64	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.039
3EXC-1	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.033
3EXC-1N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.033

Line Name : ES3-3-3RDPT ES to FWH 23C

3EXC-11R	ECC. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.319	0.047
3EXC-3P	STRAIGHT PIPE	57	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.039
3EXC-3	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.033
3EXC-2P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.039
3EXC-2A	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	20	0.375	0.000	0.039
3EXC-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.033
3EXC-2N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.033

Line Name : ES4-1-4THPT ES to FWH 24A

4EXA-15N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.386	0.066
4EXA-14P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.291	0.078
4EXA-14	45-DEG ELBOW	3	A234/WP22/	18	1.90	0.00	0.87	15000.0	20.000	10	0.250	0.294	0.066
4EXA-13	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.320	0.066
4EXA-VALVE-4EX-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	20.000	10	0.250	0.000	0.071
4EXA-12P	STRAIGHT PIPE	58	A335/P22/	26	1.90	0.00	0.87	15000.0	20.000	10	0.250	0.000	0.066
4EXA-VALVE-4EX-2	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	20.000	10	0.250	0.000	0.071
4EXA-12A	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXA-12	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066
4EXA-11P	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXA-11	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066
4EXA-10P	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXA-10	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066
4EXA-9P	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXA-9	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066
4EXA-8P	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXA-8	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.389	0.066
4EXA-8A	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.316	0.078
4EXA-7	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066

4EXA-7P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXA-6	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066
4EXA-6P DS	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.262	0.078
4EXA-5	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.358	0.066
4EXA-4P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXA-4	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.483	0.066
4EXA-3P US	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXA-3	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066
4EXA-2P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXA-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.368	0.066
4EXA-1-2	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXA-1	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.475	0.066
4EXA-1N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066

Line Name : ES5-1-4THPT ES to FWH 24B

4EXB-12N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.308	0.066
4EXB-12P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.269	0.078
4EXB-12	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.304	0.066
4EXB-11	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.314	0.066
4EXB-VALVE-4EX-3	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	20.000	10	0.250	0.000	0.071
4EXB-13P	STRAIGHT PIPE	58	A335/P22/	26	1.90	0.00	0.87	15000.0	20.000	10	0.250	0.000	0.066
4EXB-VALVE-4EX-4	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	20.000	10	0.250	0.000	0.071
4EXB-14P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXB-10	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.499	0.066
4EXB-9P US	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	20.000	10	0.250	0.000	0.066
4EXB-9P DS	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	20.000	10	0.250	0.000	0.066
4EXB-9	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.494	0.066
4EXB-8P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.268	0.078
4EXB-8	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066
4EXB-7P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXB-7	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066
4EXB-6P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXB-6	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066
4EXB-5P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXB-5	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066
4EXB-4P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXB-4P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.282	0.078
4EXB-4	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.512	0.066
4EXB-3P US	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.297	0.078
4EXB-3P DS	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXB-3	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066
4EXB-2P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXB-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066
4EXB-1P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXB-1	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066
4EXB-1N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066

Line Name : ES6-1-4THPT ES to FWH 24C

4EXC-15N	EXIT NOZZLE	31	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.385	0.078
4EXC-15P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.253	0.078
4EXC-15	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.301	0.066
4EXC-14	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.300	0.066
4EXC-14P-1	STRAIGHT PIPE	53	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.272	0.078
4EXC-VALVE-4EX-5	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	20.000	10	0.250	0.000	0.071
4EXC-14P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078

4EXC-VALVE-4EX-6	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	20.000	10	0.250	0.000	0.071
4EXC-13P DS	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.345	0.078
4EXC-13	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.314	0.066
4EXC-12P US	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXC-12P DS	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXC-12	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.537	0.066
4EXC-11P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.290	0.078
4EXC-11	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.312	0.066
4EXC-10P	STRAIGHT PIPE	53	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXC-10	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.295	0.066
4EXC-9P	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXC-9	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066
4EXC-8P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXC-8	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.473	0.066
4EXC-7P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXC-7	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066
4EXC-6P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXC-6	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.442	0.066
4EXC-5P US	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXC-5P DS	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.496	0.078
4EXC-5	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.343	0.066
4EXC-4P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXC-4	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.498	0.066
4EXC-3P US	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXC-3P DS	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.321	0.078
4EXC-3	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.488	0.066
4EXC-2P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.270	0.078
4EXC-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066
4EXC-1P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.000	0.078
4EXC-1P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	10	0.250	0.276	0.078
4EXC-1	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.520	0.066
4EXC-1N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	10	0.250	0.000	0.066

Line Name : ES7-1-5THPT ES to FWH 25ABC

5EX-18C	STRAIGHT PIPE	9	A234/WP11/	17	1.00	0.00	0.44	15000.0	28.000	STD	0.375	0.000	0.232
5EX-18	TEE	12	A335/P11/	25	1.00	0.00	0.44	15000.0	28.000	STD	0.375	0.000	0.232
5EX-VALVE-5EX-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	28.000	STD	0.375	0.000	0.248
5EX-17P	STRAIGHT PIPE	58	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	28.000	STD	0.375	0.000	0.267
5EX-VALVE-5EX-3	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	28.000	STD	0.375	0.000	0.248
5EX-17P-1	STRAIGHT PIPE	58	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	28.000	STD	0.375	0.000	0.267
5EX-VALVE-5EX-4	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	28.000	STD	0.375	0.000	0.248
5EX-17	45-DEG ELBOW	3	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	28.000	STD	0.375	0.570	0.269
5EX-16P US	STRAIGHT PIPE	53	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	28.000	STD	0.375	0.000	0.267
5EX-16P DS	STRAIGHT PIPE	53	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	28.000	STD	0.375	0.539	0.267
5EX-16	90-DEG ELBOW	4	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	28.000	STD	0.375	0.000	0.269
5EX-15P US	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	28.000	STD	0.375	0.000	0.267
5EX-15P DS	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	28.000	STD	0.375	0.000	0.267
5EX-15	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	28.000	STD	0.375	0.000	0.269
5EX-14P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	28.000	STD	0.375	0.000	0.267
5EX-14	90-DEG ELBOW	4	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	28.000	STD	0.375	0.000	0.269
5EX-13P US	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	28.000	STD	0.375	0.000	0.267
5EX-13P	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	28.000	STD	0.375	0.000	0.267
5EX-13P DS	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	28.000	STD	0.375	0.000	0.267
5EX-13	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	28.000	STD	0.375	0.000	0.269
5EX-12	90-DEG ELBOW	4	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	28.000	STD	0.375	0.000	0.269
5EX-11P	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	28.000	STD	0.375	0.000	0.267
5EX-11	90-DEG ELBOW	4	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	28.000	STD	0.375	0.000	0.269

5EX-8P US	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	28.000	STD	0.375	0.000	0.267
5EX-8P DS	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	28.000	STD	0.375	0.000	0.267
5EX-8	TEE	14	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	28.000	STD	0.375	0.000	0.269

Line Name : ES7-2-5THPT ESHDR to FWH 25C

5EX-VALVE 5EX-5-2	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	20	0.312	0.000	0.160
5EX-9	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	20	0.312	0.000	0.149
5EX-9-10	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	18.000	STD	0.375	0.000	0.172
5EX-10	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	20	0.312	0.000	0.149
5EX-10N	INLET NOZZLE	30	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	20	0.312	0.000	0.149

Line Name : ES7-3-5THPT ESHDR 25CT to BT

5EX-5P US	STRAIGHT PIPE	64	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	28.000	STD	0.375	0.000	0.267
5EX-5P DS	STRAIGHT PIPE	64	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	28.000	STD	0.375	0.000	0.267
5EX-5	TEE	14	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	28.000	STD	0.375	0.000	0.269

Line Name : ES7-4-5THPT ESHDR to FWH 25B

5EX-6P1	STRAIGHT PIPE	64	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	18.000	STD	0.375	0.000	0.172
5EX-VALVE 5EX-5-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	20	0.312	0.000	0.160
5EX-6	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	20	0.312	0.000	0.149
5EX-6-7	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	18.000	STD	0.375	0.000	0.172
5EX-7	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	20	0.312	0.000	0.149
5EX-7N	INLET NOZZLE	30	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	20	0.312	0.000	0.149

Line Name : ES7-5-5THPT ESHDR to FWH 25A

5EX-4	CON. REDUCER	7	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	28.000	STD	0.375	0.000	0.269
5EX-3P US	STRAIGHT PIPE	57	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	18.000	20	0.312	0.507	0.172
5EX-3	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	18.000	20	0.312	0.498	0.173
5EX-2P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	18.000	20	0.312	0.513	0.172
5EX-VALVE 5EX-5	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	20	0.312	0.000	0.160
5EX-2	90-DEG ELBOW	4	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	20	0.312	0.000	0.149
5EX-1-2	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	18.000	STD	0.375	0.000	0.172
5EX-1	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	20	0.312	0.000	0.149
5EX-1N	INLET NOZZLE	30	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	20	0.312	0.000	0.149

Line Name : ES7A-1-SEP TKA VNT to FWH25

MOPS1	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	20	0.375	0.000	0.166
MOPS2	45-DEG ELBOW	3	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	20.000	20	0.375	0.000	0.192
MOPS3	45-DEG ELBOW	3	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	20.000	20	0.375	0.000	0.192
MOPS4	STRAIGHT PIPE	53	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	20.000	20	0.375	0.000	0.191
MOPS5	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	20.000	20	0.375	0.000	0.192
MOPS6	90-DEG ELBOW	4	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	20.000	20	0.375	0.000	0.192
MOPS7	90-DEG ELBOW	4	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	20.000	20	0.375	0.000	0.192
MOPS8	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	20.000	20	0.375	0.000	0.191

Line Name : ES7A-2-SEP TKB VNT to FWH25

MOPS9	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	20	0.375	0.633	0.166
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MOPS10	STRAIGHT PIPE	61	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	20.000	20	0.375	0.000	0.191
MOPS11	90-DEG ELBOW	4	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	20.000	20	0.375	0.000	0.192
MOPS12	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	20.000	20	0.375	0.000	0.191
MOPS13	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	20.000	20	0.375	0.000	0.192
MOPS14	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	20.000	20	0.375	0.000	0.191
MOPS15	90-DEG ELBOW	4	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	20.000	20	0.375	0.000	0.192
MOPS16	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	20.000	20	0.375	0.000	0.191
MOPS17	45-DEG ELBOW	1	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	20.000	20	0.375	0.000	0.192
MOPS18	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	20.000	20	0.375	0.000	0.191

Line Name : ES8-1-6THPT ES to HDR

6EX-28N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-28	90-DEG ELBOW	4	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	40	0.406	0.000	0.189
6EX-27P	STRAIGHT PIPE	54	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	40	0.406	0.000	0.189
6EX-27	90-DEG ELBOW	4	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-23P	STRAIGHT PIPE	54	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-23	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-22P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-22R	CON. EXPANDER	18	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-22A	STRAIGHT PIPE	68	A106/B/	5	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267

Line Name : ES8-2-6THPT ES to HDR

6EX-26-1N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	40	0.406	0.000	0.189
6EX-26-1	90-DEG ELBOW	4	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	40	0.406	0.000	0.189
6EX-26P	STRAIGHT PIPE	54	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-26-2	45-DEG ELBOW	1	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-25P	STRAIGHT PIPE	51	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-25	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-24P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-24	45-DEG ELBOW	1	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189

Line Name : ES8-3-6THPT ESHDR to FWH 26

6EX-22	TEE	12	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-21P	STRAIGHT PIPE	62	A106/B/	5	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-21	90-DEG ELBOW	4	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-21C	STRAIGHT PIPE	54	A106/B/	5	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-VALVE-6EX-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	30	0.438	0.000	0.286
6EX-20B	STRAIGHT PIPE	58	A-312/TP304H/	0	18.00	0.00	0.00	12600.0	18.000	30	0.438	0.000	0.317
6EX-VALVE-6EX-3	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	30	0.438	0.000	0.286
6EX-20A	STRAIGHT PIPE	58	A-312/TP304H/	0	18.00	0.00	0.00	12600.0	18.000	30	0.438	0.000	0.317
6EX-VALVE-6EX-4	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	30	0.438	0.000	0.286
6EX-20	90-DEG ELBOW	4	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-19P	STRAIGHT PIPE	54	A106/B/	5	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-19	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-18P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-18	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-17P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-17	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-16P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-16	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-46P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-14	TEE	14	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267

Line Name : ES8-4-6THPT ESHDR to FWH 26C

6EX-14R	CON. REDUCER	17	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-14P	STRAIGHT PIPE	64	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-15	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-15P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-13C	45-DEG ELBOW	1	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-13	90-DEG ELBOW	4	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-13P	STRAIGHT PIPE	54	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-VALVE-6EX-5-2	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	STD	0.375	0.000	0.202
6EX-12P	STRAIGHT PIPE	58	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-12	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-11	90-DEG ELBOW	4	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-11N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	30	0.330	0.000	0.189

Line Name : ES8-5-6THPT ESHDR 26CT to BT

6EX-10P	STRAIGHT PIPE	64	A106/B/	5	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-10	TEE	14	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267

Line Name : ES8-6-6THPT ESHDR to FWH 26B

6EX-10R	CON. REDUCER	17	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-9P	STRAIGHT PIPE	64	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-9	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-8BP	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-8B	45-DEG ELBOW	1	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-8	90-DEG ELBOW	4	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-6P	STRAIGHT PIPE	54	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-VALVE-6EX-5-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	STD	0.375	0.000	0.202
6EX-7P	STRAIGHT PIPE	58	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-7	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-6	90-DEG ELBOW	4	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	XS	0.500	0.000	0.189
6EX-6N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	XS	0.500	0.531	0.189

Line Name : ES8-7-6THPT ESHDR to FWH 26A

6EX-51	STRAIGHT PIPE	64	A106/B/	5	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-5A	CON. REDUCER	17	A234/WPB/	21	18.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	0.267
6EX-5P	STRAIGHT PIPE	67	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-5	90-DEG ELBOW	4	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-4P	STRAIGHT PIPE	54	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-4	90-DEG ELBOW	4	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-3P	STRAIGHT PIPE	54	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-3	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-1P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-VALVE-6EX-5	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	STD	0.375	0.000	0.202
6EX-2P	STRAIGHT PIPE	58	A106/B/	5	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-2	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.189
6EX-1	90-DEG ELBOW	4	A234/WPB/	21	18.00	0.00	0.00	15000.0	12.750	XS	0.500	0.000	0.189
6EX-1N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	XS	0.500	0.661	0.189

Line Name : FW71-1-BFP21 DISCH to HDR

BFD-14N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	16.000	100	1.031	0.000	0.740
BFD-14P	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	16.000	100	1.031	0.000	0.740
BFD-14R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-14	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-14P-1	STRAIGHT PIPE	54	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD VALVE-BFD-1	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	20.000	80	1.031	0.000	0.988
BFD-14P-2	STRAIGHT PIPE	58	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD VALVE-BFD-2-21	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	20.000	80	1.031	0.000	0.988
BFD-2	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-2P US	STRAIGHT PIPE	54	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-2P DS	STRAIGHT PIPE	54	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-4	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-4P US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-5	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-5P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-6	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-6P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-7	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-7P US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-7P DS	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-8	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-8P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-9	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-9P US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-9P DS	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-10	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-10P US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-10P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924

Line Name : FW72-1-BFP22 DISCH to HDR

BFD-15N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	16.000	100	1.031	0.000	0.740
BFD-15R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-15P-1	STRAIGHT PIPE	68	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-15	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-15P US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-15P DS	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-12	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-12P	STRAIGHT PIPE	51	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-VALVE-BFD-1-1	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	20.000	80	1.031	0.000	0.988
BFD-12P-1	STRAIGHT PIPE	58	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-VALVE-BFD-2-22	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	20.000	80	1.031	0.000	0.988
BFD-12P-2	STRAIGHT PIPE	58	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-16	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-16P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-13	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-13P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-17	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-17P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-18	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-18P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-19	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-19P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-20	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-20P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-21	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-21P US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-21P DS	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797

BFD-22	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	80	1.031	0.000	0.924
BFD-22P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	20.000	80	1.031	0.000	0.797
BFD-23R	CON. EXPANDER	18	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195

Line Name : FW73-1-BFPHDR to FWH26ABC

BFD-11	TEE	12	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-23	90-DEG ELBOW	2	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-24	90-DEG ELBOW	4	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-24P DS	STRAIGHT PIPE	54	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-25	90-DEG ELBOW	2	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-25P	STRAIGHT PIPE	52	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-26	90-DEG ELBOW	4	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-26P US	STRAIGHT PIPE	54	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-27	90-DEG ELBOW	2	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-27P	STRAIGHT PIPE	52	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-28	90-DEG ELBOW	2	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-28P	STRAIGHT PIPE	52	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-29	90-DEG ELBOW	2	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-29P	STRAIGHT PIPE	52	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-32	90-DEG ELBOW	2	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-32P	STRAIGHT PIPE	52	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-32T	TEE	15	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195

Line Name : FW73-2-BFPHDR to FWH26ABC

BFD-32P-1	STRAIGHT PIPE	65	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-32T-C	TEE	14	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195

Line Name : FW73-3-BFPHDR to FWH26C

BFD-40P US	STRAIGHT PIPE	64	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-40	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-41P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-VALVE-BFD-3-2	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-41P-1	STRAIGHT PIPE	58	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-41	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-42P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-42	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-42N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832

Line Name : FW73-4-BFPHDR to FWH26ABC

BFD-32P-2	STRAIGHT PIPE	64	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-32T-B	TEE	14	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195

Line Name : FW73-5-BFPHDR to FWH26B

BFD-37P	STRAIGHT PIPE	64	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-37	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-38P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-VALVE-BFD-3-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-38P-1	STRAIGHT PIPE	58	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-38	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832

BFD-39P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-39	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-39N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832

Line Name : FW73-6-BFPHDR to FWH26A

BFD-33R	CON. REDUCER	7	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-33P-1 DS	STRAIGHT PIPE	57	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-33	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-33P US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-33P DS	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-34	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-34P US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-34P DS	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-VALVE-BFD-3	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-34P-1	STRAIGHT PIPE	58	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-35	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-35P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-36	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-36N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832

Line Name : FW74-1-FWH26A to DISHDR

BFD-55N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-55	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-55P	STRAIGHT PIPE	54	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-56	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-VALVE-BFD-4	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-56P-1	STRAIGHT PIPE	58	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-57	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-57P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-58	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-58P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-59	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-59P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-59R	CON. EXPANDER	18	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195

Line Name : FW74-2-FWH26B to DISHDR

BFD-51N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-51	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-51P	STRAIGHT PIPE	54	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-52	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-52P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-VALVE-BFD-4-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-52P-1	STRAIGHT PIPE	58	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-53	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-53P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-54	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-54P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717

Line Name : FW74-3-FWH26 to DISHDR

BFD-54T	TEE	12	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-54P-1	STRAIGHT PIPE	62	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195

Line Name : FW74-4-FWH26C to DISHDR

BFD-47N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-47	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-47P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-48	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-48P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-VALVE-BFD-4-2	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-48P-1	STRAIGHT PIPE	58	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-49	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-49P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-50	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-50P US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-50P DS	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717

Line Name : FW74-5-FWH26 to DISHDR

BFD-50T	TEE	12	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-50P-1	STRAIGHT PIPE	62	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-46T	TEE	15	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-46P	STRAIGHT PIPE	65	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-60	90-DEG ELBOW	2	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-30	90-DEG ELBOW	4	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-30P US	STRAIGHT PIPE	54	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-30P DS	STRAIGHT PIPE	54	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-31	90-DEG ELBOW	2	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-31P US	STRAIGHT PIPE	52	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-61	90-DEG ELBOW	2	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-61P	STRAIGHT PIPE	52	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-62	90-DEG ELBOW	2	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-62P US	STRAIGHT PIPE	52	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-62P DS	STRAIGHT PIPE	52	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-63	90-DEG ELBOW	2	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-63P US	STRAIGHT PIPE	52	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-63P DS	STRAIGHT PIPE	52	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-64	90-DEG ELBOW	2	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-64P	STRAIGHT PIPE	52	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-65	90-DEG ELBOW	2	A234/WPC/	22	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-65P-1	STRAIGHT PIPE	52	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195
BFD-HEADER	STRAIGHT PIPE	62	A672/B70/21	0	0.00	0.00	0.00	17500.0	30.000	SPE	1.260	0.000	1.195

Line Name : FW75-1-DISHDR to SG21

BFD-72P US	STRAIGHT PIPE	64	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-72P DS	STRAIGHT PIPE	64	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-72	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-72P-1 US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-72P-1 DS	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-VALVE-BFD-5	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-72R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-VALVE-FCV-417	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-71R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-71	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-70P US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-70P DS	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717

BFD-70	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-69P US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-69P DS	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-69	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-68P US	STRAIGHT PIPE	51	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-68P DS	STRAIGHT PIPE	51	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-68	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-67P US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-67P DS	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-VALVE-BFD-6	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-VALVE-BFD-7	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-67	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-66	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-66P	STRAIGHT PIPE	54	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-96	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-96P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-97	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-97P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-98	90-DEG ELBOW	2	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-98P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-98P-1	STRAIGHT PIPE	9	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-99	90-DEG ELBOW	2	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-99N	INLET NOZZLE	30	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544

Line Name : FW76-1-DISHDR to SG22

BFD-78P	STRAIGHT PIPE	64	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-78	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-78P-1 US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-VALVE-BFD-5-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-78P-2	STRAIGHT PIPE	58	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-VALVE-FCV-427	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-77R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-77P	STRAIGHT PIPE	58	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-77	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-76P US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-76	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-75P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-75	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-74P	STRAIGHT PIPE	51	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-74	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-73P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-VALVE-BFD-6-1	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-VALVE-BFD-7-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-73	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-73P	STRAIGHT PIPE	54	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-91	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-91P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-92	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-92P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-92-1	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-92P-1	STRAIGHT PIPE	51	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-92-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-92P-2	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-92P-3	STRAIGHT PIPE	9	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-93	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-93P US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-93P DS	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544

BFD-94	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-95	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-95P	STRAIGHT PIPE	53	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-95R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	60	0.812	0.000	0.703
BFD-95N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	60	0.812	0.000	0.703

Line Name : FW77-1-DISHDR to SG24

BFD-84P	STRAIGHT PIPE	64	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-84	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-84P-1	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-VALVE-BFD-5-3	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-84P-2	STRAIGHT PIPE	58	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-VALVE-FCV-447	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-83R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-83	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-82P US	STRAIGHT PIPE	54	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-82P DS	STRAIGHT PIPE	54	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-82	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-81P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-81	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-80	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-80P	STRAIGHT PIPE	54	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-VALVE-BFD-6-3	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-VALVE-BFD-7-3	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-79	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-104P	STRAIGHT PIPE	54	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-104	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-105P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-105	90-DEG ELBOW	2	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-105-1	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-105P-1	STRAIGHT PIPE	54	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-105P-2	STRAIGHT PIPE	9	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-106	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-106P	STRAIGHT PIPE	54	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-106N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633

Line Name : FW78-1-DISHDR to SG23

BFD-89P	STRAIGHT PIPE	64	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-89	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-89P-1	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-VALVE-BFD-5-2	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-89P-2	STRAIGHT PIPE	58	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-VALVE-FCV-437	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-3R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-3P	STRAIGHT PIPE	58	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-3	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-88P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-88	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-87P US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-87P DS	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-87	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-86P US	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-86P DS	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	80	0.938	0.000	0.717
BFD-VALVE-BFD-6-2	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889
BFD-VALVE-BFD-7-2	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	80	0.938	0.000	0.889

BFD-86	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-85	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-100P	STRAIGHT PIPE	54	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-100	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-101P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-101	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-102P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-102	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-102P-1	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-102P-2	STRAIGHT PIPE	9	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-103	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633
BFD-103P	STRAIGHT PIPE	52	A106/C/	6	0.00	0.00	0.00	17500.0	18.000	60	0.750	0.000	0.544
BFD-103N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	60	0.750	0.000	0.633

Line Name : HD12-1-FWH26A to CV

6EXD-9N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	1.614	0.159
6EXD-9P US	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-8	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-8P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-7	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-7P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-6	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-6P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-1	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.395	0.159
6EXD-1P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-1-1R	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.410	0.159

Line Name : HD12-2-FWH26B to CV

6EXD-13N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-13P	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-12	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-12P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-11	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-11P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.407	0.159
6EXD-2P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-2-1R	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.405	0.159

Line Name : HD12-3-FWH26C to CV

6EXD-18N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-18P	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-18	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-17P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-17	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-16P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-16	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-15P-1	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-15	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-15P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-3	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-3P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159
6EXD-3-1R	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	30	0.307	0.000	0.159

Line Name : HD12-4-FWH26A CV to HTR DR TK

6EX1D-VALVE-LCV-1101	CONTROL VALVE	24	A217/WC6/	95	1.00	0.00	0.44	14000.0	6.625	40	0.280	0.000	0.105
6EX1D-R2	CON. EXPANDER	18	A234/WP5/	0	5.00	0.00	0.50	14100.0	10.750	40	0.365	0.000	0.169
6EX1D-P2	STRAIGHT PIPE	68	A335/P5/	0	5.00	0.00	0.50	14100.0	10.750	40	0.365	0.000	0.169
6EX1D-N2	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.159

Line Name : HD12-5-FWH26B CV to HTR DR TK

6EX2D-VALVE-LCV-1102	CONTROL VALVE	24	A217/WC6/	95	1.00	0.00	0.44	14000.0	6.625	40	0.280	0.000	0.105
6EX2D-R2	CON. EXPANDER	18	A234/WP5/	0	5.00	0.00	0.50	14100.0	10.750	40	0.365	0.000	0.169
6EX2D-P2	STRAIGHT PIPE	68	A335/P5/	0	5.00	0.00	0.50	14100.0	10.750	40	0.365	0.000	0.169
6EX2D-N2	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.159

Line Name : HD12-6-FWH26C CV to HTR DR TK

6EX3D-VALVE-LCV-1103	CONTROL VALVE	24	A217/WC6/	95	1.00	0.00	0.44	14000.0	6.625	40	0.280	0.000	0.105
6EX3D-R2	CON. EXPANDER	18	A234/WP5/	0	5.00	0.00	0.50	14100.0	10.750	40	0.365	0.000	0.169
6EX3D-P2	STRAIGHT PIPE	68	A335/P5/	0	5.00	0.00	0.50	14100.0	10.750	40	0.365	0.000	0.169
6EX3D-N2	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.159

Line Name : HD19-1-HDT to HDP 21 SUCT

5EX-21N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	20	0.375	0.000	0.161
5EX-21P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	24.000	20	0.375	0.000	0.188
5EX-21	90-DEG RED. ELBOW	16	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	20	0.375	0.436	0.161
5EX-22	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	20	0.312	0.417	0.121
5EX-22P	STRAIGHT PIPE	53	A53/B/E	2	0.00	0.00	0.00	12800.0	18.000	20	0.312	0.408	0.141
5EX-VALVE-5EX-16	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	20	0.312	0.000	0.129
5EX-23P-1	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	18.000	20	0.312	0.000	0.141
5EX-23N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	20	0.312	0.000	0.121

Line Name : HD19-2-HDT to HDP 22 SUCT

5EX-26N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	20	0.375	0.000	0.161
5EX-26P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	24.000	20	0.375	0.000	0.188
5EX-26	90-DEG RED. ELBOW	16	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	20	0.375	0.423	0.161
5EX-27P	STRAIGHT PIPE	66	A53/B/E	2	0.00	0.00	0.00	12800.0	18.000	20	0.312	0.399	0.141
5EX-VALVE-5EX-16-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	18.000	20	0.312	0.000	0.129
5EX-28P-1	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	18.000	20	0.312	0.000	0.141
5EX-28N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	20	0.312	0.000	0.121

Line Name : HD20-1-HDP21 to BFP SUCTION

HD-8N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	XS	0.500	0.000	0.304
HD-VALVE-HD-1	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	XS	0.500	0.000	0.326
HD-8P	STRAIGHT PIPE	58	A105//	3	0.00	0.00	0.00	17500.0	8.625	40	0.322	0.410	0.177
HD-VALVE-LCV-1127	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	8.625	40	0.322	0.000	0.220
HD-7	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	XS	0.500	0.000	0.304
HD-VALVE-HD-2	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	XS	0.500	0.000	0.326
HD-3P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	12.750	XS	0.500	0.000	0.304
HD-3	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	XS	0.500	0.000	0.304
HD-3P-1	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	12.750	XS	0.500	0.000	0.304

HD-5P US	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	12.750	XS	0.500	0.000	0.304
HD-5P DS	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	12.750	XS	0.500	0.000	0.304

Line Name : HD20-2-HDP22 to BFP SUCTION

HD-10N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	XS	0.500	0.000	0.304
HD-VALVE-HD-1-1	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	XS	0.500	0.000	0.326
HD-10P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.206
HD-VALVE-LCV-1127A	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	8.625	40	0.322	0.000	0.220
HD-9	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	XS	0.500	0.000	0.304
HD-VALVE-HD-2-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	XS	0.500	0.000	0.326
HD-4P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	12.750	XS	0.500	0.000	0.304
HD-4	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	XS	0.500	0.000	0.304
HD-4A	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	12.750	XS	0.500	0.000	0.304
HD-6P DS	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	12.750	XS	0.500	0.000	0.304
HD-6	TEE	12	A106/B/	5	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-6C	STRAIGHT PIPE	62	A234/WPB/	21	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-5AP US	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-5AP DS	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382

Line Name : HD20-3-HDP DIS T to BFP SUC

HD-5	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-11P DS	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-11	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-2P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-12P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-12	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-13P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-13	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-14P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-14	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-15P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-15	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-15P-1 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-16	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-16P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-17	TEE	15	A234/WPB/	21	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-17P	STRAIGHT PIPE	65	A106/B/	5	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-1	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382
HD-1P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	16.000	60	0.656	0.000	0.382

Line Name : HD21A-1-FWH24A to CV

4EXD-13N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-13P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-13T	TEE	15	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-13P-1	STRAIGHT PIPE	65	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-13	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-12	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-11P	STRAIGHT PIPE	53	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-11	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-10P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-10	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-9P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026

4EXD-9	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-8P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-8	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-7P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-7	90-DEG RED. ELBOW	16	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-VALVE-4EX-8	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	4.500	40	0.237	0.000	0.016
4EXD-6	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.015
4EXD-6P	STRAIGHT PIPE	57	A-181//60	0	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.012

Line Name : HD21A-2-FWH24A CV to FWH23A

4EXD-VALVE- LCV-1115	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	3.500	40	0.216	0.000	0.012
4EXD-5	CON. EXPANDER	18	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	6.625	40	0.280	0.000	0.026
4EXD-4	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.444	0.022
4EXD-4P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-1-1	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-1	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.312	0.022
4EXD-1P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-1N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022

Line Name : HD22A-1-FWH24B to CV

4EXD-48N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-48P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-48	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-47P	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-47	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-46P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-46	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-45P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-45	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-44	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-44P	STRAIGHT PIPE	53	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-43	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-42P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-42	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-41P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-41	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-40P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-40P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-40	90-DEG RED. ELBOW	16	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-VALVE-4EX-8-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	4.500	40	0.237	0.000	0.016
4EXD-39	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.015
4EXD-39P	STRAIGHT PIPE	57	A53/B/E	2	0.00	0.00	0.00	12800.0	3.500	40	0.216	0.000	0.014

Line Name : HD22A-2-FWH24B CV to FWH23B

4EXD-VALVE-LCV-1116	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	3.500	40	0.216	0.000	0.012
4EXD-38	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-37	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.444	0.022
4EXD-37P US	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-2-1	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-2	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-2P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-2N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022

Line Name : HD23A-1-FWH24C to CV

4EXD-71N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-71P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-71	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-70P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-70	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-69	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-69P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-68	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-67P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-67	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.308	0.022
4EXD-66P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-66	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-65P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-65	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-64P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-64	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-63P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-63	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-62P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-62	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-61P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-61	90-DEG RED. ELBOW	16	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-VALVE-4EX-8-2	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	4.500	40	0.237	0.000	0.016
4EXD-60	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.015
4EXD-60P	STRAIGHT PIPE	57	A53/B/E	2	0.00	0.00	0.00	12800.0	3.500	40	0.216	0.000	0.014

Line Name : HD23A-2-FWH24C CV to FWH23C

4EXD-VALVE-LCV-1117	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	3.500	40	0.216	0.000	0.012
4EXD-59	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-58	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.448	0.022
4EXD-58P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-3-1	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-3	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-3P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-3N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022

Line Name : HD242A-1-FWH23A CV to FWH22A

242-VALVE-LCV-1118	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	6.625	40	0.280	0.000	0.012
242-8R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.323	0.014
242-VALVE-3EX-9	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	8.625	20	0.250	0.000	0.015
242-9P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
242-10T	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
242-11P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
242-12N	CON. EXPANDER	18	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.021

Line Name : HD243A-1-FWH23B CV to FWH22B

243-VALVE-LCV-1119	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	6.625	40	0.280	0.000	0.012
243-9R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.326	0.014
243-VALVE-3EX-9-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	8.625	20	0.250	0.000	0.015
243-10P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017

243-11T	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
243-12P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
243-13N	CON. EXPANDER	18	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.021

Line Name : HD244A-1-FWH23C CV to FWH22C

244-VALVE-LCV-1119	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	6.625	40	0.280	0.000	0.012
244-9R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.305	0.014
244-VALVE-3EX-9-2	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	8.625	20	0.250	0.000	0.015
244-10P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
244-11T	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
244-12P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
244-13N	CON. EXPANDER	18	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.021

Line Name : HD24A-1-FWH23A to CV

3EXD-1N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-1P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-1	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-2P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-2P-1 US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-2P-1 DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-3	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-3P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-4	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-4P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-5	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.285	0.014
3EXD-5P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-6	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-6P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-6P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-7	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-7P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-8	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-8P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-9	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-9P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-10	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-10P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-11	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-11P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-12	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-12P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-13	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-13P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-14	TEE	15	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-20P	STRAIGHT PIPE	65	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-20	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.299	0.014
3EXD-20P-1 US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-20P-1 DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-21	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-21P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-22	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-22P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
242-1P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
242-2E	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014

242-3P	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
242-4E	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
242-5E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
242-6P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
242-7E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
242-7R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014

Line Name : HD25A-1-FWH23B to CV

3EXD-23N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-23P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-23	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.278	0.014
3EXD-24	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.309	0.014
3EXD-24P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-25	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-25P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-26	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-26P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-27	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-27P	STRAIGHT PIPE	53	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-28	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-28P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-29	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-29P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-30	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.287	0.014
3EXD-30P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-31	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-31P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-32	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-32P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-33	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.292	0.014
3EXD-33P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-33P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-34	TEE	15	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-40P	STRAIGHT PIPE	65	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-40	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-40P-1	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-41	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-41P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-42	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-42P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
243-1P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
243-2E	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
243-3P	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
243-4E	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
243-5P	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
243-6E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
243-7P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
243-8E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
243-8R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014

Line Name : HD26A-1-FWH23C to CV

3EXD-43N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-43P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-43	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-43P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017

3EXD-44	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-44P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-45	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.325	0.014
3EXD-45P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-46	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-46P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-47	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-47P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-48	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-48P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-49	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-49P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-50	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-50P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-50P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-51	TEE	15	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-58P US	STRAIGHT PIPE	65	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-58P DS	STRAIGHT PIPE	65	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-58	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-58P-1	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-59	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.299	0.014
3EXD-59P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-59P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-60	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-60P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
244-1P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
244-2E	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
244-3P	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
244-4E	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
244-5P	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
244-6E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
244-7P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
244-8E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
244-8R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014

Line Name : HD9-1-FWH25A to HTR DRN TK

5EXD-21N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXD-21P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-21	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXD-15P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-15	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.310	0.089
5EXD-16P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-16	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXD-17P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-17P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-17	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.295	0.089
5EXD-18P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-18	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXD-19P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-19	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXD-20P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-20P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-20	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.304	0.089
5EXD-VALVE-5EX-8	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	10.750	20	0.250	0.000	0.095
5EXD-20N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089

Line Name : HD9-2-FWH25B to HTR DRN TK

5EXD-9N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXD-9P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-9	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXD-10P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-10	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.309	0.089
5EXD-11P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-11	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXD-12P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-12	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXD-13P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-13	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXD-14P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-14P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-14	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXD-VALVE-5EX-8-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	10.750	20	0.250	0.000	0.095
5EXD-14N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089

Line Name : HD9-3-FWH25C to HTR DRN TK

5EXD-1N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXD-1P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-3	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.296	0.089
5EXD-2P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-4	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.285	0.089
5EXD-3P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-3P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-5	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.295	0.089
5EXD-4P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-1	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXD-5P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXD-6P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-6	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.285	0.089
5EXD-7	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.280	0.089
5EXD-8P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXD-8	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXD-VALVE-5EX-8-2	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	10.750	20	0.250	0.000	0.095
5EXD-8N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089

Line Name : MS56-1-PRESEP to MSR-A

5EX-49N	EXIT NOZZLE	31	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-49P1	STRAIGHT PIPE	61	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-49	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.250	SPE	0.625	0.000	0.231
5EX-49EJ1	ORIFICE	6	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-49P2	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-49EJ2	ORIFICE	6	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-52	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.250	SPE	0.625	0.000	0.231
5EX-52P	STRAIGHT PIPE	51	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-53	90-DEG ELBOW	4	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.250	SPE	0.625	0.000	0.231
5EX-53R	CON. EXPANDER	18	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-53P	STRAIGHT PIPE	68	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337

Line Name : MS56-2-PRESEP to MSR-A

5EX-50N	EXIT NOZZLE	31	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-50P1	STRAIGHT PIPE	61	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-50	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.250	SPE	0.625	0.000	0.231
5EX-50P2	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-62	45-DEG ELBOW	1	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.250	SPE	0.625	0.000	0.231
5EX-50EJ1	ORIFICE	6	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-50P3	STRAIGHT PIPE	51	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-50EJ2	ORIFICE	6	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-51	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.250	SPE	0.625	0.000	0.231
5EX-51P	STRAIGHT PIPE	51	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230

Line Name : MS56-3-PRESEP to MSR-A

5EX-54	TEE	12	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-54P	STRAIGHT PIPE	62	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-55	TEE	14	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337

Line Name : MS56-4-PRESEP to MSR23A

5EX-55EJ1	ORIFICE	6	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-55EJ2	ORIFICE	6	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-56	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.750	SPE	0.625	0.000	0.193
5EX-56P	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-56N	INLET NOZZLE	30	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191

Line Name : MS56-5-PRESEP to MSR-A

5EX-55R	CON. REDUCER	7	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-55P-1	STRAIGHT PIPE	68	A155/KC70/2	10	18.00	0.00	0.00	15800.0	38.000	SPE	0.500	0.000	0.264
5EX-57	TEE	14	A155/KC70/2	10	18.00	0.00	0.00	15800.0	38.000	SPE	0.500	0.000	0.264

Line Name : MS56-6-PRESEP to MSR22A

5EX-57EJ1	ORIFICE	6	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-57EJ2	ORIFICE	6	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-58	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.750	SPE	0.625	0.000	0.193
5EX-58P	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-58N	INLET NOZZLE	30	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191

Line Name : MS56-7-PRESEP to MSR21A

5EX-57R	CON. REDUCER	7	A155/KC70/2	10	18.00	0.00	0.00	15800.0	38.250	SPE	0.625	0.000	0.266
5EX-57P2	STRAIGHT PIPE	57	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.750	SPE	0.625	0.000	0.193
5EX-59	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.750	SPE	0.625	0.000	0.193
5EX-59EJ1	ORIFICE	6	A285/C/	0	18.00	0.00	0.00	25400.0	27.500	SPE	0.500	0.000	0.119
5EX-59P	STRAIGHT PIPE	56	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.750	SPE	0.625	0.000	0.193
5EX-59EJ2	ORIFICE	6	A285/C/	0	18.00	0.00	0.00	25400.0	27.500	SPE	0.500	0.000	0.119
5EX-60	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.750	SPE	0.625	0.000	0.193
5EX-60P	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-60N	INLET NOZZLE	30	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191

Line Name : MS57-1-PRESEP to MSR-B

5EX-37N	EXIT NOZZLE	31	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-37P1	STRAIGHT PIPE	61	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-37	90-DEG ELBOW	2	SA-312/TP304/	82	18.00	0.00	0.00	14800.0	33.250	SPE	0.625	0.000	0.247
5EX-37EJ1	ORIFICE	6	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-37P2	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-37EJ2	ORIFICE	6	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-40	90-DEG ELBOW	2	SA-312/TP304/	82	18.00	0.00	0.00	14800.0	33.250	SPE	0.625	0.000	0.247
5EX-40P	STRAIGHT PIPE	51	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-41	90-DEG ELBOW	2	SA-312/TP304/	82	18.00	0.00	0.00	14800.0	33.250	SPE	0.625	0.000	0.247
5EX-41R	CON. EXPANDER	18	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337

Line Name : MS57-2-PRESEP to MSR-B

5EX-38N	EXIT NOZZLE	31	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-38P	STRAIGHT PIPE	61	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-38	90-DEG ELBOW	2	SA-312/TP304/	82	18.00	0.00	0.00	14800.0	33.250	SPE	0.625	0.000	0.247
5EX-61P1	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-61	45-DEG ELBOW	1	SA-312/TP304/	82	18.00	0.00	0.00	14800.0	33.250	SPE	0.625	0.000	0.247
5EX-61EJ1	ORIFICE	6	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-61P2	STRAIGHT PIPE	51	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-61EJ2	ORIFICE	6	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-39	90-DEG ELBOW	2	SA-312/TP304/	82	18.00	0.00	0.00	14800.0	33.250	SPE	0.625	0.000	0.247
5EX-39P	STRAIGHT PIPE	51	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230

Line Name : MS57-3-PRESEP to MSR-B

5EX-42	TEE	12	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-41P	STRAIGHT PIPE	62	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-43	TEE	14	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337

Line Name : MS57-4-PRESEP to MSR23B

5EX-43EJ1	ORIFICE	6	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-43EJ2	ORIFICE	6	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-44	90-DEG ELBOW	2	SA-312/TP304/	82	18.00	0.00	0.00	14800.0	27.750	SPE	0.625	0.000	0.206
5EX-44N	INLET NOZZLE	30	A285/C/	0	18.00	0.00	0.00	25400.0	27.500	SPE	0.500	0.000	0.119

Line Name : MS57-5-PRESEP to MSR-B

5EX-43R	CON. REDUCER	7	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-43P1	STRAIGHT PIPE	57	A155/KC70/2	10	18.00	0.00	0.00	15800.0	38.000	SPE	0.500	0.000	0.264
5EX-45	TEE	14	A155/KC70/2	10	18.00	0.00	0.00	15800.0	38.000	SPE	0.500	0.000	0.264

Line Name : MS57-6-PRESEP to MSR22B

5EX-45EJ1	ORIFICE	6	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-45EJ2	ORIFICE	6	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-46	90-DEG ELBOW	2	SA-312/TP304/	82	18.00	0.00	0.00	14800.0	27.750	SPE	0.625	0.000	0.206
5EX-46N	INLET NOZZLE	30	A285/C/	0	18.00	0.00	0.00	25400.0	27.500	SPE	0.500	0.000	0.119

Line Name : MS57-7-PRESEP to MSR21B

5EX-45R	CON. REDUCER	7	A155/KC70/2	10	18.00	0.00	0.00	15800.0	38.250	SPE	0.625	0.000	0.266
5EX-47P2	STRAIGHT PIPE	57	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.750	SPE	0.625	0.000	0.193
5EX-47	90-DEG ELBOW	2	SA-312/TP304/	82	18.00	0.00	0.00	14800.0	27.750	SPE	0.625	0.000	0.206
5EX-47EJ1	ORIFICE	6	A285/C/	0	18.00	0.00	0.00	25400.0	27.500	SPE	0.500	0.000	0.119
5EX-47EJ2	ORIFICE	6	A285/C/	0	18.00	0.00	0.00	25400.0	27.500	SPE	0.500	0.000	0.119
5EX-48	90-DEG ELBOW	2	SA-312/TP304/	82	18.00	0.00	0.00	14800.0	27.750	SPE	0.625	0.000	0.206
5EX-48N	INLET NOZZLE	30	A285/C/	0	18.00	0.00	0.00	25400.0	27.500	SPE	0.500	0.000	0.119

Line Name : MSD27-1-MS21A to MSDT 21A

1A-16N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
1A-16P-1	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.410	0.100
1A-16	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.412	0.085
1A-16P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD27-2-MS21A to MSDT 21A

1A-17N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
1A-17P-1	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD27-3-MS21A to MSDT 21A

1A-19N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
1A-19P-1	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.408	0.100
1A-19	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.406	0.085
1A-19P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD27-4-MS21A to MSDT 21A

1A-17	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.405	0.085
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Line Name : MSD27-5-MS21A to MSDT 21A

1A-18	TEE	11	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.410	0.085
1A-18P US	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
1A-18P DS	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.263	0.100
1A-20	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.430	0.085
1A-VALVE-5EX-19L	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	20	0.250	0.000	0.091
1A-20P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
1A-VALVE-5EX-19M	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	20	0.250	0.000	0.091
1A-20P-1	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
1A-20N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085

Line Name : MSD28-1-MS22A to MSDT 22A

2A-16N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
2A-16P-1	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.404	0.100
2A-16	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.403	0.085
2A-16P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.399	0.100

Line Name : MSD28-2-MS22A to MSDT 22A

2A-17N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
2A-17P1	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD28-3-MS22A to MSDT 22A

2A-19N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
2A-19P-1	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
2A-19	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
2A-19P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD28-4-MS22A to MSDT 22A

2A-17	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
2A-17P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD28-5-MS22A to MSDT 22A

2A-18	TEE	11	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
2A-18P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
2A-20	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
2A-VALVE-5EX-19J	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	20	0.250	0.000	0.091
2A-20P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
2A-VALVE-5EX-19K	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	20	0.250	0.000	0.091
2A-20P-1	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
2A-20N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085

Line Name : MSD29-1-MS23A to MSDT 23A

3A-16N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
3A-16P-1	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
3A-16	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.422	0.085
3A-16P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD29-2-MS23A to MSDT 23A

3A-17N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
3A-17P1	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD29-3-MS23A to MSDT 23A

3A-19N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
3A-19P-1	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
3A-19	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.406	0.085
3A-19P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD29-4-MS23A to MSDT 23A

3A-17	TEE	12	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.402	0.100
3A-17P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD29-5-MS23A to MSDT 23A

3A-18	TEE	11	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.393	0.085
3A-18P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
3A-20	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
3A-VALVE-5EX-19G	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	20	0.250	0.000	0.091
3A-20P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
3A-VALVE-5EX-19H	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	20	0.250	0.000	0.091
3A-20P-1 US	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
3A-20P-1 DS	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.278	0.100
3A-21	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.305	0.085
3A-21P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.292	0.100
3A-21N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085

Line Name : MSD30-1-MS21B to MSDT 21B

1B-16N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
1B-16P-1	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.435	0.100
1B-16	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.426	0.085
1B-16P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD30-2-MS21B to MSDT 21B

1B-18N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
1B-18P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD30-3-MS21B to MSDT 21B

1B-19N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
1B-19P-1	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.407	0.100
1B-19	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.386	0.085
1B-19P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.398	0.100

Line Name : MSD30-4-MS21B to MSDT 21B

1B-18	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.396	0.085
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Line Name : MSD30-5-MS21B to MSDT 21B

1B-17	TEE	11	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.415	0.085
1B-17P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
1B-20	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
1B-VALVE-5EX-19	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	20	0.250	0.000	0.091
1B-20P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
1B-VALVE-5EX-19F	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	20	0.250	0.000	0.091
1B-20P-1	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
1B-20N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085

Line Name : MSD31-1-MS22B to MSDT 22B

2B-16N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
2B-16P-1	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.413	0.100
2B-16	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.392	0.085
2B-16P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD31-2-MS22B to MSDT 22B

2B-18N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
2B-18P1	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD31-3-MS22B to MSDT 22B

2B-19N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
2B-19P-1	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.419	0.100
2B-19	TEE	12	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.416	0.100
2B-19P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD31-4-MS22B to MSDT 22B

2B-18	TEE	12	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.367	0.100
2B-18P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD31-5-MS22B to MSDT 22B

2B-17	TEE	11	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.411	0.100
2B-17P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
2B-20	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
2B-VALVE-5EX-19D	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	20	0.250	0.000	0.091
2B-20P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
2B-VALVE-5EX-19E	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	20	0.250	0.000	0.091
2B-20P-1	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
2B-20N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085

Line Name : MSD32-1-MS23B to MSDT 23B

3B-16N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
3B-16P-1	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
3B-16	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.425	0.085
3B-16P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD32-2-MS23B to MSDT 23B

3B-18N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
3B-18P1	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD32-3-MS23B to MSDT 23B

3B-19N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
3B-19P-1	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
3B-19	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.407	0.085
3B-19P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100

Line Name : MSD32-4-MS23B to MSDT 23B

3B-18	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.417	0.085
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3B-18P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
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Line Name : MSD32-5-MS23B to MSDT 23B

3B-17	TEE	11	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.437	0.100
3B-17P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
3B-20	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
3B-VALVE-5EX-19B	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	20	0.250	0.000	0.091
3B-20P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
3B-VALVE-5EX-19C	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	12.750	20	0.250	0.000	0.091
3B-20P-1	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
3B-21	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085
3B-21P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.100
3B-21N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.085

Line Name : MSD33A-1-MSDT 21A to HDT

1A-12N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
1A-12P	STRAIGHT PIPE	61	A53/B/E	2	18.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.068
1A-12	TEE	15	A234/WPB/	21	18.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
1A-12P-1	STRAIGHT PIPE	64	A53/B/E	2	18.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.068
1A-11	90-DEG RED. ELBOW	16	A234/WPB/	21	18.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
1A-11P	STRAIGHT PIPE	66	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1A-10	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1A-10P	STRAIGHT PIPE	52	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1A-1	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1A-VALVE-5EX-29-1	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	6.625	40	0.280	0.000	0.048
1A-2	90-DEG ELBOW	4	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1A-2P	STRAIGHT PIPE	54	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1A-3	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1A-3P	STRAIGHT PIPE	52	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1A-4	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1A-4P	STRAIGHT PIPE	52	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1A-5	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1A-5P	STRAIGHT PIPE	52	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1A-6	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1A-6P	STRAIGHT PIPE	52	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1A-7	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1A-7P	STRAIGHT PIPE	52	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1A-8	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1A-8P	STRAIGHT PIPE	52	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1A-9	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1A-9P	STRAIGHT PIPE	52	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1A-13	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1A-13P	STRAIGHT PIPE	52	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1A-15	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1A-15N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.438	0.044

Line Name : MSD34A-1-MSDT 22A to HDT

2A-3N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
2A-3P-1	STRAIGHT PIPE	61	A106/B/	5	18.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
2A-3	TEE	15	A234/WPB/	21	18.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
2A-3P	STRAIGHT PIPE	64	A106/B/	5	18.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
2A-4	90-DEG RED. ELBOW	16	A234/WPB/	21	18.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
2A-4P	STRAIGHT PIPE	66	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044

2A-5	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-5P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-1	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-VALVE-5EX-29-2	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	6.625	40	0.280	0.000	0.048
2A-2P	STRAIGHT PIPE	58	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-2	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-2P-1	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-6	45-DEG ELBOW	1	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-6P	STRAIGHT PIPE	51	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-7	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-7P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-8	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-8P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-9	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-9P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-10	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-10P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-12	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-12P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-13	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-13P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-15	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-15N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044

Line Name : MSD35A-1-MSDT 23A to HDT

3A-16N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
3A-16P US	STRAIGHT PIPE	61	A106/B/	5	18.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
3A-16	TEE	15	A234/WPB/	21	18.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
3A-1P	STRAIGHT PIPE	64	A53/B/E	2	18.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.068
3A-1	90-DEG RED. ELBOW	16	A234/WPB/	21	18.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
3A-VALVE-5EX-29-3	CHECK VALVE	25	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-2P	STRAIGHT PIPE	58	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-2	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-3	90-DEG ELBOW	4	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-3P	STRAIGHT PIPE	54	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-17	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-17P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-18	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-18P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-19	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-19P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-20	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-20P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-21	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-21P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-13	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-13P	STRAIGHT PIPE	52	A106/B/	5	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-15	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-15N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044

Line Name : MSD36A-1-MSDT 21B to HDT

1B-3N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
1B-3P	STRAIGHT PIPE	61	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	8.625	40	0.322	0.000	0.066
1B-3	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	8.625	40	0.322	0.000	0.066
1B-4P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	8.625	40	0.322	0.000	0.066

1B-4	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	8.625	40	0.322	0.000	0.066
1B-5	TEE	15	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	8.625	40	0.322	0.000	0.066
1B-5R	CON. REDUCER	7	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	8.625	40	0.322	0.000	0.066
1B-5P	STRAIGHT PIPE	57	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
1B-1	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
1B-VALVE-5EX-29-4	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	6.625	40	0.280	0.000	0.048
1B-2P	STRAIGHT PIPE	58	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
1B-2	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
1B-6P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
1B-6	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
1B-7P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
1B-7	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
1B-7P-1	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
1B-8	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
1B-8P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
1B-9	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
1B-9P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
1B-10	45-DEG ELBOW	1	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
1B-10P US	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
1B-10P DS	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
1B-11	45-DEG ELBOW	1	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
1B-11P US	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
1B-11P DS	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
1B-12	45-DEG ELBOW	1	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
1B-12P US	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
1B-12P DS	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
1B-14	45-DEG ELBOW	1	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
1B-14P	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
1B-13	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
1B-13P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
1B-15	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
1B-15P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
1B-15N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044

Line Name : MSD37A-1-MSDT 22B to HDT

2B-1N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
2B-1P	STRAIGHT PIPE	61	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	8.625	40	0.322	0.000	0.066
2B-1	TEE	15	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	8.625	40	0.322	0.000	0.066
2B-2P	STRAIGHT PIPE	64	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	8.625	40	0.322	0.000	0.066
2B-2	90-DEG RED. ELBOW	16	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	8.625	40	0.322	0.000	0.066
2B-3	90-DEG ELBOW	4	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
2B-3P	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
2B-4	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
2B-VALVE-5EX-29-5	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	6.625	40	0.280	0.000	0.048
2B-4P	STRAIGHT PIPE	58	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
2B-5	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
2B-5P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
2B-6	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
2B-6P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
2B-7	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
2B-7P US	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
2B-7P DS	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
2B-8	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
2B-8P US	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
2B-8P DS	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
2B-9	45-DEG ELBOW	1	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
2B-9P US	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051

2B-9P DS	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
2B-10	45-DEG ELBOW	1	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
2B-10P US	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
2B-10P DS	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
2B-11	45-DEG ELBOW	1	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
2B-11P	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
2B-12	45-DEG ELBOW	1	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
2B-12P US	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
2B-12P DS	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
2B-13	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
2B-13P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
2B-15	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	13021.0	6.625	40	0.280	0.000	0.051
2B-15P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13088.0	6.625	40	0.280	0.000	0.051
2B-15N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044

Line Name : MSD38A-1-MSDT 23B to HDT

3B-3N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
3B-3P	STRAIGHT PIPE	61	A53/B/E	2	18.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.068
3B-3	TEE	15	A234/WPB/	21	18.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
3B-4P	STRAIGHT PIPE	64	A53/B/E	2	18.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.068
3B-4	90-DEG RED. ELBOW	16	A234/WPB/	21	18.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.058
3B-5	90-DEG ELBOW	4	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-5P	STRAIGHT PIPE	54	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-1	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-VALVE-5EX-29-6	CHECK VALVE	25	A216/WCB/	93	0.00	0.00	0.00	14000.0	6.625	40	0.280	0.000	0.048
3B-2P	STRAIGHT PIPE	58	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-2	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-2P-1	STRAIGHT PIPE	52	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-6	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-6P	STRAIGHT PIPE	52	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-7	45-DEG ELBOW	1	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-7P	STRAIGHT PIPE	51	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-8	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-8P	STRAIGHT PIPE	52	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-9	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-9P DS	STRAIGHT PIPE	52	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-10	45-DEG ELBOW	1	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-10P US	STRAIGHT PIPE	51	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-10P DS	STRAIGHT PIPE	51	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-11	45-DEG ELBOW	1	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-11P US	STRAIGHT PIPE	51	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-11P DS	STRAIGHT PIPE	51	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-12	45-DEG ELBOW	1	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-12P US	STRAIGHT PIPE	51	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-14	45-DEG ELBOW	1	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-14P	STRAIGHT PIPE	51	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-13	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-13P	STRAIGHT PIPE	52	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-15	90-DEG ELBOW	2	A234/WPB/	21	18.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-15P	STRAIGHT PIPE	52	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-15N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044

Line Name : MSD39-1-RHTR 21A to RHDT 21A

MS-1AN	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1AOP	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

MS-1AN-1	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
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Line Name : MSD40-1-RHTR 22A to RHDT 22A

MS-2AN	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A0P	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2AN-1	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

Line Name : MSD41-1-RHTR 23A to RHDT 23A

MS-3AN	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A0P	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3AN-1	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

Line Name : MSD42-1-RHTR 21B to RHDT 21B

MS-1BN	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B0P	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1BN-1	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

Line Name : MSD43-1-RHTR 22B to RHDT 22B

MS-2BN	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B0P	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2BN-1	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

Line Name : MSD44-1-RHTR 23B to RHDT 23B

MS-3BN	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B0P	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3BN-1	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

Line Name : MSD45A-1-RHDT21A to CV

MS-1A11N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A11P-1	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A11	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A11P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A11P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A12	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A12P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A12P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A13	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A13P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A13P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A14	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A14P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A14P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A14A	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A15	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A15P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A15P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

MS-1A16	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A16P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A17	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A17P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A17P DS	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A18	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A18P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A19	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A20	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A20P	STRAIGHT PIPE	53	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A21	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A21P US	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A21P DS	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A21R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A21P-1	STRAIGHT PIPE	68	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A22	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A22P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A22P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A22P-1	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A23	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A24	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A24P DS	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A24R	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A24P-1	STRAIGHT PIPE	67	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A24FE	ORIFICE	6	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A25P-1	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A25	TEE	15	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A25P	STRAIGHT PIPE	65	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A26	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A26P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A27	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A27P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A28	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A28P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A28P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A29	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A29P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A29P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A30	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A30P-1	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A30R-1	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

Line Name : MSD45B-1-RHDT21A CV to FWH26

MS-1A-VALVE-LCV-1104	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	4.500	80	0.337	0.000	0.169
MS-1A30R2	CON. EXPANDER	18	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MS-1A30P2	STRAIGHT PIPE	68	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MS-1A31	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MS-1A31P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MS-1A32	45-DEG ELBOW	1	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MS-1A32P	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206

Line Name : MSD45C-1-RHDT A HDR to FWH26

MS-1A34T1	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A34P1	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378

Line Name : MSD45C-2-RHDT A HDR to FWH26

MS-1A34T2	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A34P2	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A35	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378

Line Name : MSD45C-3-RHDT A HDR to FWH26

MS-1A35T	TEE	12	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A36	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A36P US	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A36P DS	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A37	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A37P US	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A37P DS	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A38	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A38P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A39	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A39P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A40	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A40P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A41	TEE	14	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	10.750	80	0.594	0.000	0.349

Line Name : MSD45C-4-RHDT A HDR to FWH26C

MS-1A63P US	STRAIGHT PIPE	64	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MS-1A63P DS	STRAIGHT PIPE	64	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MS-1A63	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MS-1A64P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MS-1A64P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MS-1A64	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MS-1A65P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MS-1A65P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MS-1A65	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MS-1A-VALVE-MS-14-2	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	6.625	80	0.432	0.000	0.249
MS-1A66P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A66P DS	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A66	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A67P US	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A67P DS	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A67	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A67P-1	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A67R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A67N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303

Line Name : MSD45C-5-RHDT A HDR to FWH26

MS-1A41R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-1A41P-1 US	STRAIGHT PIPE	57	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A41P-1 DS	STRAIGHT PIPE	57	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A42	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A42P US	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A42P DS	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A43	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A43P US	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303

MS-1A43P DS	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A44	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A44P US	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A44P DS	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A45	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A45P US	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A68	TEE	14	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303

Line Name : MSD45D-1-RHDT A HDR to FWH26B

MS-1A68P	STRAIGHT PIPE	64	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A55	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A55P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A56	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A57	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A57P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A57P DS	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A58	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A58P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A59	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A59P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A59P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A60	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A-VALVE-MS-14-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	6.625	80	0.432	0.000	0.249
MS-1A60P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A60P DS	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A61	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A61P US	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A61P DS	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A62	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A61P-1	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A62R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A62N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303

Line Name : MSD45D-2-RHDT A HDR to FWH26A

MS-1A45R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A45P-1 US	STRAIGHT PIPE	67	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A45P-1 DS	STRAIGHT PIPE	67	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A46	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A46P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A47	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A47P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A47P DS	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A48	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A49	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A49P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A49P DS	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A50	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A50P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A51	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A51P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A51P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A52	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A-VALVE-MS-14	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	6.625	80	0.432	0.000	0.249
MS-1A52P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A52P DS	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

MS-1A53	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A53P US	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A53P DS	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A54	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A53P-1	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1A54R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A54N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303

Line Name : MSD46A-1-RHDT22A to CV

MS-2A11N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A11P-1	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A11	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A11P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A11P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A12	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A12P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A12P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A13	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A13P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A14	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A14P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A15	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A15R-1	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A15P-1	STRAIGHT PIPE	68	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A15R-2	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A15P-2	STRAIGHT PIPE	67	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A15FE	ORIFICE	6	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A15P-3	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A15R-3	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A15P-4	STRAIGHT PIPE	68	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A15P-5	TEE	15	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A15P-6	STRAIGHT PIPE	65	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A16	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A16P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A17	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A17P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A17P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A18	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A18P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A18P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A19	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A19P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A19P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A20	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A20P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A21	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A21P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A21P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.560	0.303
MS-2A21R	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A22	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A22P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A22P DS	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A23	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A23P-1	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2A23R	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

Line Name : MSD46A-2-RHDT22A CV to FWH26

MS-2A-VALVE-LCV-1104A	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	3.500	160	0.438	0.000	0.132
MS-2A24R	CON. EXPANDER	18	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MS-2A23P	STRAIGHT PIPE	68	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MS-2A24	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MS-2A24P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MS-2A25	45-DEG ELBOW	1	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MS-2A25P	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206

Line Name : MSD47-1-RHDT23A to CV

MS-3A11N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A11P	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A11	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A12P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A12	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A13P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A13	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A14P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A14	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A15P-1 US	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A15P-1 DS	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A15	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A15P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A16	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A16P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A16FE	ORIFICE	6	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A17P-1	STRAIGHT PIPE	56	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A17R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-3A17	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-3A17P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-3A18	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-3A18P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-3A19	TEE	15	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-3A19R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-3A19P US	STRAIGHT PIPE	57	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A19P DS	STRAIGHT PIPE	57	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A20	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A21	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A21P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A21P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A22	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A22P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A23	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3A23R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

Line Name : MSD47-2-RHDT23A CV to FWH26

MS-3A-VALVE-LCV-1104B	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	4.500	80	0.337	0.000	0.169
MS-3A24R	CON. EXPANDER	18	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MS-3A23P	STRAIGHT PIPE	68	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MS-3A24	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MS-3A24P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MS-3A25	45-DEG ELBOW	1	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MS-3A25P	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206

Line Name : MSD48A-1-RHDT21B to CV

MS-1B11N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B11P-1	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B11	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B11P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B12	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B12P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B13	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B13P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B14	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B14P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B14FE	ORIFICE	6	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B14P-1 US	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B15	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B15P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B16	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B16P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B17	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B17P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B18	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B18P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B19	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B19P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B20	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B20P-1	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B20R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B20P	STRAIGHT PIPE	68	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B21	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B22	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B22P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B23	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B23P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B23R	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B24	TEE	15	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B24P US	STRAIGHT PIPE	65	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B25	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B25P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B26	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B27P-1	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B27	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B27P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B28	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B28P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B29	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B29P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B30	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B30P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B31	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B31P US	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B31P DS	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B32	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B32P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B32P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B33	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B33P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B33R	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

Line Name : MSD48B-1-RHDT21B CV to FWH26

MS-1B-VALVE-LCV-1105	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	4.500	80	0.337	0.000	0.169
MS-1B34R	CON. EXPANDER	18	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MS-1B33P-1	STRAIGHT PIPE	68	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MS-1B34	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MS-1B34P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B34P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B35	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B35P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

Line Name : MSD48B-2-RHDT B HDR to FWH26

MS-1B36	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B36P US	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B36P DS	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B37	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B37P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B38	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B38P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B39	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1B39P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303

Line Name : MSD49A-1-RHDT22B to CV

MS-2B11N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B11P-1	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B11	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B11P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B12	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B12P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B13	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B13P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B14	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B14P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B15	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B15P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B16	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B16P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B17	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B17P-3	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B17R-1	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B17P DS	STRAIGHT PIPE	68	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.636	0.378
MS-2B17R-2	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B17P-1 US	STRAIGHT PIPE	67	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B17FE	ORIFICE	6	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B17P-2 DS	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B18R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B18P-1 US	STRAIGHT PIPE	68	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B18	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B18P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B19	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B19P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B20	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B20P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B21	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378

MS-2B21P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B21P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B22	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.633	0.378
MS-2B23	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B23P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B23P DS	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B24	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B24P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B25	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B25P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B26	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B26P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B27	TEE	15	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B27P-1	STRAIGHT PIPE	65	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B27R	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B27P-2	STRAIGHT PIPE	67	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B28R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B28P-1	STRAIGHT PIPE	68	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B28	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B28P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B29	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B29P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B30	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B30R1	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378

Line Name : MSD49B-1-RHDT22B CV to FWH26

MS-2B-VALVE-LCV-1105A	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	4.500	80	0.337	0.000	0.169
MS-2B30R2	CON. EXPANDER	18	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	10.750	60	0.500	0.000	0.349
MS-2B31P	STRAIGHT PIPE	68	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	10.750	60	0.500	0.000	0.335
MS-2B31	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	10.750	60	0.500	0.000	0.349
MS-2B31P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B31P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B32	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B32P US	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B32P DS	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B33	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378

Line Name : MSD49C-1-RHDT B HDR to FWH26

MS-2B34	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B33P	STRAIGHT PIPE	62	A335/P22/	26	1.90	0.00	0.87	15000.0	10.750	80	0.594	0.000	0.378
MS-2B35	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	10.750	80	0.594	0.000	0.378
MS-2B35P	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	10.750	80	0.594	0.000	0.378
MS-2B36	90-DEG ELBOW	4	A234/WP22/	18	1.90	0.00	0.87	15000.0	10.750	80	0.594	0.000	0.378
MS-2B36P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B36P DS	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B63	TEE	14	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378

Line Name : MSD49C-2-RHDT B HDR to FWH26C

MS-2B63P	STRAIGHT PIPE	64	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B50	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B50P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B51	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B52	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

MS-2B52P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B52P DS	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B53	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MS-2B-VALVE-MS-15-2	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	6.625	80	0.432	0.000	0.249
MS-2B53P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B53P DS	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B54	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B54P	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B55	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B55P	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B55R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303

Line Name : MSD49C-3-RHDT B HDR

MS-2B63P-1 US	STRAIGHT PIPE	64	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B64	TEE	14	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378

Line Name : MSD49C-4-RHDT B HDR to FWH26B

MS-2B64P	STRAIGHT PIPE	64	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B44	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B44P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B45	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B45P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B45P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B46	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B46P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B46P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B47	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B-VALVE-MS-15-1	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	6.625	80	0.432	0.000	0.249
MS-2B47P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B47P DS	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B48	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B48P US	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B48P DS	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B49	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B49P	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B49R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2B49N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303

Line Name : MSD49C-5-RHDT B HDR to FWH26A

MS-2B64R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
MS-2B64P-1 US	STRAIGHT PIPE	57	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B37	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B37P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B38	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B38P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B39	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B39P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B40	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B40P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B40P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B41	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B-VALVE-MS-15	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	6.625	80	0.432	0.000	0.249
MS-2B41P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

MS-2B42	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B42P US	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B42P DS	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B43	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B43P	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-2B43R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2B43N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

Line Name : MSD50A-1-RHDT23B to CV

MS-3B11N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B11P-1	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B11	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B11P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B12	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B12P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B13	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B13P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B14	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B14P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B15	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B16	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B16P	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B17	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B17P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B18	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B18P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B19	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.457	0.233
MS-3B20	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B20P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B21	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B21P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B21PE	ORIFICE	6	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B21P-1	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B22	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B22P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B22P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B23	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B23P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B24	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B24P US	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B24P DS	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B25	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.441	0.233
MS-3B25P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.437	0.233
MS-3B26	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B26P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B27	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B27P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B28	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B28P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B29	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B29P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B30	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B30P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B31	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B31P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B30	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B30P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233

MS-3B31	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B31P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B32	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B32P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B33	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B33P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B34	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B34P	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B35	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B35P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B36	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B36P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B37	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B37P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B38	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B38P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B38P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B39	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B40	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B40R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.500	0.000	0.303
MS-3B40P	STRAIGHT PIPE	68	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-3B41	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-3B41P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-3B41P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-3B42	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-3B42P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-3B42P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-3B42R	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303

Line Name : MSD50C-1-RHDT23B CV to FWH26

MS-3B-VALVE-LCV-1105B	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	4.500	80	0.337	0.000	0.169
MS-3B43R	CON. EXPANDER	18	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	8.625	80	0.500	0.000	0.280
MS-3B43	90-DEG ELBOW	4	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	8.625	80	0.500	0.000	0.280
MS-3B43P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303

Line Name : SG51-1-CONT PEN to SGBFTK

MS46-1P-1	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS46-1	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS46-1P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.248	0.083
MS46-1P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.244	0.083
MS46-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS46-2P-3	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.256	0.083
MS46-VALVE-PCV-1214	GATE VALVE	22	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072
MS46-2P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS46-VALVE-PCV-1214A	GATE VALVE	22	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072
MS46-2P-1	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS46-2R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS46-2P-2	STRAIGHT PIPE	68	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS46-3	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS46-3P	STRAIGHT PIPE	53	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS46-3FE	ORIFICE	6	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS46-4P-1 US	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS46-4P-1 DS	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS46-4	90-DEG RED. ELBOW	16	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.317	0.123
MS46-4P US	STRAIGHT PIPE	66	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083

MS46-4P DS	STRAIGHT PIPE	66	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS46-5	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS46-5P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS46-VALVE-MS-131-A	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	2.375	80	0.218	0.000	0.089
MS46-6P1	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS46-6	45-DEG ELBOW	1	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072
MS46-6P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS46-6-1	45-DEG ELBOW	1	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072
MS46-6-1P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS46-7	TEE	15	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS46-VALVE-HCV-5046	CONTROL VALVE	24	A216/WCB/	93	0.00	0.00	0.00	14000.0	2.375	80	0.218	0.000	0.089
MS46-7R	CON. REDUCER	7	A-182/F316L/	62	16.00	0.00	2.00	13896.0	2.375	80	0.218	0.000	0.090
MS46-7P2	STRAIGHT PIPE	67	A-312/TP316L/	67	16.00	0.00	2.00	13896.0	1.315	80	0.179	0.000	0.050
MS46-Valve-MS-71-A	ANGLE VALVE	20	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040

Line Name : SG52-1-CONT PEN to SGBFTK

MS45-1P-1	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.252	0.083
MS45-1	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS45-1P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS45-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS45-VALVE-PCV-1215	GATE VALVE	22	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072
MS45-2P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS45-VALVE-PCV-1215A	GATE VALVE	22	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072
MS45-2P-1	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS45-2R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS45-2P-3	STRAIGHT PIPE	68	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS45-3	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS45-3P	STRAIGHT PIPE	53	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS45-3FE	ORIFICE	6	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS45-3P-1	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS45-4	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS45-4P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS45-5	90-DEG RED. ELBOW	16	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS45-VALVE-MS-131-B	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	2.375	80	0.218	0.000	0.089
MS45-5P	STRAIGHT PIPE	66	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS45-6	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS45-6P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS45-7	TEE	15	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS45-VALVE-HCV-5047	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	2.375	80	0.218	0.000	0.089
MS45-7R	CON. REDUCER	7	A-182/F316L/	62	16.00	0.00	2.00	13896.0	2.375	80	0.218	0.000	0.090
MS45-7P2	STRAIGHT PIPE	57	A-312/TP316L/	67	16.00	0.00	2.00	13896.0	1.315	80	0.179	0.000	0.050
MS45-VALVE-MS-71-B	ANGLE VALVE	20	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040

Line Name : SG53-1-CONT PEN to SGBFTK

MS47-1P-1	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.240	0.083
MS47-1	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS47-1P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS47-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS47-VALVE-PCV-1216	GATE VALVE	22	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072
MS47-2P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS47-VALVE-PCV-1216A	GATE VALVE	22	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072
MS47-2P-1	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS47-2R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS47-2P-2	STRAIGHT PIPE	68	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS47-3	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123

MS47-3P	STRAIGHT PIPE	53	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS47-3FE	ORIFICE	6	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS47-4P-1	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS47-4	90-DEG RED. ELBOW	16	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS47-4P DS	STRAIGHT PIPE	66	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS47-5	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.299	0.072
MS47-5P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS47-6	45-DEG ELBOW	1	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072
MS47-6P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS47-VALVE-MS-131C	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	2.375	80	0.218	0.000	0.089
MS47-7	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072
MS47-7P1	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS47-8	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072
MS47-8VP	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.236	0.083
MS47-9	TEE	15	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072
MS47-9P	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS47-10	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS47-VALVE-HCV-5048	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	2.375	80	0.218	0.000	0.089
MS47-10P1	STRAIGHT PIPE	52	SA-312/TP304/	82	18.00	0.00	0.00	14176.0	2.375	80	0.218	0.000	0.088
MS47-10R	CON. REDUCER	17	SA-182/F304L/	77	18.00	0.00	0.00	13344.0	2.375	80	0.218	0.000	0.094
MS47-10P2	STRAIGHT PIPE	67	SA-312/TP316L/	83	16.00	0.00	2.00	13896.0	1.315	80	0.179	0.000	0.050
MS47-VALVE-MS-71C	ANGLE VALVE	20	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040

Line Name : SG54-1-CONT PEN to SGBFTK

MS48-1P-1	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-1	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-1P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-1P-2	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-VALVE-PCV-1217	GATE VALVE	22	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072
MS48-2P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-VALVE-PCV-1217A	GATE VALVE	22	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072
MS48-2P-1	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-2R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS48-2P-2	STRAIGHT PIPE	68	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS48-3	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS48-3P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS48-3FE	ORIFICE	6	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS48-4P-1	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS48-4	90-DEG RED. ELBOW	16	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
MS48-4P	STRAIGHT PIPE	66	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-5	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-5P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-6	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-6P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-VALVE-MS-131D	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	2.375	80	0.218	0.000	0.089
MS48-7	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-7P1	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-8	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-8VP	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-9	TEE	15	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-9P	STRAIGHT PIPE	65	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-10	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-10P1	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
MS48-VALVE-HCV-5049	GATE VALVE	22	A216/WCB/	93	0.00	0.00	0.00	14000.0	2.375	80	0.218	0.000	0.089
MS48-10R	CON. REDUCER	17	SA-182/F304L/	77	18.00	0.00	0.00	13344.0	2.375	80	0.218	0.000	0.094
MS48-10P2	STRAIGHT PIPE	67	SA-312/TP316L/	83	16.00	0.00	2.00	13896.0	1.315	80	0.179	0.000	0.050

MS48-VALVE-MS-71D	ANGLE VALVE	20	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
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Line Name : xNCW_15 HDT VENT TO 25A

5EXV-13N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXV-13P US	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXV-13P DS	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXV-13	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXV-12P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXV-11	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXV-3	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXV-3N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089

Line Name : xNCW_15 HDT VENT TO 25B

5EXV-10N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXV-10P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXV-10	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXV-9P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXV-9	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXV-8	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXV-2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXV-2N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089

Line Name : xNCW_15 HDT VENT TO 25C

5EXV-7N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXV-7P	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXV-7	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXV-6P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXV-6	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXV-5	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXV-5P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	20	0.250	0.000	0.104
5EXV-4	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXV-1	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089
5EXV-1N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	20	0.250	0.000	0.089

Line Name : xNCW_151 Main Steam

MS21-1	90-DEG ELBOW	2	A234/WPC/	22	0.00	0.00	0.00	17500.0	28.000	SPE	0.912	0.000	0.847
MS21-1 DS	STRAIGHT PIPE	52	A672/B70/21	0	0.00	0.00	0.00	17500.0	28.000	SPE	0.912	0.000	0.847

Line Name : xNCW_153 Main Steam

MS23-1	90-DEG ELBOW	2	A234/WPC/	22	0.00	0.00	0.00	17500.0	28.000	SPE	0.912	0.000	0.847
MS23-1 DS	STRAIGHT PIPE	52	A672/B70/21	0	0.00	0.00	0.00	17500.0	28.000	SPE	0.912	0.000	0.847

Line Name : xNCW_18

5EXC-1P DS	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	24.000	20	0.375	0.000	0.233
5EXC-1	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	20	0.375	0.000	0.199
5EXC-2P US	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	24.000	20	0.375	0.000	0.233
5EXC-2P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	24.000	20	0.375	0.000	0.233

5EXC-2	TEE	10	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	20	0.375	0.000	0.199
5EXC-3	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	24.000	20	0.375	0.000	0.199
5EXC-2A	STRAIGHT PIPE	60	A53/B/E	2	0.00	0.00	0.00	12800.0	24.000	20	0.375	0.000	0.233
5EXC-7P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	10.750	20	0.250	0.000	0.103
5EXC-8	TEE	12	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	10.750	20	0.250	0.000	0.103
5EXC-30	CON. EXPANDER	18	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	14.000	20	0.312	0.000	0.025
5EXC-11P DS	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	14.000	20	0.312	0.000	0.027
5EXC-11	90-DEG ELBOW	2	SA-312/TP304/	82	18.00	0.00	0.00	15200.0	14.000	20	0.312	0.000	0.023
5EXC-11N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	14.000	20	0.312	0.000	0.027
5EXC-13P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	14.000	20	0.312	0.000	0.136
5EXC-14	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	20	0.312	0.000	0.116
5EXC-15P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	10.750	20	0.250	0.000	0.103
5EXC-16	TEE	12	A-403/WP304H/	0	18.00	0.00	0.00	12900.0	10.750	20	0.250	0.000	0.103
5EXC-31	CON. EXPANDER	18	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	14.000	20	0.312	0.000	0.025
5EXC-19P DS	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	14.000	20	0.312	0.000	0.027
5EXC-19	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	14.000	20	0.312	0.000	0.025
5EXC-19P-1	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	14.000	20	0.312	0.000	0.027
5EXC-19N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	14.000	20	0.312	0.000	0.027
5EXC-21P-1 US	STRAIGHT PIPE	57	A53/B/E	2	0.00	0.00	0.00	12800.0	14.000	20	0.312	0.000	0.136
5EXC-21P-1 DS	STRAIGHT PIPE	57	A53/B/E	2	0.00	0.00	0.00	12800.0	14.000	10	0.250	0.000	0.136
5EXC-21P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	14.000	20	0.312	0.000	0.136
5EXC-29P DS	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	14.000	20	0.312	0.000	0.027
5EXC-29	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	14.000	20	0.312	0.000	0.025
5EXC-30P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	14.000	20	0.312	0.000	0.027
5EXC-25P	STRAIGHT PIPE	58	A-312/TP304H/	0	18.00	0.00	0.00	13000.0	10.750	20	0.250	0.000	0.103
5EXC-27	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	20	0.312	0.000	0.023
5EXC-27P	STRAIGHT PIPE	62	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	14.000	20	0.312	0.000	0.025
5EXC-17	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	20	0.312	0.000	0.023
5EXC-17P US	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	14.000	20	0.312	0.000	0.027
5EXC-25	ECC. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	14.000	20	0.312	0.000	0.116

Line Name : xNCW_19 HTR DRN PMP VENT

5EX-30	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	2.375	40	0.154	0.000	0.014
5EX-29P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.016
5EX-30P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.016

Line Name : xNCW_200

200-6E	90-DEG EXP. ELBOW	19	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
200-6P	STRAIGHT PIPE	69	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
200-13E	90-DEG EXP. ELBOW	19	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
200-13P	STRAIGHT PIPE	69	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378

Line Name : xNCW_201

201-6E	90-DEG EXP. ELBOW	19	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
201-6P	STRAIGHT PIPE	69	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
201-13E	90-DEG EXP. ELBOW	19	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
201-13P	STRAIGHT PIPE	69	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378

Line Name : xNCW_202

202-6E	90-DEG EXP. ELBOW	19	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
202-6P	STRAIGHT PIPE	69	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378

202-13E	90-DEG EXP. ELBOW	19	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
202-13P	STRAIGHT PIPE	69	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378

Line Name : xNCW_203

203-6E	90-DEG EXP. ELBOW	19	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
203-6P	STRAIGHT PIPE	69	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
203-13E	90-DEG EXP. ELBOW	19	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
203-13P	STRAIGHT PIPE	69	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378

Line Name : xNCW_204

204-6E	90-DEG EXP. ELBOW	19	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
204-6P	STRAIGHT PIPE	69	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
204-13E	90-DEG EXP. ELBOW	19	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
204-13P	STRAIGHT PIPE	69	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378

Line Name : xNCW_205

205-5R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.071
205-5P US	STRAIGHT PIPE	68	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.084
205-13R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.071
205-13P US	STRAIGHT PIPE	68	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.084
205-14P DS	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.084
205-15T	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.071
205-15P US	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.084
205-22R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.071
205-22P US	STRAIGHT PIPE	68	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.084
205-22P-1	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.084
205-5P-1 DS	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.084
205-23T	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.071
205-23P US	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.084
205-23P DS	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.084
205-24T	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.071
205-24P US	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.084

Line Name : xNCW_206

206-6P	STRAIGHT PIPE	58	A106/C/	6	0.00	0.00	0.00	17500.0	8.625	80	0.500	0.000	0.261
206-7E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
206-8E	90-DEG EXP. ELBOW	19	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
206-8P	STRAIGHT PIPE	69	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
206-16E	90-DEG EXP. ELBOW	19	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378
206-16P	STRAIGHT PIPE	69	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	80	0.594	0.000	0.378

Line Name : xNCW_207

207-1R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.076
207-9R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.076

Line Name : xNCW_208

208-1R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.021
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208-1P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.025
208-3R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.021
208-3P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.025
208-5R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.021
208-5P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.025
208-6R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.021
208-6P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.025

Line Name : xNCW_209

209-5P US	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013
209-5E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.011
209-1E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.011
209-1P US	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013
209-3E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.011
209-3P US	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013

Line Name : xNCW_210

210-3P-1	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
210-3P-2	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
210-3P-3 DS	STRAIGHT PIPE	58	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	4.500	80	0.337	0.000	0.140
210-4E	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	4.500	80	0.337	0.000	0.146
210-4P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	4.500	80	0.337	0.000	0.140
210-4P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	4.500	80	0.337	0.000	0.140
210-5E	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	4.500	80	0.337	0.000	0.146
210-5P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	4.500	80	0.337	0.000	0.140

Line Name : xNCW_211

211-15P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
211-16E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072
211-16P US	STRAIGHT PIPE	58	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	2.375	40	0.154	0.000	0.074

Line Name : xNCW_212

212-1E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.011
212-1P US	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013
212-2P US	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013
212-3P US	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013

Line Name : xNCW_213

213-1P	STRAIGHT PIPE	58	A335/P22/	26	1.90	0.00	0.87	15000.0	6.625	XXS	0.864	0.000	0.306
213-3R	CON. EXPANDER	18	A182/F22/	16	1.90	0.00	0.87	17800.0	8.625	XXS	0.875	0.000	0.338
213-3P	STRAIGHT PIPE	68	A335/P22/	26	1.90	0.00	0.87	15000.0	8.625	XXS	0.875	0.000	0.399
213-4P	STRAIGHT PIPE	58	A335/P22/	26	1.90	0.00	0.87	15000.0	6.625	XXS	0.864	0.000	0.306
213-6R	CON. EXPANDER	18	A182/F22/	16	1.90	0.00	0.87	17800.0	8.625	XXS	0.875	0.000	0.338
213-6P	STRAIGHT PIPE	68	A335/P22/	26	1.90	0.00	0.87	15000.0	8.625	XXS	0.875	0.000	0.399

Line Name : xNCW_214

214-23P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	40	0.133	0.000	0.046
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214-12P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
214-25P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
214-26E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
214-27P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083

Line Name : xNCW_215

22BFPT	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	38.250	SPE	0.625	0.000	0.064
215-1P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.004
215-7P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.004
215-8E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	2.375	40	0.154	0.000	0.003
215-8P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.004
215-6P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.004
215-9P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.004
215-10E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	2.375	40	0.154	0.000	0.003
215-10P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.004
215-14R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.006
215-15T	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.006
215-15P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	3.500	40	0.216	0.000	0.007
215-18P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	40	0.133	0.000	0.002
215-19E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	40	0.133	0.000	0.002
215-19P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	40	0.133	0.000	0.002
215-20E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	40	0.133	0.000	0.002
215-20P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	40	0.133	0.000	0.002
215-1P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.004
215-2E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	2.375	40	0.154	0.000	0.003
215-2P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.004

Line Name : xNCW_216

216-1E	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	2.375	80	0.218	0.000	0.077
216-4P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	2.375	80	0.218	0.000	0.074
216-5E	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	2.375	80	0.218	0.000	0.077
216-5P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	2.375	80	0.218	0.000	0.074
216-6N	INLET NOZZLE	30	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	2.375	80	0.218	0.000	0.077
216-4E	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	2.375	80	0.218	0.000	0.077
216-4P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	2.375	80	0.218	0.000	0.074
216-3P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	2.375	80	0.218	0.000	0.074
216-2E	45-DEG ELBOW	1	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	2.375	80	0.218	0.000	0.077
216-1P	STRAIGHT PIPE	62	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	2.375	80	0.218	0.000	0.074
216-1P-1	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	2.375	80	0.218	0.000	0.074
216-2P US	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	2.375	80	0.218	0.000	0.074

Line Name : xNCW_217

217-10P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	40	0.365	0.000	0.092
217-11R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.093
217-11P	STRAIGHT PIPE	57	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109
217-12E	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.093
217-12P	STRAIGHT PIPE	53	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109

Line Name : xNCW_218

218-7P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	40	0.365	0.000	0.092
218-8E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.079

218-8P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	40	0.365	0.000	0.092
218-9R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.093

Line Name : xNCW_219

219-6E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.079
219-6P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	40	0.365	0.000	0.092
219-7R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.093
219-7P US	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109
219-7P DS	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109
219-8E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.093
219-8P US	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109
219-13P	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109
219-14E	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.093
219-14P	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109
219-15N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109
219-10P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109
219-11E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.093
219-11P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109

Line Name : xNCW_21B

4EXD-34	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-34P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
4EXD-35	90-DEG RED. ELBOW	16	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-36	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022

Line Name : xNCW_220

220-1P DS	STRAIGHT PIPE	65	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	40	0.365	0.000	0.092
220-2E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.079
220-2P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	40	0.365	0.000	0.092
220-7P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	40	0.365	0.000	0.092
220-8E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.079
220-8P	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	40	0.365	0.000	0.092
220-9R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.093
220-9P US	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109
220-9P DS	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109
220-10E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.093
220-10P US	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109
220-14E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.093
220-13P DS	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109
220-14P US	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109

Line Name : xNCW_221

221-10P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	5.563	40	0.258	0.000	0.011
221-11E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	5.563	40	0.258	0.000	0.009
221-12E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	5.563	40	0.258	0.000	0.009
221-13P US	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	5.563	40	0.258	0.000	0.011

Line Name : xNCW_222

222-1P DS	STRAIGHT PIPE	9	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
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222-2E	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005
222-3P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
222-4E	45-DEG ELBOW	1	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005
222-6E	90-DEG ELBOW	4	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005
222-6P US	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
222-7E	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005
222-9P DS	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
222-10E	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005
222-10P US	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
222-10P DS	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
222-11E	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005
222-11P US	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005

Line Name : xNCW_223

223-9R	CON. EXPANDER	18	A234/WP22/	18	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-10P1 DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	3.500	40	0.216	0.000	0.007
223-10T	TEE	12	A234/WP22/	18	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-10P US	STRAIGHT PIPE	62	A335/P22/	26	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-10P DS	STRAIGHT PIPE	62	A335/P22/	26	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-11P1 DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	3.500	40	0.216	0.000	0.007
223-11T	TEE	12	A234/WP22/	18	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-11P US	STRAIGHT PIPE	62	A335/P22/	26	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-13P DS	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-14E	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-14P US	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-14P DS	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-15E	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-15P US	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-15P DS	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-16E	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-16P US	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-16P DS	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-17E	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-17P US	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-17P DS	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-18E	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-18P	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-19E	90-DEG ELBOW	4	A234/WP22/	18	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007
223-19P US	STRAIGHT PIPE	54	A335/P22/	26	1.90	0.00	0.87	15000.0	4.500	40	0.237	0.000	0.007

Line Name : xNCW_224

224-2P US	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
224-2P DS	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
224-3E	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	8.625	20	0.250	0.000	0.015
224-4P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
224-5N	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
224-7P US	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
224-12P US	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
224-7P DS	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
224-8E	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	8.625	20	0.250	0.000	0.015
224-9P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
224-10N	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
224-12P DS	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
224-13E	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	8.625	20	0.250	0.000	0.015
224-14P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017

224-15N	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
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Line Name : xNCW_225

225-13P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	40	0.365	0.000	0.092
225-14R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.093
225-15P US	STRAIGHT PIPE	68	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109

Line Name : xNCW_226

226-6P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	40	0.365	0.000	0.092
226-7R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.093
226-7P US	STRAIGHT PIPE	57	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109
226-9E	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.093
226-8P DS	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109
226-9N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109
226-7P DS	STRAIGHT PIPE	57	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109
226-8E	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	STD	0.375	0.000	0.093
226-8P US	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	STD	0.375	0.000	0.109

Line Name : xNCW_227

227-1P	STRAIGHT PIPE	9	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	40	0.365	0.000	0.092
227-2C	STRAIGHT PIPE	9	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.079
227-3P	STRAIGHT PIPE	9	A53/B/E	2	0.00	0.00	0.00	12800.0	3.500	40	0.216	0.000	0.030
227-4E	90-DEG RED. ELBOW	16	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.026
227-5P	STRAIGHT PIPE	66	A53/B/E	2	0.00	0.00	0.00	12800.0	2.375	40	0.154	0.000	0.020

Line Name : xNCW_228

228-5P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
228-8P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
228-11P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
228-11P DS	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
228-12E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
228-12P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
228-16E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
228-16P1 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
228-17E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
228-17P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	2.375	40	0.154	0.000	0.074
228-15P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
228-16P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083

Line Name : xNCW_229

229-2P DS	STRAIGHT PIPE	9	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
229-3E	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005
229-3P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
229-4E	45-DEG ELBOW	1	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005
229-5E	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005
229-6E	90-DEG ELBOW	4	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005
229-9P DS	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
229-6P US	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
229-10E	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005

229-10P US	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
229-10P DS	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	80	0.276	0.000	0.005
229-11E	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	80	0.276	0.000	0.005
229-11P US	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	80	0.276	0.000	0.005

Line Name : xNCW_22B

4EXD-53P	STRAIGHT PIPE	51	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-54	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-54P	STRAIGHT PIPE	51	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-57	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-57P	STRAIGHT PIPE	68	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013
4EXD-58	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013

Line Name : xNCW_230

230-17P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	3.500	40	0.216	0.000	0.014
230-18P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	3.500	40	0.216	0.000	0.014
230-19E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.012
230-19P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	3.500	40	0.216	0.000	0.014

Line Name : xNCW_231

231-2P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	40	0.133	0.000	0.009
231-3E	45-DEG ELBOW	1	A105//	3	0.00	0.00	0.00	17500.0	1.315	40	0.133	0.000	0.008
231-3P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	40	0.133	0.000	0.009
231-4E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	40	0.133	0.000	0.008
231-4P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	40	0.133	0.000	0.009

Line Name : xNCW_232

232-1P	STRAIGHT PIPE	9	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	40	0.365	0.000	0.092
232-2C	STRAIGHT PIPE	9	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.079
232-3R	STRAIGHT PIPE	9	A234/WPB/	21	0.00	0.00	0.00	15000.0	5.563	40	0.258	0.000	0.041
232-4R	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.026
232-5P US	STRAIGHT PIPE	67	SA-312/TP304/	82	18.00	0.00	0.00	14800.0	2.375	40	0.154	0.000	0.018

Line Name : xNCW_233

233-7P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	20	0.375	0.000	0.039
233-9P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	20.000	20	0.375	0.000	0.039
233-10E	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	20.000	20	0.375	0.000	0.033

Line Name : xNCW_234

234-2R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	20	0.250	0.000	0.021
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Line Name : xNCW_235

235-3P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
235-4E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
235-5P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123

235-5P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
235-6E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
235-7P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123

Line Name : xNCW_235308 (GLAND STM)

GS1	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.233
GS1R	CON. EXPANDER	18	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	----

Line Name : xNCW_236

236-2P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
236-6P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
236-8P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
236-11P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067

Line Name : xNCW_237

237-2P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
237-5P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
237-8P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
237-12P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
237-15P US	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067

Line Name : xNCW_238

238-10P US	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.004
238-35P US	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.004

Line Name : xNCW_239

239-10P US	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.004
239-35P US	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.004
239-2P	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.004
239-3E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	2.375	40	0.154	0.000	0.003
239-4P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.004

Line Name : xNCW_23B

4EXD-74	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-78	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
4EXD-78P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013
4EXD-78N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013

Line Name : xNCW_240

240-10P US	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.004
240-35P US	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.004

Line Name : xNCW_241

241-7N	STRAIGHT PIPE	9	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	40	0.365	0.000	0.092
241-8C	STRAIGHT PIPE	9	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.079
241-9R	STRAIGHT PIPE	9	A234/WPB/	21	0.00	0.00	0.00	15000.0	5.563	40	0.258	0.000	0.041
241-10P	STRAIGHT PIPE	9	A-312/TP316H/	83	16.00	0.00	2.00	18800.0	3.500	40	0.216	0.000	0.020
241-11E	90-DEG RED. ELBOW	16	A-403/WP316H/	0	16.00	0.00	2.00	17900.0	3.500	40	0.216	0.000	0.021
241-12P US	STRAIGHT PIPE	66	SA-312/TP304/	82	18.00	0.00	0.00	14800.0	2.375	40	0.154	0.000	0.018
241-1N	STRAIGHT PIPE	9	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	40	0.365	0.000	0.092
241-2C	STRAIGHT PIPE	9	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.079
241-3R	STRAIGHT PIPE	9	A234/WPB/	21	0.00	0.00	0.00	15000.0	5.563	40	0.258	0.000	0.041
241-4P US	STRAIGHT PIPE	9	A53/B/E	2	0.00	0.00	0.00	12800.0	3.500	40	0.216	0.000	0.030
241-4P DS	STRAIGHT PIPE	9	A53/B/E	2	0.00	0.00	0.00	12800.0	3.500	40	0.216	0.000	0.030
241-5E	90-DEG RED. ELBOW	16	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.026
241-6P US	STRAIGHT PIPE	66	SA-312/TP304/	82	18.00	0.00	0.00	14800.0	2.375	40	0.154	0.000	0.018

Line Name : xNCW_245

245-3P	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.061
245-7P	STRAIGHT PIPE	56	SA-312/TP304/	82	18.00	0.00	0.00	14600.0	1.315	80	0.179	0.000	0.062
245-11P	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.061
245-15P	STRAIGHT PIPE	56	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.061

Line Name : xNCW_246

246-1N	EXIT NOZZLE	31	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.875	40	0.203	0.000	0.005
246-2P	STRAIGHT PIPE	61	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
246-3E	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005
246-4P DS	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
246-5E	45-DEG ELBOW	1	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005
246-6P US	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
246-6P DS	STRAIGHT PIPE	51	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
246-7E	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005
246-8E	90-DEG ELBOW	4	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005
246-17P DS	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
246-18E	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005
246-19P US	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
246-21P DS	STRAIGHT PIPE	9	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005
246-22E	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	2.875	40	0.203	0.000	0.005
246-23P US	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	2.875	40	0.203	0.000	0.005

Line Name : xNCW_247

247-1N	EXIT NOZZLE	31	A53/B/E	2	0.00	0.00	0.00	12800.0	5.563	40	0.258	0.000	0.011
247-2P US	STRAIGHT PIPE	61	A53/B/E	2	0.00	0.00	0.00	12800.0	5.563	40	0.258	0.000	0.011

Line Name : xNCW_248

248-12P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
248-13T	TEE	14	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
248-14P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
248-15C	STRAIGHT PIPE	9	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
248-16P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123

Line Name : xNCW_249

249-25R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
249-26P	STRAIGHT PIPE	68	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
249-19R	ECC. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
249-20P	STRAIGHT PIPE	68	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
249-21P DS	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
249-28P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
249-29T	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
249-30P US	STRAIGHT PIPE	62	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089

Line Name : xNCW_24B

3EXD-15	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-16	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-16P	STRAIGHT PIPE	57	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.011
3EXD-17	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-18	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-18P US	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017

Line Name : xNCW_250

250-17P	STRAIGHT PIPE	58	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	1.900	80	0.200	0.000	0.059
250-1P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
250-18P DS	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
250-18E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.900	80	0.200	0.000	0.057
250-21P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067

Line Name : xNCW_251

251-12E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
251-13P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
251-21P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
251-22E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
251-23P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303

Line Name : xNCW_252

252-2T	TEE	12	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
252-3T	TEE	15	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
252-4P US	STRAIGHT PIPE	65	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
252-9P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
252-9T	TEE	10	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
252-18P US	STRAIGHT PIPE	60	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
252-10P US	STRAIGHT PIPE	60	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
252-10T	TEE	14	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
252-11P	STRAIGHT PIPE	64	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
252-30E	180-DEG ELBOW	5	A106/B/	5	0.00	0.00	0.00	15000.0	0.840	40	0.109	0.000	0.030

Line Name : xNCW_253

253-1N	EXIT NOZZLE	31	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013
253-2E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.011
253-3PUS	STRAIGHT PIPE	54	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.011
253-4P DS	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013
253-5T	TEE	12	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013

Line Name : xNCW_254

254-15E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
254-16P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
254-3E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
254-4P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
254-20P DS	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
254-21E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
254-22P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
254-7E	BEND	0	A106/B/	5	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158

Line Name : xNCW_255

255-14P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
255-14E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.900	80	0.200	0.000	0.057
255-15P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
255-15P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
255-16E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.900	80	0.200	0.000	0.057
255-17P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
255-20T	TEE	15	A105//	3	0.00	0.00	0.00	17500.0	1.900	80	0.200	0.000	0.057
255-24P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
255-19P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
255-25P US	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
255-13P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067

Line Name : xNCW_256

256-38E	45-DEG ELBOW	1	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072
256-37P DS	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
256-39P US	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
256-28P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
256-39P DS	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
256-41P US	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
256-40T	TEE	11	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072

Line Name : xNCW_257

257-7R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
257-8P	STRAIGHT PIPE	68	A106/B/	5	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158

Line Name : xNCW_258

258-6E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	2.375	40	0.154	0.000	0.007
258-5P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.008

Line Name : xNCW_259

259-15E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
259-16P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
259-3E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
259-4P US	STRAIGHT PIPE	54	A106/B/	5	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
259-9E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158

259-8P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158
259-10P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	4.500	80	0.337	0.000	0.158

Line Name : xNCW_25B

3EXD-37	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-38	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-38P US	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
3EXD-34P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017

Line Name : xNCW_260

260-1R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.029
260-2P US	STRAIGHT PIPE	68	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.034

Line Name : xNCW_261

261-21P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	4.500	40	0.237	0.000	0.026
261-14P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	20	0.250	0.000	0.074

Line Name : xNCW_262

262-17P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013
262-18T	TEE	13	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.011
262-20E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.007
262-33P US	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013
262-19R	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.011

Line Name : xNCW_263

263-21P DS	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	30	0.330	0.000	0.050
263-23P US	STRAIGHT PIPE	60	A53/B/E	2	0.00	0.00	0.00	12800.0	12.750	30	0.330	0.000	0.050
263-25P US	STRAIGHT PIPE	57	A53/B/E	2	0.00	0.00	0.00	12800.0	10.750	30	0.307	0.000	0.042
263-22T	TEE	10	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	30	0.330	0.000	0.042
263-24R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	12.750	30	0.330	0.000	0.042
263-14P DS	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	3.500	40	0.216	0.000	0.014
263-13R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
263-12P US	STRAIGHT PIPE	68	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
263-19R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
263-18P	STRAIGHT PIPE	68	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026
263-17E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
263-6R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.022
263-5P US	STRAIGHT PIPE	68	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.026

Line Name : xNCW_264

264-1P	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
264-2E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
264-3P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
264-9P DS	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
264-10T	TEE	10	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
264-11P US	STRAIGHT PIPE	60	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
264-14P US	STRAIGHT PIPE	60	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046

Line Name : xNCW_265

265-9P DS	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
265-10T	TEE	10	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
265-11P US	STRAIGHT PIPE	60	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
265-14P US	STRAIGHT PIPE	60	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046

Line Name : xNCW_266

266-9P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
266-11P US	STRAIGHT PIPE	60	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
266-14P US	STRAIGHT PIPE	60	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
266-10T	TEE	10	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
266-1P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
266-2E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
266-3P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046

Line Name : xNCW_267

267-6P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
267-6E1	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
267-6T	TEE	12	A106/B/	5	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.158
267-29E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
267-30P	STRAIGHT PIPE	52	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
267-31R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.233
267-32E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.233
267-33P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.233

Line Name : xNCW_268

268-10P DS	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
268-16P US	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
268-12P US	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
268-11T	TEE	10	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
268-3E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
268-2P	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
268-4P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046

Line Name : xNCW_269

269-2P	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
269-4P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
269-3E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
269-10P DS	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
269-12P US	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
269-16P US	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
269-11T	TEE	10	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040

Line Name : xNCW_26B

3EXD-52	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-52P US	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017

3EXD-53	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-54	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-55	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-56	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014
3EXD-56P US	STRAIGHT PIPE	62	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	20	0.250	0.000	0.014

Line Name : xNCW_270

270-2P	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
270-4P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
270-3E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
270-10P DS	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
270-12P US	STRAIGHT PIPE	60	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
270-17P US	STRAIGHT PIPE	60	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
270-11T	TEE	10	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040

Line Name : xNCW_271

271-17P DS	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
271-18R	ECC. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
271-19R	ECC. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
271-20P US	STRAIGHT PIPE	68	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
271-24R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
271-25P US	STRAIGHT PIPE	68	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
271-27P US	STRAIGHT PIPE	62	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
271-26T	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
271-26P DS	STRAIGHT PIPE	58	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
271-21P	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089

Line Name : xNCW_272

272-3P	STRAIGHT PIPE	63	SA-312/TP304/	82	18.00	0.00	0.00	14000.0	1.900	40	0.145	0.000	0.071
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Line Name : xNCW_273

273-9P DS	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
273-10E	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
273-1P US	STRAIGHT PIPE	54	A335/P22/	26	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
273-7P DS	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
273-8E	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
273-9P US	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123

Line Name : xNCW_274

274-25P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	3.500	40	0.216	0.000	0.014
274-25N	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	3.500	40	0.216	0.000	0.014
274-1N	EXIT NOZZLE	31	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.008
274-1C	STRAIGHT PIPE	9	A105//	3	0.00	0.00	0.00	17500.0	2.375	40	0.154	0.000	0.007
274-1P	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.008

Line Name : xNCW_275

275-12P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
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275-13E	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
275-14N	INLET NOZZLE	30	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
275-10P DS	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
275-11E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
275-12P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
275-8P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
275-9E	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123
275-10P US	STRAIGHT PIPE	53	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.123

Line Name : xNCW_276

276-1N	EXIT NOZZLE	31	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	40	0.145	0.000	0.016
276-1P	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	40	0.145	0.000	0.016

Line Name : xNCW_277

277-22P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.875	40	0.203	0.000	0.024
277-23N	EXIT NOZZLE	31	A106/B/	5	0.00	0.00	0.00	15000.0	2.875	40	0.203	0.000	0.024
277-20P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.875	40	0.203	0.000	0.024
277-21E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.875	40	0.203	0.000	0.024
277-22P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.875	40	0.203	0.000	0.024
277-18P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.875	40	0.203	0.000	0.024
277-19E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.875	40	0.203	0.000	0.024
277-20P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.875	40	0.203	0.000	0.024

Line Name : xNCW_278

278-1N	EXIT NOZZLE	31	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	40	0.133	0.000	0.019
278-1C	STRAIGHT PIPE	9	A105//	3	0.00	0.00	0.00	17500.0	1.315	40	0.133	0.000	0.017
278-1P	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	40	0.133	0.000	0.019
278-1E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	40	0.133	0.000	0.017
278-2P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	40	0.133	0.000	0.019

Line Name : xNCW_279

279-6R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.875	40	0.203	0.000	0.043
279-6P	STRAIGHT PIPE	68	A53/B/S	38	0.00	0.00	0.00	15000.0	2.875	40	0.203	0.000	0.043

Line Name : xNCW_280

280-8P US	STRAIGHT PIPE	56	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.086
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Line Name : xNCW_281

281-13P DS	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.008
281-12E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.008
281-11P US	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.008
281-4P	STRAIGHT PIPE	68	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.008
281-3E	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.008
281-2P US	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.008

Line Name : xNCW_282

282-23T	TEE	14	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.013
282-24R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.013
282-22P DS	STRAIGHT PIPE	62	A53/B/S	38	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.013
282-31P	STRAIGHT PIPE	62	A53/B/S	38	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.010

Line Name : xNCW_283

283-7T	TEE	10	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.008
283-6P DS	STRAIGHT PIPE	51	A53/B/S	38	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.008
283-8R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.008
283-20R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.008
283-21P US	STRAIGHT PIPE	57	A53/B/S	38	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.005
283-9P US	STRAIGHT PIPE	57	A53/B/S	38	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.005

Line Name : xNCW_284

284-7R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.086
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Line Name : xNCW_285

285-13P DS	STRAIGHT PIPE	51	A335/P22/	26	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
285-1B-VCD-XE	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
285-15P US	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123

Line Name : xNCW_286

286-3P DS	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	5.563	40	0.258	0.000	0.011
286-HV21C-1E	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	5.563	40	0.258	0.000	0.009
286-5P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	5.563	40	0.258	0.000	0.011

Line Name : xNCW_287

287-17P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
287-16E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.072

Line Name : xNCW_288

288-2P DS	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.009
288-5EXV-DS-MS21A	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.008
288-4P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.009

Line Name : xNCW_2R16 Misc Inspections

EST-18	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	80	0.154	0.000	----
FE-419	ORIFICE	6	A106/B/	5	0.00	0.00	0.00	15000.0	28.000FE419		1.187	0.000	----
MST-49	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	----

Line Name : xNCW_33B

1A-16P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
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1A-16	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1A-17P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1A-17P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1A-17	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1A-18P-1	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1A-22R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1A-22P	STRAIGHT PIPE	67	A53/B/E	2	0.00	0.00	0.00	12800.0	4.500	40	0.237	0.000	0.035
1A-21P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1A-22	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044

Line Name : xNCW_34B

2A-16P	STRAIGHT PIPE	63	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
2A-16	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-17P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
2A-17	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-18P	STRAIGHT PIPE	53	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
2A-21P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
2A-22	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-22P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
2A-27R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-27R1	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2A-28P	STRAIGHT PIPE	57	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052

Line Name : xNCW_35B

3A-14P	STRAIGHT PIPE	51	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3A-3P1	STRAIGHT PIPE	65	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3A-3	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-3P US	STRAIGHT PIPE	53	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3A-4	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-4P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3A-5P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3A-5P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3A-5	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-6	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-6P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3A-8P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3A-9	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-9P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3A-12R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3A-12P-1	STRAIGHT PIPE	57	A53/B/E	2	0.00	0.00	0.00	12800.0	4.500	40	0.237	0.000	0.035

Line Name : xNCW_36B

1B-16P US	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1B-16P DS	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1B-16	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1B-16P1 US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1B-20P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1B-21P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1B-22	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1B-22P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
1B-21	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
1B-23	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044

Line Name : xNCW_37B

2B-13P DS	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
2B-14	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2B-15P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
2B-19P-1 DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
2B-19	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2B-20P-1 US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
2B-20P-1 DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
2B-20	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
2B-20P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052

Line Name : xNCW_38B

3B-21P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-22	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-22P US	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-22P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-23	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-23P US	90-DEG ELBOW	2	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-17P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-18	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-19	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.044
3B-19P US	STRAIGHT PIPE	54	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-24P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052
3B-24N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.052

Line Name : xNCW_39

MS-1A3P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.875	80	0.276	0.000	0.101
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Line Name : xNCW_42

MS-1B2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.875	80	0.276	0.000	0.101
MS-1B2P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.875	80	0.276	0.000	0.101
MS-1B3P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.875	80	0.276	0.000	0.101

Line Name : xNCW_44

MS-3B4	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.875	80	0.276	0.000	0.101
MS-3B4P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.875	80	0.276	0.000	0.101

Line Name : xNCW_45B

MS-1A25R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A33	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A33P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A33P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A34	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A34P-2	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A34R-1	CON. REDUCER	17	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A34R-2	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-1A34P-1	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017

Line Name : xNCW_46B

MS-2A26P	STRAIGHT PIPE	63	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A26	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A26P-1 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A26P-1 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A27	180-DEG ELBOW	5	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A27P US	STRAIGHT PIPE	55	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A27P DS	STRAIGHT PIPE	55	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A28	180-DEG ELBOW	5	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A28P	STRAIGHT PIPE	55	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A29	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A29P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A30	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A30P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A30P DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A31	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A31P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A32	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A32P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A32R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A33R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A33	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A33P	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A34	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A34P	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2A34N	INLET NOZZLE	30	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303

Line Name : xNCW_47

MS-3A28R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-3A28	TEE	15	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.014
MS-3A29	TEE	15	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.014
MS-3A29P	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	80	0.500	0.000	0.017
MS-3A30N	STRAIGHT PIPE	62	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.017

Line Name : xNCW_48A

MS-1B41P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-1B42P	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
MS-1B41R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303

Line Name : xNCW_49B

MS-2B27P	STRAIGHT PIPE	63	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2B56	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2B56P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2B62P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017
MS-2B62R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-2B61	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303

Line Name : xNCW_50B

MS-3B44P1	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.233
MS-3B44R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MS-3B44P	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	20	0.250	0.000	0.017

Line Name : xNCW_55A

BD3-13P	STRAIGHT PIPE	68	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
BD3-20	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
BD3-20P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
BD3-21	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123

Line Name : xNCW_55B

BD3-21P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
BD3-22	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
BD3-22P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
BD3-23	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
BD3-23P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
BD3-24	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
BD3-24P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123

Line Name : xNCW_55C

BD3-47	TEE	13	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
BD3-51R	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
BD3-52	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
BD3-52P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
BD3-53P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.900	80	0.200	0.000	0.067
BD3-53R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
BD3-50	TEE	15	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
BD3-50P US	STRAIGHT PIPE	65	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
BD3-50P-1 DS	STRAIGHT PIPE	65	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123
BD3-49P-1	STRAIGHT PIPE	65	A106/B/	5	0.00	0.00	0.00	15000.0	3.500	80	0.300	0.000	0.123

Line Name : xNCW_56_CROSSUNDER (A)

5EX-49N	EXIT NOZZLE	31	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-49P1	STRAIGHT PIPE	61	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-49	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-49P2	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-52	45-DEG ELBOW	1	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-52P	STRAIGHT PIPE	51	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-53	90-DEG ELBOW	4	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-53R	CON. EXPANDER	18	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-53P	STRAIGHT PIPE	68	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-50N	EXIT NOZZLE	31	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-50P1	STRAIGHT PIPE	61	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-50	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-50P2	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-62	45-DEG ELBOW	1	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-50P3	STRAIGHT PIPE	51	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-51	45-DEG ELBOW	1	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-51P	STRAIGHT PIPE	51	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-54	TEE	12	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-54P	STRAIGHT PIPE	62	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337

5EX-55	TEE	14	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-55P	STRAIGHT PIPE	64	A285/C/	0	0.00	0.00	0.00	25400.0	27.500	SPE	0.500	0.000	0.119
5EX-56	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-56P	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-56N	INLET NOZZLE	30	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-55R	CON. REDUCER	7	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-55P-1	STRAIGHT PIPE	68	A155/KC70/2	10	18.00	0.00	0.00	15800.0	38.000	SPE	0.500	0.000	0.264
5EX-57	TEE	14	A155/KC70/2	10	18.00	0.00	0.00	15800.0	38.000	SPE	0.500	0.000	0.264
5EX-57P1	STRAIGHT PIPE	64	A285/C/	0	0.00	0.00	0.00	25400.0	27.500	SPE	0.500	0.000	0.119
5EX-58	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-58P	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-58N	INLET NOZZLE	30	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-57R	CON. REDUCER	7	A155/KC70/2	10	18.00	0.00	0.00	15800.0	38.000	SPE	0.500	0.000	0.264
5EX-57P2	STRAIGHT PIPE	57	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-59	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-59P1	STRAIGHT PIPE	52	A285/C/	0	0.00	0.00	0.00	25400.0	27.500	SPE	0.500	0.000	0.119
5EX-59P	STRAIGHT PIPE	52	A285/C/	0	0.00	0.00	0.00	25400.0	27.500	SPE	0.500	0.000	0.119
5EX-59P2	STRAIGHT PIPE	52	A285/C/	0	0.00	0.00	0.00	25400.0	27.500	SPE	0.500	0.000	0.119
5EX-60	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-60P	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-60N	INLET NOZZLE	30	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191

Line Name : xNCW_57_CROSSUNDER (B)

5EX-37N	EXIT NOZZLE	31	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-37P1	STRAIGHT PIPE	61	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-37	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-37P2	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-40	45-DEG ELBOW	1	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-40P	STRAIGHT PIPE	51	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-41	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-41R	CON. EXPANDER	18	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-38N	EXIT NOZZLE	31	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-38P	STRAIGHT PIPE	61	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-38	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-61P1	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-61	45-DEG ELBOW	1	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-61P2	STRAIGHT PIPE	51	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-39	45-DEG ELBOW	1	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-39P	STRAIGHT PIPE	51	A155/KC70/2	10	18.00	0.00	0.00	15800.0	33.000	SPE	0.500	0.000	0.230
5EX-42	TEE	12	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-41P	STRAIGHT PIPE	62	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-43	TEE	14	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-43P	STRAIGHT PIPE	64	A285/C/	0	0.00	0.00	0.00	25400.0	27.500	SPE	0.500	0.000	0.119
5EX-44	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-44P	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-44N	INLET NOZZLE	30	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-43R	CON. REDUCER	7	A155/KC70/2	10	18.00	0.00	0.00	15800.0	48.500	SPE	1.000	0.000	0.337
5EX-43P1	STRAIGHT PIPE	57	A155/KC70/2	10	18.00	0.00	0.00	15800.0	38.000	SPE	0.500	0.000	0.264
5EX-45	TEE	14	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-45P	STRAIGHT PIPE	64	A285/C/	0	0.00	0.00	0.00	25400.0	27.500	SPE	0.500	0.000	0.119
5EX-46	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-46P	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-46N	INLET NOZZLE	30	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-45R	CON. REDUCER	7	A155/KC70/2	10	18.00	0.00	0.00	15800.0	38.000	SPE	0.500	0.000	0.264
5EX-47P2	STRAIGHT PIPE	57	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-47	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-47P1	STRAIGHT PIPE	52	A285/C/	0	0.00	0.00	0.00	25400.0	27.500	SPE	0.500	0.000	0.119

5EX-47P	STRAIGHT PIPE	52	A285/C/	0	0.00	0.00	0.00	25400.0	27.500	SPE	0.500	0.000	0.119
5EX-48	90-DEG ELBOW	2	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-48P	STRAIGHT PIPE	52	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191
5EX-48N	INLET NOZZLE	30	A155/KC70/2	10	18.00	0.00	0.00	15800.0	27.500	SPE	0.500	0.000	0.191

Line Name : xNCW_65A

1A-VCD34	CON. EXPANDER	18	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	80	0.300	0.000	0.113
1A-VCD1	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
1A-VCD1P	STRAIGHT PIPE	53	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
1A-VCD2	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
1A-VCD4P	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
1A-VCD13	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
1A-VCD15	90-DEG ELBOW	4	A234/WP22/	18	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
1A-VCD15P	STRAIGHT PIPE	54	A335/P22/	26	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123

Line Name : xNCW_65B

1A-VCD32P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
1A-VCD33	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
1A-VCD33P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
1A-VCD23	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
1A-VCD28	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
1A-VCD27P DS	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
1A-VCD28P US	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109

Line Name : xNCW_66A

2A-VCD35	CON. EXPANDER	18	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	80	0.300	0.000	0.113
2A-VCD1	90-DEG ELBOW	4	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
2A-VCD1P	STRAIGHT PIPE	54	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2A-VCD2	45-DEG ELBOW	1	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
2A-VCD3P	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2A-VCD2P	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2A-VCD4	90-DEG ELBOW	4	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
2A-VCD4P	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2A-VCD7	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
2A-VCD8	90-DEG ELBOW	4	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
2A-VCD14	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
2A-VCD20	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
2A-VCD10	90-DEG ELBOW	4	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
2A-VCD36P	STRAIGHT PIPE	58	A335/P22/	26	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
2A-VCD36	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
2A-VCD36P-1 US	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
2A-VCD41P DS	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
2A-VCD42	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123

Line Name : xNCW_66B

2A-VCD23	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
2A-VCD26P DS	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2A-VCD27	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
2A-VCD27P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2A-VCD33P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2A-VCD34P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109

2A-VCD34	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
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Line Name : xNCW_67A

3A-VCD30	CON. EXPANDER	18	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	80	0.300	0.000	0.113
3A-VCD1P	STRAIGHT PIPE	68	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3A-VCD1	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3A-VCD1P-1 US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3A-VCD2	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3A-VCD2P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3A-VCD7	90-DEG ELBOW	4	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3A-VCD7P	STRAIGHT PIPE	54	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3A-VCD9	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3A-VCD16	90-DEG ELBOW	4	A234/WP22/	18	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123

Line Name : xNCW_67B

3A-VCD16	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3A-VCD18P	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3A-VCD21P	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3A-VCD22	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3A-VCD22P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3A-VCD28	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3A-VCD28P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3A-VCD29	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3A-VCD29P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109

Line Name : xNCW_68A

1B-VCD33	CON. EXPANDER	18	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	80	0.300	0.000	0.113
1B-VCD1	45-DEG ELBOW	3	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
1B-VCD1P	STRAIGHT PIPE	53	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
1B-VCD2	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
1B-VCD2P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
1B-VCD5	90-DEG ELBOW	4	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
1B-VCD11	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
1B-VCD16P	STRAIGHT PIPE	58	A335/P22/	26	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
1B-VCD17	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
1B-VCD17P	STRAIGHT PIPE	58	A335/P22/	26	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
1B-VCD4	TEE	12	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
1B-VCD4P US	STRAIGHT PIPE	62	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
1B-VCD3P DS	STRAIGHT PIPE	58	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
1B-VCD18P	STRAIGHT PIPE	58	A335/P22/	26	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
1B-VCD19E	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
1B-VCD19P US	STRAIGHT PIPE	52	A335/P22/	26	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123

Line Name : xNCW_68B

1B-VCD19P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
1B-VCD20	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
1B-VCD20P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
1B-VCD21	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
1B-VCD-22P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
1B-VCD-23	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
1B-VCD-23P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109

1B-VCD19	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
1B-VCD19P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
1B-VCD18P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
1B-VCD32	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113

Line Name : xNCW_69A

2B-VCD38	CON. EXPANDER	18	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	80	0.300	0.000	0.113
2B-VCD1	90-DEG ELBOW	4	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
2B-VCD1P	STRAIGHT PIPE	54	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2B-VCD2	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
2B-VCD2P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2B-VCD8E	90-DEG ELBOW	2	A234/WP22/	18	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
2B-VCD8P	STRAIGHT PIPE	58	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2B-VCD7P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2B-VCD8P-2 US	STRAIGHT PIPE	60	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2B-VCD8	TEE	10	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
2B-VCD9	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
2B-VCD39P	STRAIGHT PIPE	58	A335/P22/	26	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
2B-VCD39	90-DEG ELBOW	4	A234/WP22/	18	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123

Line Name : xNCW_69B

2B-VCD22P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2B-VCD23	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
2B-VCD23P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2B-VCD25P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2B-VCD26	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
2B-VCD26P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2B-VCD21P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2B-VCD22	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
2B-VCD22P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
2B-VCD31	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113

Line Name : xNCW_70A

3B-VCD35	CON. EXPANDER	18	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	80	0.300	0.000	0.113
3B-VCD1P	STRAIGHT PIPE	68	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3B-VCD2	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3B-VCD2P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3B-VCD7P	STRAIGHT PIPE	58	A335/P22/	26	1.90	0.00	0.87	15000.0	3.500	40	0.216	0.000	0.123
3B-VCD7P2	STRAIGHT PIPE	58	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3B-VCD7	TEE	12	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3B-VCD7P1	STRAIGHT PIPE	58	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3B-VCD6P1 DS	STRAIGHT PIPE	62	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3B-VCD11	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3B-VCD16P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3B-VCD17E	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113

Line Name : xNCW_70B

3B-VCD33P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3B-VCD34	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3B-VCD34P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3B-VCD19P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109

3B-VCD20	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3B-VCD20P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3B-VCD26	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3B-VCD28P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3B-VCD29	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3B-VCD29P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3B-VCD29P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3B-VCD30	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3B-VCD-30P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3B-VCD17P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109
3B-VCD18	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	40	0.216	0.000	0.113
3B-VCD18P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	40	0.216	0.000	0.109

Line Name : xNCW_74

BFD-46	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832
BFD-65A	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.306
BFD-65Q	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.306
BFD-65Q1	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	6.625	80	0.432	0.000	0.306
EXNOZ_C	TEE	12	A106/B/	5	18.00	0.00	0.00	15000.0	18.000	80	0.938	0.000	0.832

Line Name : xNCW_79A

3EX-TELO1P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.006
3EX-TELO1	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.006
3EX-TELO1R	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.007
3EX-TELO2	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.007
3EX-TELO2P	STRAIGHT PIPE	54	A53/B/S	38	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.007
3EX-TELO9P	STRAIGHT PIPE	61	A53/B/S	38	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.006
3EX-TELO9	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.006

Line Name : xNCW_79B

3EX-TELO-23P DS	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013
3EX-TELO-24	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	6.625	40	0.280	0.000	0.011
3EX-TELO-25P US	STRAIGHT PIPE	52	A53/B/E	2	0.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013

Line Name : xNCW_83

CD-85P	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.052
CD-86P	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.052
CD-87E	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	2.375	80	0.218	0.000	0.044
CD-88P US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.052

Line Name : xNCW_85

GCD-1P	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.188
GCD-2	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.188
GCD-2P US	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.188
GCD-2P DS	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.188
GCD-3	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.188
GCD-3P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.188
GCD-4	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.188
GCD-4P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.188

GCD-5	TEE	11	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.188
GCD-5P	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.188
GCD-12P	STRAIGHT PIPE	61	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.188
GCD-14	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.188
GCD-14P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.188
GCD-16	45-DEG ELBOW	1	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.188
GCD-15P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.188
GCD-16P	STRAIGHT PIPE	51	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.188

Line Name : xNCW_86

UH-3P	STRAIGHT PIPE	63	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.003
UH-4	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.003
UH-4P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.003
UH-4P-1	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.003
UH-5	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.003
UH-5P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.003
UH-6	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.003
UH-6P	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	40	0.154	0.000	0.003

Line Name : xNCW_86A

UH-10A	TEE	12	A53/B/S	38	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.005
UH-10B	90-DEG ELBOW	4	A234/WPB/	21	0.00	0.00	0.00	15000.0	3.500	40	0.216	0.000	0.004

Line Name : xNCW_87

MST-10P	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	4.500	80	0.337	0.000	0.140
MST-11	45-DEG ELBOW	1	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	4.500	80	0.337	0.000	0.146
MST-10	45-DEG ELBOW	1	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	4.500	80	0.337	0.000	0.146
MST-9P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	4.500	80	0.337	0.000	0.140
MST-9	90-DEG EXP. ELBOW	19	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MST-8P	STRAIGHT PIPE	69	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MST-8	45-DEG ELBOW	1	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MST-7P US	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MST-7P DS	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MST-7	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MST-6P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MST-6P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MST-6	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MST-5P US	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MST-5P DS	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MST-5	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	6.625	80	0.432	0.000	0.215
MST-4P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	6.625	80	0.432	0.000	0.206
MST-4	90-DEG EXP. ELBOW	19	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	8.625	80	0.500	0.000	0.280
MST-3P	STRAIGHT PIPE	69	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	8.625	80	0.500	0.000	0.268
MST-3	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	8.625	80	0.500	0.000	0.280
MST-2P	STRAIGHT PIPE	69	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	8.625	80	0.500	0.000	0.268
MST-2	90-DEG RED. ELBOW	16	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	8.625	80	0.500	0.000	0.280
MST-1P	STRAIGHT PIPE	69	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	8.625	80	0.500	0.000	0.268
MST-1	TEE	10	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	8.625	80	0.500	0.000	0.280
MST-1P-1 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303
MST-1N	INLET NOZZLE	30	A106/B/	5	0.00	0.00	0.00	15000.0	8.625	80	0.500	0.000	0.303

Line Name : xNCW_88

MST-16P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	4.500	80	0.337	0.000	0.140
MST-16	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	4.500	80	0.337	0.000	0.146
MST-15P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	4.500	80	0.337	0.000	0.140
MST-15	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	4.500	80	0.337	0.000	0.146
MST-14P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	4.500	80	0.337	0.000	0.140
MST-14	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	4.500	80	0.337	0.000	0.146
MST-13P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	4.500	80	0.337	0.000	0.140
MST-13	45-DEG ELBOW	1	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	4.500	80	0.337	0.000	0.146
MST-12P	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	4.500	80	0.337	0.000	0.140
MST-12	45-DEG ELBOW	1	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	4.500	80	0.337	0.000	0.146
MST-11P	STRAIGHT PIPE	51	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	4.500	80	0.337	0.000	0.140

Line Name : xNCW_89

MST-39P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	80	0.300	0.000	0.109
MST-39	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	80	0.300	0.000	0.113
MST-38P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	80	0.300	0.000	0.109
MST-38	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	80	0.300	0.000	0.113
MST-37P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	80	0.300	0.000	0.109
MST-37	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	80	0.300	0.000	0.113
MST-36P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	80	0.300	0.000	0.109
MST-36	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	80	0.300	0.000	0.113
MST-31	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	80	0.300	0.000	0.113
MST-28P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	80	0.300	0.000	0.109
MST-28	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	80	0.300	0.000	0.113
MST-27P	STRAIGHT PIPE	52	A-312/TP316H/	83	16.00	0.00	2.00	17000.0	3.500	80	0.300	0.000	0.109
MST-27	90-DEG ELBOW	2	A-403/WP316H/	0	16.00	0.00	2.00	16300.0	3.500	80	0.300	0.000	0.113

Line Name : xNCW_90

EST-1T	TEE	12	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	6.625	40	0.280	0.000	0.012
EST-1P-1	STRAIGHT PIPE	62	A53/B/E	2	18.00	0.00	0.00	12800.0	6.625	40	0.280	0.000	0.013

Line Name : xNCW_91

EST-33R	CON. EXPANDER	18	A-403/WP304H/	0	18.00	0.00	0.00	12800.0	4.500	40	0.237	0.000	0.078
EST-33	90-DEG EXP. ELBOW	19	A-403/WP304H/	0	18.00	0.00	0.00	12800.0	4.500	40	0.237	0.000	0.078
EST-32	90-DEG ELBOW	4	A-403/WP304H/	0	18.00	0.00	0.00	12800.0	4.500	40	0.237	0.000	0.078
EST-31P-1	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-31P US	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-31P DS	STRAIGHT PIPE	54	A-312/TP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-31T	TEE	11	A-403/WP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-31	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-30P US	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-30P DS	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-30B	45-DEG ELBOW	1	A-403/WP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-30AP	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-30A	45-DEG ELBOW	1	A-403/WP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-29P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-25	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-24P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-24	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-23P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-22P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-22	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079

EST-21P US	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-21P DS	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-21	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-20P US	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	12600.0	4.500	40	0.237	0.000	0.079
EST-15	90-DEG ELBOW	2	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	4.500	40	0.237	0.000	0.008
EST-14P	STRAIGHT PIPE	52	A-312/TP304H/	0	18.00	0.00	0.00	13800.0	4.500	40	0.237	0.000	0.008
EST-14	45-DEG ELBOW	1	A-403/WP304H/	0	18.00	0.00	0.00	14000.0	4.500	40	0.237	0.000	0.008

Line Name : xNCW_9321-F-2027 Aux Steam

CONDR24-US Pipe	STRAIGHT PIPE	52	A53/B/S	38	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.005
CONDR24-Elbow	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.005

Line Name : xNCW_9321-F-2586 Aux Steam

AS-DS-PCV-1250	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	4.500	40	0.237	0.000	0.005
AS-DS Valve UH-64	STRAIGHT PIPE	58	A53/B/E	2	0.00	0.00	0.00	12800.0	8.625	40	0.322	0.000	0.012
AS-US PCV-1251	CON. REDUCER	7	A234/WPB/	21	0.00	0.00	0.00	15000.0	8.625	40	0.322	0.000	0.010

Line Name : xNCW_Extraction Steam Traps

EST2-Pipe 1	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.016
EST2-Elbow 1	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.050	40	0.113	0.000	0.013
EST2-Pipe 2 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.016
EST2-Pipe 2 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.016
EST2-Pipe 3	STRAIGHT PIPE	60	A106/B/	5	0.00	0.00	0.00	15000.0	0.840	40	0.109	0.000	0.012
EST2-Tee 1	TEE	12	A105//	3	0.00	0.00	0.00	17500.0	1.050	40	0.113	0.000	0.013
EST2-Pipe 4	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.016
EST2-Pipe 5	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.016
EST2-Elbow2	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.050	40	0.113	0.000	0.013
EST2-Pipe 6	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.016
EST4-Pipe 1	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.009
EST4-Elbow 1	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.050	40	0.113	0.000	0.007
EST4-Pipe 2 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.009
EST4-Pipe 2 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.009
EST4-Tee 1	TEE	12	A105//	3	0.00	0.00	0.00	17500.0	1.050	40	0.113	0.000	0.007
EST4-Pipe 3	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.009
EST4-Pipe 4	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.009
EST4-Elbow 2	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.050	40	0.113	0.000	0.007
EST4-Pipe 5	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.009
EST5-Pipe 1	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.003
EST5-Elbow 1	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.050	40	0.113	0.000	0.003
EST5-Pipe 2 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.003
EST5-Pipe 2 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.003
EST5-Tee 1	TEE	12	A105//	3	0.00	0.00	0.00	17500.0	1.050	40	0.113	0.000	0.003
EST5-Pipe 3	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.003
EST5-Pipe 4	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.003
EST5-Elbow 2	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.050	40	0.113	0.000	0.003
EST5-Pipe 5	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.050	40	0.113	0.000	0.003

Line Name : xNCW_FEEDWATER HEATER SHELLS

FWH-23B-1	STRAIGHT PIPE	9	A516/70/	36	0.00	0.00	0.00	17500.0	53.875FWH23	0.438	0.000	0.050
FWH-24A	STRAIGHT PIPE	9	A106/C/	6	0.00	0.00	0.00	17500.0	51.875FWH24	0.438	0.000	0.148
FWH-24B	STRAIGHT PIPE	9	A516/70/	36	0.00	0.00	0.00	17500.0	51.875FWH24	0.438	0.000	0.148

FWH-24C	STRAIGHT PIPE	9	A106/C/	6	0.00	0.00	0.00	17500.0	51.875FWH24	0.438	0.000	----
FWH-25A	STRAIGHT PIPE	9	A516/70/	36	0.00	0.00	0.00	17500.0	54.125FWH25	0.563	0.000	----
FWH-25C	STRAIGHT PIPE	9	A516/70/	36	0.00	0.00	0.00	17500.0	54.125FWH25	0.563	0.000	----
FWH-26A	STRAIGHT PIPE	9	A516/70/	36	0.00	0.00	0.00	17500.0	62.000FWH26	1.000	0.000	----
FWH-26C	STRAIGHT PIPE	9	A516/70/	36	0.00	0.00	0.00	17500.0	62.000FWH26	1.000	0.000	----
FWH-23B-2	STRAIGHT PIPE	9	A516/70/	36	0.00	0.00	0.00	17500.0	53.875FWH23	0.438	0.000	----

Line Name : xNCW_FWH 21&22 Nozzles

LPFW21A-1N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	26.000 STD	0.375	0.000	----
LPFW21A-2N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	26.000 STD	0.375	0.000	----
LPFW21A-3N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	26.000 STD	0.375	0.000	----
LPFW21A-4N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	26.000 STD	0.375	0.000	----
LPFW21A-5N	INLET NOZZLE	30	A106/B/	5	0.00	0.00	0.00	15000.0	14.000 40	0.438	0.000	----
LPFW21A-6N	EXIT NOZZLE	31	A106/B/	5	0.00	0.00	0.00	15000.0	14.000 40	0.438	0.000	----
LPFW21A-7N	EXIT NOZZLE	31	A106/B/	5	0.00	0.00	0.00	15000.0	12.750 20	0.250	0.000	----
LPFW21B-1N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	26.000 STD	0.375	0.000	----
LPFW21B-2N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	26.000 STD	0.375	0.000	----
LPFW21B-3N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	26.000 STD	0.375	0.000	----
LPFW21B-4N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	26.000 STD	0.375	0.000	----
LPFW21B-5N	INLET NOZZLE	30	A106/B/	5	0.00	0.00	0.00	15000.0	14.000 40	0.438	0.000	----
LPFW21B-6N	EXIT NOZZLE	31	A106/B/	5	0.00	0.00	0.00	15000.0	14.000 40	0.438	0.000	----
LPFW21B-7N	EXIT NOZZLE	31	A106/B/	5	0.00	0.00	0.00	15000.0	12.750 20	0.250	0.000	----
LPFW21C-1N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	26.000 STD	0.375	0.000	----
LPFW21C-2N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	26.000 STD	0.375	0.000	----
LPFW21C-3N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	26.000 STD	0.375	0.000	----
LPFW21C-4N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	26.000 STD	0.375	0.000	----
LPFW21C-5N	INLET NOZZLE	30	A106/B/	5	0.00	0.00	0.00	15000.0	14.000 40	0.438	0.000	----
LPFW21C-6N	EXIT NOZZLE	31	A106/B/	5	0.00	0.00	0.00	15000.0	14.000 40	0.438	0.000	----
LPFW21C-7N	EXIT NOZZLE	31	A106/B/	5	0.00	0.00	0.00	15000.0	12.750 20	0.250	0.000	----
LPFW22A-1N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	22.000 STD	0.375	0.000	----
LPFW22A-2N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	22.000 STD	0.375	0.000	----
LPFW22A-3N	INLET NOZZLE	30	A106/B/	5	0.00	0.00	0.00	15000.0	14.000 40	0.438	0.000	----
LPFW22B-1N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	22.000 STD	0.375	0.000	----
LPFW22B-2N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	22.000 STD	0.375	0.000	----
LPFW22B-3N	INLET NOZZLE	30	A106/B/	5	0.00	0.00	0.00	15000.0	14.000 40	0.438	0.000	----
LPFW22C-1N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	22.000 STD	0.375	0.000	----
LPFW22C-2N	INLET NOZZLE	30	A53/B/E	2	0.00	0.00	0.00	12800.0	22.000 STD	0.375	0.000	----
LPFW22C-3N	INLET NOZZLE	30	A106/B/	5	0.00	0.00	0.00	15000.0	14.000 40	0.438	0.000	----

Line Name : xNCW_Main Steam Traps

MST24-Pipe 1	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315 80	0.179	0.000	0.046
MST24-Elbow 1	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315 80	0.179	0.000	0.040
MST24-Pipe 2 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315 80	0.179	0.000	0.046
MST24-Pipe 2 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315 80	0.179	0.000	0.046
MST24-Elbow 2	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315 80	0.179	0.000	0.040
MST24-Pipe 3 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315 80	0.179	0.000	0.046
MST24-Pipe 3 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315 80	0.179	0.000	0.046
MST24-Tee 1	TEE	12	A105//	3	0.00	0.00	0.00	17500.0	1.315 80	0.179	0.000	0.040
MST24-Pipe 4	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315 80	0.179	0.000	0.046
DS Valve MS-100-2	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	1.315 80	0.179	0.000	0.046
MST27-Pipe 1	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315 80	0.179	0.000	0.046
MST27-Elbow 1	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315 80	0.179	0.000	0.040
MST27-Pipe 2 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315 80	0.179	0.000	0.046
MST27-Pipe 2 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315 80	0.179	0.000	0.046
MST27-Elbow 2	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315 80	0.179	0.000	0.040

MST27-Pipe 3 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST27-Pipe 3 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST27-Tee 1	TEE	12	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
MST27-Pipe 4	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	0.840	80	0.147	0.000	0.030
MST43-Pipe 1	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST43-Elbow 1	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
MST43-Pipe 2 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST43-Pipe 2 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST43-Elbow 2	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
MST43-Pipe 3 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST43-Pipe 3 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST43-Tee 1	TEE	12	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
MST43-Pipe 4	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	0.840	80	0.147	0.000	0.030
MST44-Pipe 1	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST44-Elbow 1	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
MST44-Pipe 2 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST44-Pipe 2 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST44-Elbow 2	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
MST44-Pipe 3 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST44-Pipe 3 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST44-Tee 1	TEE	12	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
MST44-Pipe 4	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	0.840	80	0.147	0.000	0.030
MST45-Pipe 1 US	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST45-Pipe 1 DS	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.660	80	0.191	0.000	0.058
MST45-Elbow 1	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.660	80	0.191	0.000	0.050
MST45-Pipe 2 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.660	80	0.191	0.000	0.058
MST45-Pipe 2 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.660	80	0.191	0.000	0.058
MST45-Elbow 2	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.660	80	0.191	0.000	0.050
MST45-Pipe 3 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.660	80	0.191	0.000	0.058
MST45-Pipe 3 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.660	80	0.191	0.000	0.058
MST45-Tee 1	TEE	12	A105//	3	0.00	0.00	0.00	17500.0	1.660	80	0.191	0.000	0.050
MST45-Pipe 4	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	0.840	80	0.147	0.000	0.030
MST46-Pipe 1	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST46-Elbow 1	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
MST46-Pipe 2 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST46-Pipe 2 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST46-Elbow 2	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
MST46-Pipe 3 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST46-Pipe 3 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST46-Tee 1	TEE	12	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
MST46-Pipe 4	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	0.840	80	0.147	0.000	0.030
MST50-Pipe 1	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST50-Elbow 1	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
MST50-Pipe 2 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST50-Pipe 2 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST50-Tee 1	TEE	12	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
MST50-Pipe 3	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST50-Pipe 4	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	0.840	80	0.147	0.000	0.030
MST51-Pipe 1	STRAIGHT PIPE	9	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST51-Elbow 1	90-DEG ELBOW	2	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
MST51-Pipe 2 US	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST51-Pipe 2 DS	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST51-Tee 1	TEE	12	A105//	3	0.00	0.00	0.00	17500.0	1.315	80	0.179	0.000	0.040
MST51-Pipe 3	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046
MST51-Pipe 4	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	1.315	80	0.179	0.000	0.046

Line Name : xNCW_MICRO GRIDS

3EXC-12R MICRO	STRAIGHT PIPE	9	N.A	0	0.00	0.00	0.00	0.0	24.000	10	0.250	0.000	----
3EXA-13R MICRO	STRAIGHT PIPE	9	N.A	0	0.00	0.00	0.00	0.0	28.000	SPE	0.313	0.000	----
3EXA-13R MICRO1	STRAIGHT PIPE	9	N.A	0	0.00	0.00	0.00	0.0	28.000	SPE	0.313	0.000	----
3EXA-13R MICRO2	STRAIGHT PIPE	9	N.A	0	0.00	0.00	0.00	0.0	28.000	SPE	0.313	0.000	----
3EXA-13R MICRO3	STRAIGHT PIPE	9	N.A	0	0.00	0.00	0.00	0.0	28.000	SPE	0.313	0.000	----
3EXA-13R MICRO4	STRAIGHT PIPE	9	N.A	0	0.00	0.00	0.00	0.0	28.000	SPE	0.313	0.000	----
3EXA-13R MICRO5	STRAIGHT PIPE	9	N.A	0	0.00	0.00	0.00	0.0	28.000	SPE	0.313	0.000	----
3EXA-13R MICRO6	STRAIGHT PIPE	9	A234/WPB/	21	0.00	0.00	0.00	15000.0	28.000	SPE	0.313	0.000	----
8-6EX-20A MICRO1	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	18.000	30	0.438	0.000	----
7-5EX-4 MICRO1	STRAIGHT PIPE	9	N.A	0	0.00	0.00	0.00	0.0	28.000	STD	0.375	0.000	----
7-5EX-15 MICRO1	90-DEG ELBOW	2	N.A	0	0.00	0.00	0.00	0.0	28.000	STD	0.375	0.000	----
7-5EX-15 MICRO2	90-DEG ELBOW	2	N.A	0	0.00	0.00	0.00	0.0	28.000	STD	0.375	0.000	----
1-3EXA-11R MICRO A	STRAIGHT PIPE	67	N.A	0	0.00	0.00	0.00	0.0	28.000	SPE	0.313	0.000	----
1-3EXA-11R MICRO B	STRAIGHT PIPE	67	N.A	0	0.00	0.00	0.00	0.0	20.000	10	0.250	0.000	----
1-3EXA-11R MICRO C	STRAIGHT PIPE	67	N.A	0	0.00	0.00	0.00	0.0	28.000	SPE	0.313	0.000	----
1-3EXA-11R MICRO D	STRAIGHT PIPE	67	N.A	0	0.00	0.00	0.00	0.0	28.000	SPE	0.313	0.000	----
1-3EXA-11RP MICRO1	STRAIGHT PIPE	67	N.A	0	0.00	0.00	0.00	0.0	20.000	10	0.250	0.000	----
1-3EXA-11RP MICRO2	STRAIGHT PIPE	67	N.A	0	0.00	0.00	0.00	0.0	20.000	10	0.250	0.000	----
1-3EXA-11RP MICRO3	STRAIGHT PIPE	67	N.A	0	0.00	0.00	0.00	0.0	20.000	10	0.250	0.000	----
1-3EXA-11RP MICRO4	STRAIGHT PIPE	67	N.A	0	0.00	0.00	0.00	0.0	20.000	10	0.250	0.000	----
1-3EXA-11RP MICRO5	STRAIGHT PIPE	67	N.A	0	0.00	0.00	0.00	0.0	20.000	10	0.250	0.000	----
1-3EXA-11RP MICRO6	STRAIGHT PIPE	67	N.A	0	0.00	0.00	0.00	0.0	20.000	10	0.250	0.000	----
8-6EX-20A (100% SCAN)	STRAIGHT PIPE	58	N.A	0	0.00	0.00	0.00	0.0	18.000	30	0.438	0.000	----
3-3EXC-3P MICRO1	STRAIGHT PIPE	9	N.A	0	0.00	0.00	0.00	0.0	20.000	10	0.250	0.000	----
3-3EXC-3P MICRO2	STRAIGHT PIPE	9	N.A	0	0.00	0.00	0.00	0.0	20.000	10	0.250	0.000	----
6-4EXC-15 MICRO1	45-DEG ELBOW	3	N.A	0	0.00	0.00	0.00	0.0	20.000	10	0.250	0.000	----
6-4EXC-15 MICRO2	45-DEG ELBOW	3	N.A	0	0.00	0.00	0.00	0.0	20.000	10	0.250	0.000	----
6-4EXC-15 MICRO3	45-DEG ELBOW	3	N.A	0	0.00	0.00	0.00	0.0	20.000	10	0.250	0.000	----
4-EXB-14P M1	STRAIGHT PIPE	58	N.A	0	0.00	0.00	0.00	0.0	20.000	10	0.250	0.000	----
4-EXB-14P M2	STRAIGHT PIPE	58	N.A	0	0.00	0.00	0.00	0.0	20.000	10	0.250	0.000	----
4-EXB-14P M9	STRAIGHT PIPE	58	N.A	0	0.00	0.00	0.00	0.0	20.000	10	0.250	0.000	----
4-EXB-9P MA	STRAIGHT PIPE	58	N.A	0	0.00	0.00	0.00	0.0	20.000	10	0.250	0.000	----
MS23-1 DS	STRAIGHT PIPE	52	N.A	0	0.00	0.00	0.00	0.0	28.000	SPE	0.912	0.000	----
MS21-1 DS	STRAIGHT PIPE	52	N.A	0	0.00	0.00	0.00	0.0	28.000	SPE	0.912	0.000	----

Line Name : xNCW_MOPS DRAIN_A

MPSD2	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
MPSD8	STRAIGHT PIPE	68	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
MPSD9	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
MPSD10	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
MPSD11	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
MPSD12	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089

Line Name : xNCW_MOPS DRAIN_B

MPSD1	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
MPSD3	STRAIGHT PIPE	68	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
MPSD4	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
MPSD5	TEE	12	A234/WPB/	21	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
MPSD6	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089
MPSD7	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	10.750	40	0.365	0.000	0.089

Line Name : xNCW_P&ID_227780

COMP1	STRAIGHT PIPE	62	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
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COMP2	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
COMP3	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
COMP4	90-DEG ELBOW	2	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
COMP5	STRAIGHT PIPE	52	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083
COMP7	STRAIGHT PIPE	58	A106/B/	5	0.00	0.00	0.00	15000.0	2.375	80	0.218	0.000	0.083

Line Name : xNCW_P&ID_9321-F-2120

DS of Valve AF138	CON. EXPANDER	18	A234/WPB/	21	0.00	0.00	0.00	15000.0	2.875	40	0.203	0.000	0.043
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Line Name : xNCW_P&ID_9321-F-2729

SGBTV-2E	45-DEG ELBOW	3	A234/WPB/	21	0.00	0.00	0.00	15000.0	18.000	STD	0.375	0.000	0.060
SGBTV-2E US Pipe	STRAIGHT PIPE	53	A53/B/E	2	0.00	0.00	0.00	12800.0	18.000	STD	0.375	0.000	0.070

Company: ENTERGY NUCLEAR NORTHEAST
Plant: INDIAN POINT
Unit: 2
DB Name: IP2

Report Date: 02-MAY-2005 Time: 15:30:57
CHECWORKS FAC Version 1.0G (Build 75)

*** FAC Database: Component History Summary Report ***

SELECTION CRITERIA:

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

Line Name : CD83-2-HDR to BFP21

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
CD-65N	CD-65N	REFUEL 15	11-06-2002

Line Name : ES1-1-3RDPT ES to FWH 23A

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
3EXA-7	3EXA-7	REFUEL 15	11-14-2002
3EXA-6P DS	3EXA-6P DS	REFUEL 15	11-14-2002
3EXA-6	3EXA-6	REFUEL 15	11-14-2002
3EXA-5P	3EXA-5P	REFUEL 15	11-14-2002
3EXA-5	3EXA-5	REFUEL 15	11-14-2002
3EXA-4P US	3EXA-4P US	REFUEL 15	11-14-2002
3EXA-4	3EXA-4	REFUEL 15	11-14-2002

Line Name : ES1-2-3RDPT ES to FWH 23A

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
3EXA-1P	3EXA-1P	REFUEL 15	11-14-2002
3EXA-1A	3EXA-1A	REFUEL 15	11-14-2002
3EXA-1	3EXA-1	REFUEL 15	11-14-2002

Line Name : ES1-3-3RDPT ES to FWH 23A

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
3EXA-11R	3EXA-11R	REFUEL 15	11-14-2002
3EXA-11RP	3EXA-11RP	REFUEL 13	06-30-1997

3EXA-3	3EXA-3	REFUEL 10	02-03-1991
3EXA-2P	3EXA-2P	REFUEL 10	02-03-1991

Line Name : ES2-3-3RDPT ES to FWH 23B

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
-----	-----	-----	-----
3EXB-3P US	3EXB-3P	REFUEL 13	06-30-1997
3EXB-3P DS	3EXB-3P DS	REFUEL 13	06-30-1997
3EXB-3	3EXB-3	REFUEL 10	02-03-1991
3EXB-2P US	3EXB-2P	REFUEL 10	02-03-1991
3EXB-2P DS	3EXB-2P DS	REFUEL 10	02-03-1991

Line Name : ES3-1-3RDPT ES to FWH 23C

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
-----	-----	-----	-----
3EXC-13R	3EXC-13R	REFUEL 14	05-25-2000
3EXC-12R	3EXC-12R	REFUEL 14	05-25-2000
3EXC-12P	3EXC-12P	REFUEL 14	05-25-2000

Line Name : ES3-3-3RDPT ES to FWH 23C

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
-----	-----	-----	-----
3EXC-3P	3EXC-3P	REFUEL 13	06-30-1997
3EXC-3	3EXC-3	REFUEL 10	02-03-1991
3EXC-2P	3EXC-2P	REFUEL 10	02-03-1991

Line Name : ES4-1-4THPT ES to FWH 24A

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
-----	-----	-----	-----
4EXA-14	4EXA-14	REFUEL 15	11-14-2002
4EXA-12P	4EXA-12P	REFUEL 15	11-14-2002

Line Name : ES5-1-4THPT ES to FWH 24B

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
-----	-----	-----	-----
4EXB-13P	4EXB-13P	REFUEL 15	11-14-2002
4EXB-14P	4EXB-14P	REFUEL 15	10-26-2002
4EXB-9P US	4EXB-9P US	REFUEL 15	11-14-2002
4EXB-9P DS	4EXB-9P DS	REFUEL 15	11-14-2002

Line Name : ES7-1-5THPT ES to FWH 25ABC

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
5EX-18C	5EX-18C	REFUEL 13	06-30-1997
5EX-18	5EX-18	REFUEL 13	06-30-1997
5EX-17P	5EX-17P	REFUEL 14	05-25-2000
5EX-17P-1	5EX-17P-1	REFUEL 14	05-25-2000
5EX-17	5EX-17	REFUEL 14	05-25-2000
	5EX-17	REFUEL 8	01-01-1988
5EX-16P US	5EX-16P US	REFUEL 14	05-25-2000
	5EX-16P US	REFUEL 8	01-01-1988
5EX-16P DS	5EX-16P DS	REFUEL 14	05-25-2000
	5EX-16P DS	REFUEL 8	01-01-1988
5EX-16	5EX-16	REFUEL 14	05-25-2000
	5EX-16	REFUEL 8	01-01-1988
5EX-15P US	5EX-15P US	REFUEL 14	05-25-2000
5EX-15P DS	5EX-15P DS	REFUEL 14	05-25-2000
	5EX-15P	REFUEL 8	01-01-1988
5EX-15	5EX-15	REFUEL 14	05-25-2000
	5EX-15	REFUEL 8	01-01-1988
5EX-14P	5EX-14P	REFUEL 14	05-25-2000
	5EX-14P	REFUEL 8	01-01-1988
5EX-14	5EX-14	REFUEL 14	05-25-2000
	5EX-14	REFUEL 8	01-01-1988
5EX-13P US	5EX-13P US	REFUEL 14	05-25-2000
5EX-13P	5EX-13P	REFUEL 14	05-25-2000
5EX-13P DS	5EX-13P DS	REFUEL 14	05-25-2000
5EX-13	5EX-13	REFUEL 14	05-25-2000
	5EX-13	REFUEL 8	01-01-1988
5EX-12	5EX-12	REFUEL 14	05-25-2000
	5EX-12	REFUEL 8	01-01-1988
5EX-11P	5EX-11P	REFUEL 14	05-25-2000
	5EX-11P	REFUEL 8	01-01-1988
5EX-11	5EX-11	REFUEL 14	05-25-2000
	5EX-11	REFUEL 8	01-01-1988
5EX-8P US	5EX-8P US	REFUEL 14	05-25-2000
5EX-8P DS	5EX-8P DS	REFUEL 14	05-25-2000
	5EX-8P	REFUEL 8	01-01-1988
5EX-8	5EX-8	REFUEL 14	05-25-2000
	5EX-8	REFUEL 8	01-01-1988

Line Name : ES7-2-5THPT ESHDR to FWH 25C

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
5EX-9	5EX-9	REFUEL 13	06-30-1997
	5EX-9	REFUEL 8	01-01-1988
5EX-9-10	5EX-9-10	REFUEL 13	06-30-1997
	5EX-9-10	REFUEL 8	01-01-1988
5EX-10	5EX-10	REFUEL 13	06-30-1997
	5EX-10	REFUEL 8	01-01-1988

Line Name : ES7-3-5THPT ESHDR 25CT to BT

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
5EX-5P US	5EX-5P US	REFUEL 14	05-25-2000
5EX-5P DS	5EX-5P DS	REFUEL 14	05-25-2000
	5EX-5P	REFUEL 8	01-01-1988
5EX-5	5EX-5	REFUEL 14	05-25-2000
	5EX-5	REFUEL 8	01-01-1988

Line Name : ES7-4-5THPT ESHDR to FWH 25B

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
5EX-6P1	5EX-6P1	REFUEL 14	05-25-2000
5EX-6	5EX-6	REFUEL 13	06-30-1997
	5EX-6	REFUEL 8	01-01-1988
5EX-6-7	5EX-6-7	REFUEL 13	06-30-1997
	5EX-6-7	REFUEL 8	01-01-1988
5EX-7	5EX-7	REFUEL 13	06-30-1997
	5EX-7	REFUEL 8	01-01-1988

Line Name : ES7-5-5THPT ESHDR to FWH 25A

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
5EX-4	5EX-4	REFUEL 14	05-25-2000
	5EX-4	REFUEL 8	01-01-1988
5EX-3P US	5EX-3P US	REFUEL 14	05-25-2000
	5EX-3P	REFUEL 8	01-01-1988
5EX-3	5EX-3	REFUEL 14	05-25-2000
	5EX-3	REFUEL 8	01-01-1988
5EX-2P	5EX-2P	REFUEL 14	05-25-2000
	5EX-2P	REFUEL 8	01-01-1988
5EX-2	5EX-2	REFUEL 13	06-30-1997
	5EX-2	REFUEL 8	01-01-1988
5EX-1-2	5EX-1-2	REFUEL 13	06-30-1997
	5EX-1-2	REFUEL 8	01-01-1988
5EX-1	5EX-1	REFUEL 13	06-30-1997
	5EX-1	REFUEL 8	01-01-1988

Line Name : ES7A-1-SEP TKA VNT to FWH25

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MOPS2	MOPS2	REFUEL 13	06-30-1997

MOPS3	MOPS3	REFUEL 13	06-30-1997
MOPS4	MOPS4	REFUEL 13	06-30-1997
MOPS5	MOPS5	REFUEL 13	06-30-1997
MOPS6	MOPS6	REFUEL 13	06-30-1997
MOPS7	MOPS7	REFUEL 13	06-30-1997
MOPS8	MOPS8	REFUEL 13	06-30-1997

Line Name : ES7A-2-SEP TKB VNT to FWH25

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MOPS10	MOPS10	REFUEL 13	06-30-1997
MOPS11	MOPS11	REFUEL 13	06-30-1997
MOPS12	MOPS12	REFUEL 13	06-30-1997
MOPS13	MOPS13	REFUEL 13	06-30-1997
MOPS14	MOPS14	REFUEL 13	06-30-1997
MOPS15	MOPS15	REFUEL 13	06-30-1997
MOPS16	MOPS16	REFUEL 13	06-30-1997
MOPS17	MOPS17	REFUEL 13	06-30-1997
MOPS18	MOPS18	REFUEL 13	06-30-1997

Line Name : ES8-1-6THPT ES to HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
6EX-28	6EX-28	REFUEL 10	02-03-1991
6EX-27P	6EX-27P	REFUEL 10	02-03-1991
6EX-27	6EX-27	REFUEL 10	02-03-1991
6EX-23P	6EX-23P	REFUEL 10	02-03-1991
6EX-23	6EX-23	REFUEL 11	04-01-1993
6EX-22P	6EX-22P	REFUEL 10	02-03-1991
6EX-22R	6EX-22R	REFUEL 11	04-01-1993
6EX-22A	6EX-22A	REFUEL 10	02-03-1991

Line Name : ES8-2-6THPT ES to HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
6EX-26-1	6EX-26-1	REFUEL 10	02-03-1991
6EX-26P	6EX-26P	REFUEL 10	02-03-1991
6EX-26-2	6EX-26-2	REFUEL 10	02-03-1991
6EX-25P	6EX-25P	REFUEL 10	02-03-1991
6EX-25	6EX-25	REFUEL 10	02-03-1991
6EX-24P	6EX-24P	REFUEL 10	02-03-1991
6EX-24	6EX-24	REFUEL 10	02-03-1991

Line Name : ES8-3-6THPT ESHDR to FWH 26

Current	Previous	Period	Replacement
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Component Name	Component Name	Replaced	Date
6EX-22	6EX-22	REFUEL 11	04-01-1993
6EX-21P	6EX-21P	REFUEL 11	04-01-1993
6EX-21	6EX-21	REFUEL 11	04-01-1993
6EX-21C	6EX-21C	REFUEL 11	04-01-1993
6EX-20B	6EX-20B	REFUEL 13	06-30-1997
6EX-20A	6EX-20A	REFUEL 13	06-30-1997
6EX-20	6EX-20	REFUEL 11	04-01-1993
6EX-19P	6EX-19P	REFUEL 11	04-01-1993
6EX-19	6EX-19	REFUEL 11	04-01-1993
6EX-18P	6EX-18P	REFUEL 11	04-01-1993
6EX-18	6EX-18	REFUEL 11	04-01-1993
6EX-17P	6EX-17P	REFUEL 11	04-01-1993
6EX-17	6EX-17	REFUEL 11	04-01-1993
6EX-16P	6EX-16P	REFUEL 11	04-01-1993
6EX-16	6EX-16	REFUEL 11	04-01-1993
6EX-46P	6EX-46P	REFUEL 11	04-01-1993
6EX-14	6EX-14	REFUEL 11	04-01-1993

Line Name : ES8-4-6THPT ESHDR to FWH 26C

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
6EX-14R	6EX-14R	REFUEL 11	04-01-1993
6EX-14P	6EX-14P	REFUEL 11	04-01-1993
6EX-15	6EX-15	REFUEL 11	04-01-1993
6EX-15P	6EX-15P	REFUEL 11	04-01-1993
6EX-13C	6EX-13C	REFUEL 11	04-01-1993
6EX-13	6EX-13	REFUEL 11	04-01-1993
6EX-13P	6EX-13P	REFUEL 11	04-01-1993
6EX-12P	6EX-12P	REFUEL 11	04-01-1993
6EX-12	6EX-12	REFUEL 11	04-01-1993
6EX-11	6EX-11	REFUEL 11	04-01-1993

Line Name : ES8-5-6THPT ESHDR 26CT to BT

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
6EX-10P	6EX-10P	REFUEL 11	04-01-1993
6EX-10	6EX-10	REFUEL 11	04-01-1993

Line Name : ES8-6-6THPT ESHDR to FWH 26B

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
6EX-10R	6EX-10R	REFUEL 11	04-01-1993
6EX-9P	6EX-9P	REFUEL 11	04-01-1993
6EX-9	6EX-9	REFUEL 11	04-01-1993

6EX-8BP	6EX-8BP	REFUEL 11	04-01-1993
6EX-8B	6EX-8B	REFUEL 11	04-01-1993
6EX-8	6EX-8	REFUEL 11	04-01-1993
6EX-6P	6EX-6P	REFUEL 11	04-01-1993
6EX-7P	6EX-7P	REFUEL 11	04-01-1993
6EX-7	6EX-7	REFUEL 11	04-01-1993
6EX-6	6EX-6	REFUEL 11	04-01-1993
6EX-6N	6EX-6N	INTERIM 13	02-10-1996

Line Name : ES8-7-6THPT ESHDR to FWH 26A

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
-----	-----	-----	-----
6EX-51	6EX-51	REFUEL 11	04-01-1993
6EX-5A	6EX-5A	REFUEL 11	04-01-1993
6EX-5P	6EX-5P	REFUEL 11	04-01-1993
6EX-5	6EX-5	REFUEL 11	04-01-1993
6EX-4P	6EX-4P	REFUEL 11	04-01-1993
6EX-4	6EX-4	REFUEL 11	04-01-1993
6EX-3P	6EX-3P	REFUEL 11	04-01-1993
6EX-3	6EX-3	REFUEL 11	04-01-1993
6EX-1P	6EX-1P	REFUEL 11	04-01-1993
6EX-2P	6EX-2P	REFUEL 11	04-01-1993
6EX-2	6EX-2	REFUEL 11	04-01-1993
6EX-1	6EX-1	REFUEL 11	04-01-1993
6EX-1N	6EX-1N	INTERIM 13	02-10-1996

Line Name : FW71-1-BFP21 DISCH to HDR

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
-----	-----	-----	-----
BFD-14N	BFD-14N	REFUEL 15	11-06-2002
BFD-14P	BFD-14P	REFUEL 15	11-06-2002

Line Name : HD21A-2-FWH24A CV to FWH23A

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
-----	-----	-----	-----
4EXD-5	4EXD-5	REFUEL 13	06-30-1997

Line Name : HD22A-2-FWH24B CV to FWH23B

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
-----	-----	-----	-----
4EXD-38	4EXD-38	REFUEL 14	04-01-2000

Line Name : MSD33A-1-MSDT 21A to HDT

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
1A-12P	1A-12P	REFUEL 12	05-01-1995
1A-12	1A-12	REFUEL 12	05-01-1995
1A-12P-1	1A-12P-1	REFUEL 12	05-01-1995
1A-11	1A-11	REFUEL 12	05-01-1995
1A-11P	1A-11P	REFUEL 12	05-01-1995
1A-10	1A-10	REFUEL 12	05-01-1995
1A-10P	1A-10P	REFUEL 12	05-01-1995
1A-1	1A-1	REFUEL 12	05-01-1995
1A-2	1A-2	REFUEL 12	05-01-1995
1A-2P	1A-2P	REFUEL 12	05-01-1995
1A-3	1A-3	REFUEL 12	05-01-1995
1A-3P	1A-3P	REFUEL 12	05-01-1995
1A-4	1A-4	REFUEL 12	05-01-1995
1A-4P	1A-4P	REFUEL 12	05-01-1995
1A-5	1A-5	REFUEL 12	05-01-1995
1A-5P	1A-5P	REFUEL 12	05-01-1995
1A-6	1A-6	REFUEL 12	05-01-1995
1A-6P	1A-6P	REFUEL 12	05-01-1995
1A-7	1A-7	REFUEL 12	05-01-1995
1A-7P	1A-7P	REFUEL 12	05-01-1995
1A-8	1A-8	REFUEL 12	05-01-1995
1A-8P	1A-8P	REFUEL 12	05-01-1995
1A-9	1A-9	REFUEL 12	05-01-1995
1A-9P	1A-9P	REFUEL 12	05-01-1995
1A-13	1A-13	REFUEL 12	05-01-1995
1A-13P	1A-13P	REFUEL 12	05-01-1995
1A-15	1A-15	REFUEL 12	05-01-1995

Line Name : MSD34A-1-MSDT 22A to HDT

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
2A-3P-1	2A-3P-1	REFUEL 12	05-01-1995
2A-3	2A-3	REFUEL 12	05-01-1995
2A-3P	2A-3P	REFUEL 12	05-01-1995
2A-4	2A-4	REFUEL 12	05-01-1995
2A-4P	2A-4P	REFUEL 12	05-01-1995
2A-5	2A-5	REFUEL 12	05-01-1995
2A-5P	2A-5P	REFUEL 12	05-01-1995
2A-1	2A-1	REFUEL 12	05-01-1995
2A-2P	2A-2P	REFUEL 12	05-01-1995
2A-2	2A-2	REFUEL 12	05-01-1995
2A-2P-1	2A-2P-1	REFUEL 12	05-01-1995
2A-6	2A-6	REFUEL 12	05-01-1995
2A-6P	2A-6P	REFUEL 12	05-01-1995
2A-7	2A-7	REFUEL 12	05-01-1995
2A-7P	2A-7P	REFUEL 12	05-01-1995
2A-8	2A-8	REFUEL 12	05-01-1995
2A-8P	2A-8P	REFUEL 12	05-01-1995
2A-9	2A-9	REFUEL 12	05-01-1995

2A-9P	2A-9P	REFUEL 12	05-01-1995
2A-10	2A-10	REFUEL 12	05-01-1995
2A-10P	2A-10P	REFUEL 12	05-01-1995
2A-12	2A-12	REFUEL 12	05-01-1995
2A-12P	2A-12P	REFUEL 12	05-01-1995
2A-13	2A-13	REFUEL 12	05-01-1995
2A-13P	2A-13P	REFUEL 12	05-01-1995
2A-15	2A-15	REFUEL 12	05-01-1995

Line Name : MSD35A-1-MSDT 23A to HDT

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
3A-16P US	3A-16P	REFUEL 12	05-01-1995
3A-16	3A-16	REFUEL 12	05-01-1995
3A-1P	3A-1P	REFUEL 12	05-01-1995
3A-1	3A-1	REFUEL 12	05-01-1995
3A-2P	3A-2P	REFUEL 12	05-01-1995
3A-2	3A-2	REFUEL 12	05-01-1995
3A-3	3A-3	REFUEL 12	05-01-1995
3A-3P	3A-3P	REFUEL 12	05-01-1995
3A-17	3A-17	REFUEL 12	05-01-1995
3A-17P	3A-17P	REFUEL 12	05-01-1995
3A-18	3A-18	REFUEL 12	05-01-1995
3A-18P	3A-18P	REFUEL 12	05-01-1995
3A-19	3A-19	REFUEL 12	05-01-1995
3A-19P	3A-19P	REFUEL 12	05-01-1995
3A-20	3A-20	REFUEL 12	05-01-1995
3A-20P	3A-20P	REFUEL 12	05-01-1995
3A-21	3A-21	REFUEL 12	05-01-1995
3A-21P	3A-21P	REFUEL 12	05-01-1995
3A-13	3A-13	REFUEL 12	05-01-1995
3A-13P	3A-13P	REFUEL 12	05-01-1995
3A-15	3A-15	REFUEL 12	05-01-1995

Line Name : MSD36A-1-MSDT 21B to HDT

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
1B-3P	1B-3P	REFUEL 13	06-30-1997
1B-3	1B-3	REFUEL 13	06-30-1997
1B-4P	1B-4P	REFUEL 13	06-30-1997
1B-4	1B-4	REFUEL 13	06-30-1997
	1B-4	REFUEL 10	02-03-1991
1B-5	1B-5	REFUEL 13	06-30-1997
1B-5R	1B-5R	REFUEL 13	06-30-1997
1B-5P	1B-5P	REFUEL 13	06-30-1997
1B-1	1B-1	REFUEL 13	06-30-1997
1B-2P	1B-2P	REFUEL 13	06-30-1997
1B-2	1B-2	REFUEL 13	06-30-1997
	1B-2	REFUEL 9	03-20-1989
1B-6P	1B-6P	REFUEL 13	06-30-1997
1B-6	1B-6	REFUEL 13	06-30-1997

1B-7P	1B-7P	REFUEL 13	06-30-1997
1B-7	1B-7	REFUEL 13	06-30-1997
1B-7P-1	1B-7P-1	REFUEL 13	06-30-1997
1B-8	1B-8	REFUEL 13	06-30-1997
1B-8P	1B-8P	REFUEL 13	06-30-1997
1B-9	1B-9	REFUEL 13	06-30-1997
1B-9P	1B-9P	REFUEL 13	06-30-1997
1B-10	1B-10	REFUEL 13	06-30-1997
1B-10P US	1B-10P US	REFUEL 13	06-30-1997
1B-10P DS	1B-10P DS	REFUEL 13	06-30-1997
1B-11	1B-11	REFUEL 13	06-30-1997
1B-11P US	1B-11P US	REFUEL 13	06-30-1997
1B-11P DS	1B-11P DS	REFUEL 13	06-30-1997
1B-12	1B-12	REFUEL 13	06-30-1997
1B-12P US	1B-12P US	REFUEL 13	06-30-1997
1B-12P DS	1B-12P DS	REFUEL 13	06-30-1997
1B-14	1B-14	REFUEL 13	06-30-1997
1B-14P	1B-14P	REFUEL 13	06-30-1997
1B-13	1B-13	REFUEL 13	06-30-1997
1B-13P	1B-13P	REFUEL 13	06-30-1997
1B-15	1B-15	REFUEL 13	06-30-1997
1B-15P	1B-15P	REFUEL 13	06-30-1997

Line Name : MSD37A-1-MSDT 22B to HDT

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
2B-1P	2B-1P	REFUEL 13	06-30-1997
2B-1	2B-1	REFUEL 13	06-30-1997
	2B-1	REFUEL 12	04-01-1995
2B-2P	2B-2P	REFUEL 13	06-30-1997
2B-2	2B-2	REFUEL 13	06-30-1997
2B-3	2B-3	REFUEL 13	06-30-1997
2B-3P	2B-3P	REFUEL 13	06-30-1997
2B-4	2B-4	REFUEL 13	06-30-1997
	2B-4	REFUEL 9	03-20-1989
2B-4P	2B-4P	REFUEL 13	06-30-1997
2B-5	2B-5	REFUEL 13	06-30-1997
	2B-5	REFUEL 9	03-20-1989
2B-5P	2B-5P	REFUEL 13	06-30-1997
2B-6	2B-6	REFUEL 13	06-30-1997
2B-6P	2B-6P	REFUEL 13	06-30-1997
2B-7	2B-7	REFUEL 13	06-30-1997
	2B-7	REFUEL 9	04-01-1989
2B-7P US	2B-7P US	REFUEL 13	06-30-1997
2B-7P DS	2B-7P DS	REFUEL 13	06-30-1997
2B-8	2B-8	REFUEL 13	06-30-1997
2B-8P US	2B-8P US	REFUEL 13	06-30-1997
2B-8P DS	2B-8P DS	REFUEL 13	06-30-1997
2B-9	2B-9	REFUEL 13	06-30-1997
	2B-9	REFUEL 12	05-01-1995
2B-9P US	2B-9P US	REFUEL 13	06-30-1997
2B-9P DS	2B-9P DS	REFUEL 13	06-30-1997
2B-10	2B-10	REFUEL 13	06-30-1997
	2B-10	REFUEL 12	05-01-1995
2B-10P US	2B-10P US	REFUEL 13	06-30-1997

2B-10P DS	2B-10P DS	REFUEL 13	06-30-1997
2B-11	2B-11	REFUEL 13	06-30-1997
	2B-11	REFUEL 12	05-01-1995
2B-11P	2B-11P	REFUEL 13	06-30-1997
2B-12	2B-12	REFUEL 13	06-30-1997
2B-12P US	2B-12P US	REFUEL 13	06-30-1997
2B-12P DS	2B-12P DS	REFUEL 13	06-30-1997
2B-13	2B-13	REFUEL 13	06-30-1997
2B-13P	2B-13P	REFUEL 13	06-30-1997
2B-15	2B-15	REFUEL 13	06-30-1997
2B-15P	2B-15P	REFUEL 13	06-30-1997

Line Name : MSD38A-1-MSDT 23B to HDT

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
3B-3P	3B-3P	REFUEL 12	02-05-1995
3B-3	3B-3	REFUEL 12	02-05-1995
3B-4P	3B-4P	REFUEL 12	02-05-1995
3B-4	3B-4	REFUEL 12	02-05-1995
3B-5	3B-5	CYCLE 13B	02-05-1997
3B-5P	3B-5P	CYCLE 13B	02-05-1997
3B-1	3B-1	CYCLE 13B	02-05-1997
3B-2P	3B-2P	REFUEL 12	02-05-1995
3B-2	3B-2	REFUEL 12	02-05-1995
3B-2P-1	3B-2P-1	REFUEL 12	02-05-1995
3B-6	3B-6	REFUEL 12	02-05-1995
3B-6P	3B-6P	REFUEL 12	02-05-1995
3B-7	3B-7	REFUEL 12	02-05-1995
3B-7P	3B-7P	REFUEL 12	02-05-1995
3B-8	3B-8	CYCLE 13B	02-05-1997
3B-8P	3B-8P	REFUEL 12	02-05-1995
3B-9	3B-9	REFUEL 12	02-05-1995
3B-9P DS	3B-9P	REFUEL 12	02-05-1995
3B-10	3B-10	REFUEL 12	02-05-1995
3B-10P US	3B-10P US	REFUEL 12	02-05-1995
3B-10P DS	3B-10P DS	REFUEL 12	02-05-1995
3B-11	3B-11	REFUEL 12	02-05-1995
3B-11P US	3B-11P US	REFUEL 12	02-05-1995
3B-11P DS	3B-11P DS	REFUEL 12	02-05-1995
3B-12	3B-12	REFUEL 12	02-05-1995
3B-12P US	3B-12P US	REFUEL 12	02-05-1995
3B-14	3B-14	REFUEL 12	02-05-1995
3B-14P	3B-14P	REFUEL 12	02-05-1995
3B-13	3B-13	REFUEL 12	02-05-1995
3B-13P	3B-13P	REFUEL 12	02-05-1995
3B-15	3B-15	REFUEL 12	02-05-1995
3B-15P	3B-15P	REFUEL 12	02-05-1995

Line Name : MSD45B-1-RHDT21A CV to FWH26

Current Component Name	Previous Component Name	Period Replaced	Replacement Date

MS-1A30R2	MS-1A30R2	REFUEL 13	06-30-1997
MS-1A30P2	MS-1A30P2	REFUEL 13	06-30-1997
MS-1A31	MS-1A31	REFUEL 13	06-30-1997
MS-1A31P	MS-1A31P	REFUEL 13	06-30-1997
MS-1A32	MS-1A32	REFUEL 13	06-30-1997
MS-1A32P	MS-1A32P	REFUEL 13	06-30-1997

Line Name : MSD45C-3-RHDT A HDR to FWH26

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MS-1A41	MS-1A41	REFUEL 13	06-13-1997

Line Name : MSD45C-4-RHDT A HDR to FWH26C

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MS-1A63P US	MS-1A63P US	REFUEL 13	06-13-1997
MS-1A63P DS	MS-1A63P DS	REFUEL 13	06-13-1997
MS-1A63	MS-1A63	REFUEL 13	06-30-1997
	MS-1A63	REFUEL 12	04-16-1995
MS-1A64P US	MS-1A64P US	REFUEL 13	06-30-1997
MS-1A64P DS	MS-1A64P DS	REFUEL 13	06-30-1997
MS-1A64	MS-1A64	REFUEL 13	06-30-1997
MS-1A65P US	MS-1A65P US	REFUEL 13	06-30-1997
MS-1A65P DS	MS-1A65P DS	REFUEL 13	06-30-1997
MS-1A65	MS-1A65	REFUEL 13	06-30-1997
MS-1A67	MS-1A67	INTERIM 13	02-15-1996

Line Name : MSD46A-2-RHDT22A CV to FWH26

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MS-2A24R	MS-2A24R	REFUEL 13	06-30-1997
MS-2A23P	MS-2A23P	REFUEL 13	06-30-1997
MS-2A24	MS-2A24	REFUEL 13	06-30-1997
MS-2A24P	MS-2A24P	REFUEL 13	06-30-1997
MS-2A25	MS-2A25	REFUEL 13	06-30-1997
MS-2A25P	MS-2A25P	REFUEL 13	06-30-1997

Line Name : MSD47-2-RHDT23A CV to FWH26

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MS-3A24R	MS-3A24R	REFUEL 13	06-30-1997
MS-3A23P	MS-3A23P	REFUEL 13	06-30-1997
MS-3A24	MS-3A24	REFUEL 13	06-30-1997

MS-3A24P	MS-3A24P	REFUEL 13	06-30-1997
MS-3A25	MS-3A25	REFUEL 13	06-30-1997
MS-3A25P	MS-3A25P	REFUEL 13	06-30-1997

Line Name : MSD48B-1-RHDT21B CV to FWH26

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MS-1B34R	MS-1B34R	REFUEL 13	06-30-1997
MS-1B33P-1	MS-1B33P-1	REFUEL 13	06-30-1997
MS-1B34	MS-1B34	REFUEL 13	06-30-1997

Line Name : MSD49B-1-RHDT22B CV to FWH26

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MS-2B30R2	MS-2B30R2	REFUEL 13	06-30-1997
MS-2B31P	MS-2B31P	REFUEL 13	06-30-1997
MS-2B31	MS-2B31	REFUEL 13	06-30-1997

Line Name : MSD49C-1-RHDT B HDR to FWH26

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MS-2B33P	MS-2B33P	REFUEL 16	10-23-2004
MS-2B35	MS-2B35	REFUEL 16	10-23-2004
MS-2B35P	MS-2B35P	REFUEL 16	10-23-2004
MS-2B36	MS-2B36	REFUEL 16	10-23-2004
	MS-2B36	INTERIM 13	02-12-1996
MS-2B63	MS-2B63	REFUEL 13	06-30-1997

Line Name : MSD49C-2-RHDT B HDR to FWH26C

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MS-2B63P	MS-2B63P	REFUEL 13	06-30-1997
MS-2B50	MS-2B50	REFUEL 13	06-30-1997
MS-2B53	MS-2B53	REFUEL 13	06-30-1997

Line Name : MSD49C-5-RHDT B HDR to FWH26A

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MS-2B43R	MS-2B43R	REFUEL 13	06-30-1997

Line Name : MSD50A-1-RHDT23B to CV

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MS-3B25	MS-3B25	REFUEL 13	06-30-1997
MS-3B25P	MS-3B25P	REFUEL 13	06-30-1997
MS-3B26	MS-3B26	REFUEL 13	06-30-1997
	MS-3B26	REFUEL 11	04-01-1993
MS-3B26P US	MS-3B26P US	REFUEL 13	06-30-1997
MS-3B27	MS-3B27	REFUEL 13	06-30-1997
MS-3B27P	MS-3B27P	REFUEL 13	06-30-1997
MS-3B28	MS-3B28	REFUEL 13	06-30-1997
MS-3B28P	MS-3B28P	REFUEL 13	06-30-1997
MS-3B29	MS-3B29	REFUEL 13	06-30-1997
MS-3B29P	MS-3B29P	REFUEL 13	06-30-1997
MS-3B30	MS-3B30	REFUEL 13	06-30-1997
MS-3B30P	MS-3B30P	REFUEL 13	06-30-1997

Line Name : MSD50C-1-RHDT23B CV to FWH26

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MS-3B43R	MS-3B43R	REFUEL 13	06-30-1997
MS-3B43	MS-3B43	REFUEL 13	06-30-1997

Line Name : xNCW_18

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
5EXC-7P	5EXC-7P	REFUEL 14	05-25-2000
5EXC-8	5EXC-8	REFUEL 14	05-25-2000
5EXC-30	5EXC-30	REFUEL 14	05-25-2000
5EXC-15P	5EXC-15P	REFUEL 14	05-25-2000
5EXC-16	5EXC-16	REFUEL 14	05-25-2000
5EXC-31	5EXC-31	REFUEL 14	05-25-2000
5EXC-25P	5EXC-25P	REFUEL 15	11-14-2002
	5EXC-25P	REFUEL 13	06-30-1997
5EXC-27P	5EXC-27P	REFUEL 14	05-25-2000

Line Name : xNCW_210

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
210-3P-3 DS	210-3P-3 DS	REFUEL 15	11-14-2002
210-4E	210-4E	REFUEL 15	11-14-2002
210-4P US	210-4P US	REFUEL 15	11-14-2002

210-4P DS	210-4P DS	REFUEL 15	11-14-2002
210-5E	210-5E	REFUEL 15	11-14-2002
210-5P	210-5P	REFUEL 15	11-14-2002

Line Name : xNCW_216

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
216-1E	216-1E	REFUEL 14	05-25-2000
216-4P DS	216-4P DS	REFUEL 14	05-25-2000
	216-4P DS	REFUEL 13	06-30-1997
216-5E	216-5E	REFUEL 14	05-25-2000
	216-5E	REFUEL 13	06-30-1997
216-5P	216-5P	REFUEL 14	05-25-2000
	216-5P	REFUEL 13	06-30-1997
216-6N	216-6N	REFUEL 14	05-25-2000
	216-6N	REFUEL 13	06-30-1997
216-4E	216-4E	REFUEL 14	05-25-2000
	216-4E	REFUEL 13	06-30-1997
216-4P US	216-4P US	REFUEL 14	05-25-2000
216-3P DS	216-3P DS	REFUEL 14	05-25-2000
	216-3P DS	REFUEL 13	06-30-1997
216-2E	216-2E	REFUEL 14	05-25-2000
216-1P	216-1P	REFUEL 14	05-25-2000
216-1P-1	216-1P-1	REFUEL 14	05-25-2000
216-2P US	216-2P US	REFUEL 14	05-25-2000

Line Name : xNCW_222

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
222-1P DS	222-1P DS	REFUEL 14	05-25-2000
222-2E	222-2E	REFUEL 14	05-25-2000
222-3P	222-3P	REFUEL 14	05-25-2000
222-4E	222-4E	REFUEL 14	05-25-2000
222-6E	222-6E	REFUEL 14	05-25-2000
222-6P US	222-6P US	REFUEL 14	05-25-2000
222-7E	222-7E	REFUEL 14	05-25-2000
222-9P DS	222-9P DS	REFUEL 14	05-25-2000
222-10E	222-10E	REFUEL 14	05-25-2000
222-10P US	222-10P US	REFUEL 14	05-25-2000
222-10P DS	222-10P DS	REFUEL 14	05-25-2000
222-11E	222-11E	REFUEL 14	05-25-2000
222-11P US	222-11P US	REFUEL 14	05-25-2000

Line Name : xNCW_223

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
223-9R	223-9R	REFUEL 15	11-14-2002

223-10T	223-10T	REFUEL 15	11-14-2002
223-10P US	223-10P US	REFUEL 15	11-14-2002
223-10P DS	223-10P DS	REFUEL 15	11-14-2002
223-11T	223-11T	REFUEL 15	11-14-2002
223-11P US	223-11P US	REFUEL 15	11-14-2002
223-13P DS	223-13P DS	REFUEL 15	11-14-2002
223-14E	223-14E	REFUEL 15	11-14-2002
223-14P US	223-14P US	REFUEL 15	11-14-2002
223-14P DS	223-14P DS	REFUEL 15	11-14-2002
223-15E	223-15E	REFUEL 15	11-14-2002
223-15P US	223-15P US	REFUEL 15	11-14-2002
223-15P DS	223-15P DS	REFUEL 15	11-14-2002
223-16E	223-16E	REFUEL 15	11-14-2002
223-16P US	223-16P US	REFUEL 15	11-14-2002
223-16P DS	223-16P DS	REFUEL 15	11-14-2002
223-17E	223-17E	REFUEL 15	11-14-2002
223-17P US	223-17P US	REFUEL 15	11-14-2002
223-17P DS	223-17P DS	REFUEL 15	11-14-2002
223-18E	223-18E	REFUEL 15	11-14-2002
223-18P	223-18P	REFUEL 15	11-14-2002
223-19E	223-19E	REFUEL 15	11-14-2002
223-19P US	223-19P US	REFUEL 15	11-14-2002

Line Name : xNCW_229

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
229-2P DS	229-2P DS	REFUEL 14	05-25-2000
229-3E	229-3E	REFUEL 14	05-25-2000
229-3P	229-3P	REFUEL 14	05-25-2000
229-4E	229-4E	REFUEL 14	05-25-2000
229-5E	229-5E	REFUEL 14	05-25-2000
229-6E	229-6E	REFUEL 14	05-25-2000
229-9P DS	229-9P DS	REFUEL 14	05-25-2000
229-6P US	229-6P US	REFUEL 14	05-25-2000
229-10E	229-10E	REFUEL 14	05-25-2000
229-10P US	229-10P US	REFUEL 14	05-25-2000
229-10P DS	229-10P DS	REFUEL 14	05-25-2000
229-11E	229-11E	REFUEL 14	05-25-2000
229-11P US	229-11P US	REFUEL 14	05-25-2000

Line Name : xNCW_241

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
241-10P	241-10P	REFUEL 13	06-30-1997
241-11E	241-11E	REFUEL 13	06-30-1997

Line Name : xNCW_245

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
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245-7P	245-7P	REFUEL 12	02-24-1995
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Line Name : xNCW_246

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
246-2P	246-2P	REFUEL 14	05-25-2000
246-3E	246-3E	REFUEL 14	05-25-2000
246-4P DS	246-4P DS	REFUEL 14	05-25-2000
246-5E	246-5E	REFUEL 14	05-25-2000
246-6P US	246-6P US	REFUEL 14	05-25-2000
246-6P DS	246-6P DS	REFUEL 14	05-25-2000
246-7E	246-7E	REFUEL 14	05-25-2000
246-8E	246-8E	REFUEL 14	05-25-2000
246-17P DS	246-17P DS	REFUEL 14	05-25-2000
246-18E	246-18E	REFUEL 14	05-25-2000
246-19P US	246-19P US	REFUEL 14	05-25-2000
246-21P DS	246-21P DS	REFUEL 14	05-25-2000
246-22E	246-22E	REFUEL 14	05-25-2000
246-23P US	246-23P US	REFUEL 14	05-25-2000

Line Name : xNCW_250

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
250-17P	250-17P	REFUEL 13	06-30-1997

Line Name : xNCW_273

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
273-9P DS	273-9P DS	REFUEL 16	10-23-2004
273-10E	273-10E	REFUEL 16	10-23-2004
273-11P US	273-11P US	REFUEL 16	10-23-2004
273-7P DS	273-7P DS	REFUEL 16	10-23-2004
273-8E	273-8E	REFUEL 16	10-23-2004
273-9P US	273-9P US	REFUEL 16	10-23-2004

Line Name : xNCW_285

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
285-13P DS	285-13P DS	REFUEL 16	10-23-2004
285-1B-VCD-XE	285-1B-VCD-XE	REFUEL 16	10-23-2004
285-15P US	285-15P US	REFUEL 16	10-23-2004

Line Name : xNCW_65A

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
1A-VCD34	1A-VCD34	REFUEL 14	05-25-2000
1A-VCD1	1A-VCD1	REFUEL 14	05-25-2000
1A-VCD1P	1A-VCD1P	REFUEL 14	05-25-2000
1A-VCD2	1A-VCD2	REFUEL 14	05-25-2000
1A-VCD4P	1A-VCD4P	REFUEL 14	05-25-2000
1A-VCD13	1A-VCD13	REFUEL 14	05-25-2000
1A-VCD15	1A-VCD15	REFUEL 16	10-23-2004
1A-VCD15P	1A-VCD15P	REFUEL 16	10-23-2004

Line Name : xNCW_65B

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
1A-VCD32P DS	1A-VCD32P DS	REFUEL 14	05-25-2000
1A-VCD33	1A-VCD33	REFUEL 14	05-25-2000
	1A-VCD33	REFUEL 13	05-23-1997
1A-VCD33P US	1A-VCD33P US	REFUEL 14	05-25-2000
1A-VCD23	1A-VCD23	REFUEL 14	05-25-2000
1A-VCD28	1A-VCD28	REFUEL 14	05-25-2000
1A-VCD27P DS	1A-VCD27P DS	REFUEL 14	05-25-2000
1A-VCD28P US	1A-VCD28P US	REFUEL 14	05-25-2000

Line Name : xNCW_66A

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
2A-VCD35	2A-VCD35	REFUEL 14	05-25-2000
2A-VCD1	2A-VCD1	REFUEL 14	05-25-2000
2A-VCD1P	2A-VCD1P	REFUEL 14	05-25-2000
2A-VCD2	2A-VCD2	REFUEL 14	05-25-2000
2A-VCD3P	2A-VCD3P	REFUEL 14	05-25-2000
2A-VCD2P	2A-VCD2P	REFUEL 14	05-25-2000
2A-VCD4	2A-VCD4	REFUEL 14	05-25-2000
2A-VCD4P	2A-VCD4P	REFUEL 14	05-25-2000
2A-VCD7	2A-VCD7	REFUEL 14	05-25-2000
2A-VCD8	2A-VCD8	REFUEL 14	05-25-2000
2A-VCD14	2A-VCD14	REFUEL 14	05-25-2000
2A-VCD20	2A-VCD20	REFUEL 16	10-23-2004
2A-VCD10	2A-VCD10	REFUEL 14	05-25-2000
2A-VCD36P	2A-VCD36P	CYCLE 17	10-23-2005
2A-VCD36	2A-VCD36	CYCLE 17	10-23-2005
2A-VCD36P-1 US	2A-VCD36P-1 US	REFUEL 16	10-23-2004
2A-VCD41P DS	2A-VCD41P DS	REFUEL 16	10-23-2004
2A-VCD42	2A-VCD42	REFUEL 16	10-23-2004

Line Name : xNCW_66B

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
2A-VCD23	2A-VCD23	REFUEL 14	05-25-2000
2A-VCD26P DS	2A-VCD26P DS	REFUEL 14	05-25-2000
2A-VCD27	2A-VCD27	REFUEL 14	05-25-2000
2A-VCD27P US	2A-VCD27P US	REFUEL 14	05-25-2000
2A-VCD33P DS	2A-VCD33P DS	REFUEL 14	05-25-2000
2A-VCD34P US	2A-VCD34P US	REFUEL 14	05-25-2000
2A-VCD34	2A-VCD34	REFUEL 14	05-25-2000

Line Name : xNCW_67A

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
3A-VCD30	3A-VCD30	REFUEL 14	05-25-2000
3A-VCD1P	3A-VCD1P	REFUEL 14	05-25-2000
3A-VCD1	3A-VCD1	REFUEL 14	05-25-2000
3A-VCD1P-1 US	3A-VCD1P-1 US	REFUEL 14	05-25-2000
3A-VCD2	3A-VCD2	REFUEL 14	05-25-2000
3A-VCD2P	3A-VCD2P	REFUEL 14	05-25-2000
3A-VCD7	3A-VCD7	REFUEL 14	05-25-2000
3A-VCD7P	3A-VCD7P	REFUEL 14	05-25-2000
3A-VCD9	3A-VCD9	REFUEL 14	05-25-2000
3A-VCD16	3A-VCD16	REFUEL 16	10-23-2004

Line Name : xNCW_67B

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
3A-VCD16	3A-VCD16	REFUEL 14	05-25-2000
3A-VCD18P	3A-VCD18P	REFUEL 14	05-25-2000
3A-VCD21P	3A-VCD21P	REFUEL 14	05-25-2000
3A-VCD22	3A-VCD22	REFUEL 14	05-25-2000
3A-VCD22P	3A-VCD22P	REFUEL 14	05-25-2000
3A-VCD28	3A-VCD28	REFUEL 14	05-25-2000
3A-VCD28P DS	3A-VCD28P DS	REFUEL 14	05-25-2000
3A-VCD29	3A-VCD29	REFUEL 14	05-25-2000
3A-VCD29P US	3A-VCD29P US	REFUEL 14	05-25-2000

Line Name : xNCW_68A

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
1B-VCD33	1B-VCD33	REFUEL 14	05-25-2000
1B-VCD1	1B-VCD1	REFUEL 14	05-25-2000

1B-VCD1P	1B-VCD1	REFUEL 12	04-16-1995
	1B-VCD1P	REFUEL 14	05-25-2000
	1B-VCD1P	REFUEL 12	04-16-1995
1B-VCD2	1B-VCD2	REFUEL 14	05-25-2000
1B-VCD2P	1B-VCD2P	REFUEL 14	05-25-2000
1B-VCD5	1B-VCD5	REFUEL 14	05-25-2000
1B-VCD11	1B-VCD11	REFUEL 14	05-25-2000
1B-VCD16P	1B-VCD16P	REFUEL 16	10-23-2004
1B-VCD17	1B-VCD17	REFUEL 16	10-23-2004
1B-VCD17P	1B-VCD17P	REFUEL 16	10-23-2004
1B-VCD4	1B-VCD4	REFUEL 14	05-25-2000
1B-VCD4P US	1B-VCD4P US	REFUEL 14	05-25-2000
1B-VCD3P DS	1B-VCD3P DS	REFUEL 14	05-25-2000
1B-VCD18P	1B-VCD18P	REFUEL 16	10-23-2004
1B-VCD19E	1B-VCD19E	REFUEL 16	10-23-2004
1B-VCD19P US	1B-VCD19P US	REFUEL 16	10-23-2004

Line Name : xNCW_68B

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
1B-VCD19P DS	1B-VCD19P DS	REFUEL 14	05-25-2000
1B-VCD20	1B-VCD20	REFUEL 14	05-25-2000
	1B-VCD20	REFUEL 13	06-30-1997
1B-VCD20P US	1B-VCD20P US	REFUEL 14	05-25-2000
1B-VCD21	1B-VCD21	REFUEL 14	05-25-2000
1B-VCD-22P DS	1B-VCD-22P DS	REFUEL 14	05-25-2000
1B-VCD-23	1B-VCD-23	REFUEL 14	05-25-2000
	1B-VCD-23	REFUEL 13	06-30-1997
1B-VCD-23P US	1B-VCD-23P US	REFUEL 14	05-25-2000
1B-VCD19	1B-VCD19	REFUEL 14	05-25-2000
1B-VCD19P US	1B-VCD19P US	REFUEL 14	05-25-2000
1B-VCD18P DS	1B-VCD18P DS	REFUEL 14	05-25-2000
1B-VCD32	1B-VCD32	REFUEL 14	05-25-2000

Line Name : xNCW_69A

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
2B-VCD38	2B-VCD38	REFUEL 14	05-25-2000
2B-VCD1	2B-VCD1	REFUEL 14	05-25-2000
2B-VCD1P	2B-VCD1P	REFUEL 14	05-25-2000
2B-VCD2	2B-VCD2	REFUEL 14	05-25-2000
2B-VCD2P	2B-VCD2P	REFUEL 14	05-25-2000
2B-VCD8E	2B-VCD8E	REFUEL 16	10-23-2004
2B-VCD8P	2B-VCD8P	REFUEL 14	05-25-2000
2B-VCD7P DS	2B-VCD7P DS	REFUEL 14	05-25-2000
2B-VCD8P-2 US	2B-VCD8P-2 US	REFUEL 14	05-25-2000
2B-VCD8	2B-VCD8	REFUEL 14	05-25-2000
2B-VCD9	2B-VCD9	REFUEL 14	05-25-2000
2B-VCD39P	2B-VCD39P	REFUEL 16	10-23-2004
2B-VCD39	2B-VCD39	REFUEL 16	10-23-2004

Line Name : xNCW_69B

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
2B-VCD22P DS	2B-VCD22P DS	REFUEL 14	05-25-2000
2B-VCD23	2B-VCD23	REFUEL 14	05-25-2000
	2B-VCD23	REFUEL 13	06-30-1997
2B-VCD23P US	2B-VCD23P US	REFUEL 14	05-25-2000
2B-VCD25P DS	2B-VCD25P DS	REFUEL 14	05-25-2000
2B-VCD26	2B-VCD26	REFUEL 14	05-25-2000
2B-VCD26P US	2B-VCD26P US	REFUEL 14	05-25-2000
2B-VCD21P DS	2B-VCD21P DS	REFUEL 14	05-25-2000
2B-VCD22	2B-VCD22	REFUEL 14	05-25-2000
2B-VCD22P US	2B-VCD22P US	REFUEL 14	05-25-2000
2B-VCD31	2B-VCD31	REFUEL 14	05-25-2000

Line Name : xNCW_70A

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
3B-VCD35	3B-VCD35	REFUEL 14	05-25-2000
3B-VCD1P	3B-VCD1P	REFUEL 14	05-25-2000
3B-VCD2	3B-VCD2	REFUEL 14	05-25-2000
	3B-VCD2	REFUEL 12	04-20-1995
3B-VCD2P	3B-VCD2P	REFUEL 14	05-25-2000
3B-VCD7P	3B-VCD7P	REFUEL 16	10-23-2004
3B-VCD7P2	3B-VCD7P2	REFUEL 14	05-25-2000
3B-VCD7	3B-VCD7	REFUEL 14	05-25-2000
3B-VCD7P1	3B-VCD7P1	REFUEL 14	05-25-2000
3B-VCD6P1 DS	3B-VCD6P1 DS	REFUEL 14	05-25-2000
3B-VCD11	3B-VCD11	REFUEL 14	05-25-2000
3B-VCD16P DS	3B-VCD16P DS	REFUEL 14	05-25-2000
3B-VCD17E	3B-VCD17E	REFUEL 14	05-25-2000

Line Name : xNCW_70B

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
3B-VCD33P DS	3B-VCD33P DS	REFUEL 14	05-25-2000
3B-VCD34	3B-VCD34	REFUEL 14	05-25-2000
	3B-VCD34	REFUEL 13	06-30-1997
3B-VCD34P US	3B-VCD34P US	REFUEL 14	05-25-2000
3B-VCD19P DS	3B-VCD19P DS	REFUEL 14	05-25-2000
3B-VCD20	3B-VCD20	REFUEL 14	05-25-2000
	3B-VCD20	REFUEL 13	06-30-1997
3B-VCD20P US	3B-VCD20P US	REFUEL 14	05-25-2000
3B-VCD26	3B-VCD26	REFUEL 14	05-25-2000
3B-VCD28P DS	3B-VCD28P DS	REFUEL 14	05-25-2000
3B-VCD29	3B-VCD29	REFUEL 14	05-25-2000
3B-VCD29P US	3B-VCD29P US	REFUEL 14	05-25-2000

3B-VCD29P DS	3B-VCD29P DS	REFUEL 14	05-25-2000
3B-VCD30	3B-VCD30	REFUEL 14	05-25-2000
3B-VCD-30P US	3B-VCD-30P US	REFUEL 14	05-25-2000
3B-VCD17P	3B-VCD17P	REFUEL 14	05-25-2000
3B-VCD18	3B-VCD18	REFUEL 14	05-25-2000
3B-VCD18P US	3B-VCD18P US	REFUEL 14	05-25-2000

Line Name : xNCW_74

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
BFD-65A	BFD-65A	REFUEL 10	02-03-1991

Line Name : xNCW_87

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MST-10P	MST-10P	REFUEL 13	06-30-1997
MST-11	MST-11	REFUEL 13	06-30-1997
MST-10	MST-10	REFUEL 13	06-30-1997
MST-9P	MST-9P	REFUEL 13	06-30-1997
MST-9	MST-9	REFUEL 13	06-30-1997
	MST-9	REFUEL 10	02-03-1991
MST-8P	MST-8P	REFUEL 13	06-30-1997
MST-8	MST-8	REFUEL 13	06-30-1997
MST-7P US	MST-7P US	REFUEL 13	06-30-1997
MST-7P DS	MST-7P DS	REFUEL 13	06-30-1997
MST-7	MST-7	REFUEL 13	06-30-1997
MST-6P US	MST-6P US	REFUEL 13	06-30-1997
MST-6P DS	MST-6P DS	REFUEL 13	06-30-1997
MST-6	MST-6	REFUEL 13	06-30-1997
MST-5P US	MST-5P US	REFUEL 13	06-30-1997
MST-5P DS	MST-5P DS	REFUEL 13	06-30-1997
MST-5	MST-5	REFUEL 13	06-30-1997
MST-4P	MST-4P	REFUEL 13	06-30-1997
MST-4	MST-4	REFUEL 13	06-30-1997
MST-3P	MST-3P	REFUEL 13	06-30-1997
MST-3	MST-3	REFUEL 13	06-30-1997
MST-2P	MST-2P	REFUEL 13	06-30-1997
MST-2	MST-2	REFUEL 13	06-30-1997
MST-1P	MST-1P	REFUEL 13	06-30-1997
MST-1	MST-1	REFUEL 13	06-30-1997

Line Name : xNCW_88

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MST-16P	MST-16P	REFUEL 13	06-30-1997
MST-16	MST-16	REFUEL 13	06-30-1997
MST-15P	MST-15P	REFUEL 13	06-30-1997

MST-15	MST-15	REFUEL 13	06-30-1997
MST-14P	MST-14P	REFUEL 13	06-30-1997
MST-14	MST-14	REFUEL 13	06-30-1997
	MST-14	REFUEL 10	02-03-1991
MST-13P	MST-13P	REFUEL 13	06-30-1997
MST-13	MST-13	REFUEL 13	06-30-1997
	MST-13	REFUEL 10	02-03-1991
MST-12P	MST-12P	REFUEL 10	02-03-1991
MST-12	MST-12	REFUEL 10	02-03-1991

Line Name : xNCW_89

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MST-39P	MST-39P	REFUEL 13	06-30-1997
MST-39	MST-39	REFUEL 13	06-30-1997
	MST-39	REFUEL 9	03-20-1989
MST-38P	MST-38P	REFUEL 13	06-30-1997
	MST-38P	REFUEL 9	03-20-1989
MST-38	MST-38	REFUEL 13	06-30-1997
	MST-38	REFUEL 9	03-20-1989
MST-37P	MST-37P	REFUEL 13	06-30-1997
	MST-37P	REFUEL 9	03-20-1989
MST-37	MST-37	REFUEL 13	06-30-1997
	MST-37	CYCLE 14	12-31-1999
MST-36P	MST-36P	REFUEL 13	06-30-1997
	MST-36P	CYCLE 14	12-31-1999
MST-36	MST-36	REFUEL 9	03-20-1989
	MST-36	REFUEL 13	06-30-1997
MST-31	MST-31	REFUEL 13	06-30-1997
MST-28P	MST-28P	REFUEL 13	06-30-1997
MST-28	MST-28	REFUEL 13	06-30-1997
MST-27P	MST-27P	REFUEL 13	06-30-1997
MST-27	MST-27	REFUEL 13	06-30-1997

Line Name : xNCW_90

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EST-1T	EST-1T	REFUEL 13	06-30-1997

Line Name : xNCW_91

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EST-33R	EST-33R	REFUEL 13	06-30-1997
EST-33	EST-33	REFUEL 13	06-30-1997
EST-32	EST-32	REFUEL 13	06-30-1997
EST-31P-1	EST-31P-1	REFUEL 13	06-30-1997
EST-31P US	EST-31P US	REFUEL 13	06-30-1997

EST-31P DS	EST-31P DS	REFUEL 13	06-30-1997
EST-31T	EST-31T	REFUEL 13	06-30-1997
EST-31	EST-31	REFUEL 13	06-30-1997
EST-30P US	EST-30P US	REFUEL 13	06-30-1997
EST-30P DS	EST-30P DS	REFUEL 13	06-30-1997
EST-30B	EST-30B	REFUEL 13	06-30-1997
EST-30AP	EST-30AP	REFUEL 13	06-30-1997
EST-30A	EST-30A	REFUEL 13	06-30-1997
EST-29P	EST-29P	REFUEL 13	06-30-1997
EST-25	EST-25	REFUEL 13	06-30-1997
EST-24P	EST-24P	REFUEL 13	06-30-1997
EST-24	EST-24	REFUEL 13	06-30-1997
EST-23P	EST-23P	REFUEL 13	06-30-1997
EST-22P	EST-22P	REFUEL 13	06-30-1997
EST-22	EST-22	REFUEL 13	06-30-1997
EST-21P US	EST-21P US	REFUEL 13	06-30-1997
EST-21P DS	EST-21P DS	REFUEL 13	06-30-1997
EST-21	EST-21	REFUEL 13	06-30-1997
EST-20P US	EST-20P US	REFUEL 13	06-30-1997
EST-15	EST-15	REFUEL 13	06-30-1997
EST-14P	EST-14P	REFUEL 13	06-30-1997
EST-14	EST-14	REFUEL 13	06-30-1997

Line Name : xNCW_Extraction Steam Traps

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
EST4-Pipe 1	EST4-Pipe 1	REFUEL 15	11-14-2002

Line Name : xNCW_Main Steam Traps

Current Component Name	Previous Component Name	Period Replaced	Replacement Date
MST24-Pipe 3 US	MST24-Pipe 3 US	REFUEL 15	11-14-2002
MST24-Pipe 3 DS	MST24-Pipe 3 DS	REFUEL 15	11-14-2002

Appendix F
UT Inspection Data

CHECWORKS Line Name	CHECWORKS Component Name	Inspection Period	Report Number	Section	Method	Tinit or Tnom (in.)	Wear (in.)	Used in LCF
CD80-2-FWH 23B to FWH 24B	CD-19	Refuel 16	04UT156	MAIN	Blanket	0.438	0.066	Yes
CD80-2-FWH 23B to FWH 24B	CD-19P	Refuel 16	04UT156	Entered as D/S EXT of CD-19	Band	0.438	0.068	Yes
CD80-2-FWH 23B to FWH 24B	CD-19P	Refuel 16	04UT090	Entered as U/S EXT of CD-42	Band	0.438	0.044	No(1)
CD80-2-FWH 23B to FWH 24B	CD-42	Refuel 16	04UT090	MAIN	Blanket	0.438	0.128	Yes
CD80-2-FWH 23B to FWH 24B	CD-42N	Refuel 16	04UT088	MAIN	Band	0.438	0.073	Yes
CD80-2-FWH 23B to FWH 24B	CD-4P	Refuel 16	04UT156	Entered as U/S EXT of CD-19	Band	0.438	0.028	No(1)
CD80-3-FWH 23C to FWH 24C	CD-22	Refuel 16	04UT152	MAIN	Blanket	0.438	0.124	Yes
CD80-3-FWH 23C to FWH 24C	CD-40P	Refuel 16	04UT152	Entered as U/S EXT of CD-22	Band	0.438	0.143	No(1)
CD81-2-FWH 24B to FWH 25B	CD-20	Refuel 16	04UT143	MAIN	Blanket	0.438	0.067	Yes
CD81-3-FWH 24C to FWH 25C	CD-23	Refuel 16	04UT107	MAIN	Blanket	0.438	0.054	Yes
CD81-3-FWH 24C to FWH 25C	CD-23P	Refuel 16	04UT109	D/S EXT	Band	0.438	0.043	No(4)
CD81-3-FWH 24C to FWH 25C	CD-23P	Refuel 16	04UT153	Entered as U/S EXT of CD-53	Band	0.438	0.092	No(1)
CD81-3-FWH 24C to FWH 25C	CD-23P	Refuel 16	04UT109	MAIN	Band	0.438	0.037	Yes
CD81-3-FWH 24C to FWH 25C	CD-24	Refuel 16	04UT106	MAIN	Blanket	0.438	0.141	Yes
CD81-3-FWH 24C to FWH 25C	CD-53	Refuel 16	04UT153	MAIN	Blanket	0.438	0.112	Yes
CD82-5-HDR 25CT to HDP OUT	CD-80T	Refuel 16	04UT093	BRANCH	Band	0.688	0.078	Yes
CD82-5-HDR 25CT to HDP OUT	CD-80T	Refuel 16	04UT093	D/S MAIN	Band	0.626	0.033	Yes
CD82-5-HDR 25CT to HDP OUT	CD-80T	Refuel 16	04UT093	U/S MAIN	Band	0.626	0.012	No(2)
CD83-1-HDR HDP to BFP21T	CD-82T	Refuel 16	04UT094	BRANCH	Band	0.688	0.070	No(7)
CD83-1-HDR HDP to BFP21T	CD-82T	Refuel 16	04UT094	D/S MAIN	Band	0.626	0.030	No(7)
CD83-1-HDR HDP to BFP21T	CD-82T	Refuel 16	04UT094	U/S MAIN	Band	0.626	0.023	No(2,7)
CD83-2-HDR to BFP21	CD-69P	Refuel 16	04UT148	MAIN	Band	0.688	0.095	Yes
CD83-2-HDR to BFP21	CD-72P DS	Refuel 16	04UT136	Entered as U/S EXT of CD-72FE	Band	0.688	0.055	Yes
CD83-2-HDR to BFP21	CD-72P-1 US	Refuel 16	04UT136	Entered as D/S EXT of CD-72FE	Band	0.688	0.088	Yes
CD83-3-HDR to BFP22	CD-76P DS	Refuel 16	04UT154	Entered as D/S EXT of CD-76FE	Band	0.688	0.112	Yes
CD83-3-HDR to BFP22	CD-76P US	Refuel 16	04UT154	Entered as U/S EXT of CD-76FE	Band	0.688	0.103	Yes
ES1-1-3RDPT ES to FWH 23A	3EXA-10	Cycle 16B	04UT060	MAIN	Blanket	0.413	0.142	Yes
ES1-1-3RDPT ES to FWH 23A	3EXA-12P	Cycle 16B	04UT060	Entered as U/S EXT of 3EXA-10	Band	0.312	0.063	No(1)
ES1-1-3RDPT ES to FWH 23A	3EXA-8P	Cycle 16B	04UT067	Entered as D/S EXT of 3EXA-9	Band	0.417	0.047	No(6)
ES1-1-3RDPT ES to FWH 23A	3EXA-9	Cycle 16B	04UT067	MAIN	Blanket	0.417	0.097	Yes
ES1-1-3RDPT ES to FWH 23A	3EXA-9P	Cycle 16B	04UT060	Entered as D/S EXT of 3EXA-10	Band	0.312	0.037	Yes
ES2-1-3RDPT ES to FWH 23B	3EXB-4	Cycle 16B	04UT059	BRANCH	Band	0.250	0.093	No(7)

CHECWORKS Line Name	CHECWORKS Component Name	Inspection Period	Report Number	Section	Method	Tinit or Tnom (in.)	Wear (in.)	Used in LCF
ES2-1-3RDPT ES to FWH 23B	3EXB-4	Cycle 16B	04UT059	D/S MAIN	Band	0.313	0.056	No(7)
ES2-1-3RDPT ES to FWH 23B	3EXB-4	Cycle 16B	04UT059	U/S MAIN	Band	0.313	0.043	No(7)
ES2-3-3RDPT ES to FWH 23B	3EXB-10R	Cycle 16B	04UT058	D/S MAIN	Blanket	0.250	0.254	Yes
ES2-3-3RDPT ES to FWH 23B	3EXB-10R	Cycle 16B	04UT058	U/S MAIN	Blanket	0.327	0.118	Yes
ES2-3-3RDPT ES to FWH 23B	3EXB-2	Cycle 16B	04UT057	MAIN	Blanket	0.477	0.173	Yes
ES3-3-3RDPT ES to FWH 23C	3EXC-2	Refuel 16	04UT089	MAIN	Blanket	0.250	0.172	Yes
ES3-3-3RDPT ES to FWH 23C	3EXC-2N	Refuel 16	04UT089	MAIN	Max PtP + Past	0.250	0.061	No(7)
ES4-1-4THPT ES to FWH 24A	4EXA-11P	Cycle 16B	04UT025	Entered as D/S EXT of 4EXA-12	Band	0.250	0.078	Yes
ES4-1-4THPT ES to FWH 24A	4EXA-12	Cycle 16B	04UT025	MAIN	Blanket	0.250	0.087	Yes
ES4-1-4THPT ES to FWH 24A	4EXA-12A	Cycle 16B	04UT025	Entered as U/S EXT of 4EXA-12	Band	0.250	0.043	No(1)
ES5-1-4THPT ES to FWH 24B	4EXB-14P	Cycle 16B	04UT030	MAIN	Area	0.250	0.011	No(6)
ES5-1-4THPT ES to FWH 24B	4EXB-3P US	Cycle 16B	04UT034	MAIN	Band	0.297	0.099	Yes
ES6-1-4THPT ES to FWH 24C	4EXC-13P DS	Cycle 16B	04UT033	MAIN	Band	0.345	0.106	Yes
ES6-1-4THPT ES to FWH 24C	4EXC-4P US	Refuel 16	04UT079	Entered as D/S EXT of 4EXC-5	Band	0.250	0.035	Yes
ES6-1-4THPT ES to FWH 24C	4EXC-5	Refuel 16	04UT079	MAIN	Blanket	0.343	0.111	Yes
ES6-1-4THPT ES to FWH 24C	4EXC-5P DS	Refuel 16	04UT079	Entered as U/S EXT of 4EXC-5	Band	0.250	0.055	No(1)
FW71-1-BFP21 DISCH to HDR	BFD-8P	Refuel 16	04UT137	Entered as U/S EXT of BFD-9	Band	1.031	0.072	No(1)
FW71-1-BFP21 DISCH to HDR	BFD-9	Refuel 16	04UT137	MAIN	Blanket	1.031	0.120	Yes
FW71-1-BFP21 DISCH to HDR	BFD-9P US	Refuel 16	04UT138	MAIN	Band	1.031	0.060	Yes
FW72-1-BFP22 DISCH to HDR	BFD-23R	Refuel 16	04UT092	D/S MAIN	Band	1.260	0.134	Yes
FW72-1-BFP22 DISCH to HDR	BFD-23R	Refuel 16	04UT092	U/S MAIN	Band	1.031	0.068	Yes
FW73-1-BFPHDR to FWH26ABC	BFD-11	Refuel 16	04UT091	BR EXT	Band	1.031	0.062	No(1)
FW73-1-BFPHDR to FWH26ABC	BFD-11	Refuel 16	04UT091	BRANCH	Band	1.031	0.045	No(7)
FW73-1-BFPHDR to FWH26ABC	BFD-11	Refuel 16	04UT091	D/S MAIN	Band	1.260	0.043	No(7)
FW73-1-BFPHDR to FWH26ABC	BFD-11	Refuel 16	04UT091	U/S MAIN	Band	1.260	0.055	No(7)
FW73-1-BFPHDR to FWH26ABC	BFD-23	Refuel 16	04UT097	MAIN	Blanket	1.260	0.156	Yes
FW73-5-BFPHDR to FWH26B	BFD-39N	Refuel 16	04UT075	MAIN	Band	0.938	0.050	Yes
FW74-1-FWH26A to DISHDR	BFD-55P	Refuel 16	04UT119	MAIN	Band	0.938	0.051	Yes
FW74-1-FWH26A to DISHDR	BFD-56	Refuel 16	04UT120	MAIN	Blanket	0.938	0.284	No(5)
FW74-1-FWH26A to DISHDR	BFD-56P-1	Refuel 16	04UT146	MAIN	Band	0.938	0.061	Yes
FW74-1-FWH26A to DISHDR	BFD-57	Refuel 16	04UT147	MAIN	Blanket	0.938	0.175	Yes

CHECWORKS Line Name	CHECWORKS Component Name	Inspection Period	Report Number	Section	Method	Tinit or Tnom (in.)	Wear (in.)	Used in LCF
FW74-1-FWH26A to DISHDR	BFD-57P	Refuel 16	04UT147	Entered as D/S EXT of BFD-57	Band	0.938	0.074	Yes
FW75-1-DISHDR to SG21	BFD-70P US	Refuel 16	04UT078	Entered as D/S EXT of BFD-71	Band	0.938	0.087	Yes
FW75-1-DISHDR to SG21	BFD-71	Refuel 16	04UT078	MAIN	Blanket	0.938	0.144	Yes
FW75-1-DISHDR to SG21	BFD-71R	Refuel 16	04UT076	D/S MAIN	Band	0.938	0.085	Yes
FW75-1-DISHDR to SG21	BFD-71R	Refuel 16	04UT076	U/S MAIN	Band	0.844	0.109	Yes
FW78-1-DISHDR to SG23	BFD-89	Refuel 16	04UT111	MAIN	Blanket	0.938	0.085	Yes
FW78-1-DISHDR to SG23	BFD-89P	Refuel 16	04UT112	MAIN	Band	0.938	0.047	Yes
FW78-1-DISHDR to SG23	BFD-89P-1	Refuel 16	04UT113	MAIN	Band	0.938	0.094	Yes
HD12-1-FWH26A to CV	6EXD-6	Refuel 16	04UT117	MAIN	Blanket	0.307	0.063	Yes
HD12-1-FWH26A to CV	6EXD-6P	Refuel 16	04UT118	MAIN	Band	0.307	0.057	Yes
HD12-1-FWH26A to CV	6EXD-7P	Refuel 16	04UT117	Entered as U/S EXT of 6EXD-6	Band	0.307	0.048	No(1)
HD20-2-HDP22 to BFP SUCTION	HD-9	Refuel 16	04UT077	D/S MAIN	Band	0.500	0.121	Yes
HD20-2-HDP22 to BFP SUCTION	HD-9	Refuel 16	04UT077	U/S MAIN	Band	0.322	0.113	Yes
HD22A-1-FWH24B to CV	4EXD-39P	Cycle 16B	04UT027	MAIN	Band	0.216	0.038	No(8)
HD22A-2-FWH24B CV to FWH23B	4EXD-38	Cycle 16B	04UT026	D/S MAIN	Band	0.280	0.062	Yes
HD22A-2-FWH24B CV to FWH23B	4EXD-38	Cycle 16B	04UT026	U/S MAIN	Band	0.216	0.050	Yes
HD24A-1-FWH23A to CV	3EXD-5P	Cycle 16B	04UT041	Entered as U/S EXT of 3EXD-6	Band	0.250	0.032	No(1)
HD24A-1-FWH23A to CV	3EXD-6	Cycle 16B	04UT041	MAIN	Blanket	0.250	0.068	Yes
HD24A-1-FWH23A to CV	3EXD-6P DS	Cycle 16B	04UT039	MAIN	Band	0.250	0.030	Yes
HD24A-1-FWH23A to CV	3EXD-7	Cycle 16B	04UT039	MAIN	Blanket	0.250	0.066	Yes
HD24A-1-FWH23A to CV	3EXD-7P	Cycle 16B	04UT039	MAIN	Band	0.250	0.038	Yes
HD24A-1-FWH23A to CV	3EXD-8	Cycle 16B	04UT040	MAIN	Blanket	0.250	0.045	Yes
HD24A-1-FWH23A to CV	3EXD-8P	Cycle 16B	04UT040	Entered as D/S EXT of 3EXD-8	Band	0.250	0.025	No(2)
HD9-3-FWH25C to HTR DRN TK	5EXD-3P US	Refuel 16	04UT074	MAIN	Band	0.250	0.041	Yes
MSD48A-1-RHDT21B to CV	MS-1B25P	Refuel 16	04UT080	Entered as U/S EXT of MS-1B26	Band	0.432	0.046	No(1)
MSD48A-1-RHDT21B to CV	MS-1B25P	Refuel 16	04UT083	MAIN	Band	0.432	0.062	Yes
MSD48A-1-RHDT21B to CV	MS-1B26	Refuel 16	04UT080	MAIN	Blanket	0.432	0.159	Yes
MSD48A-1-RHDT21B to CV	MS-1B27P-1	Refuel 16	04UT080	Entered as D/S EXT of MS-1B26	Band	0.432	0.061	Yes
MSD48B-2-RHDT B HDR to FWH26	MS-1B39	Refuel 16	04UT087	MAIN	Blanket	0.500	0.121	Yes
MSD48B-2-RHDT B HDR to FWH26	MS-1B39P	Refuel 16	04UT084	MAIN	Band	0.500	0.050	Yes
MSD49A-1-RHDT22B to CV	MS-2B11P	Refuel 16	04UT135	D/S pipe portion entered as D/S EXT of MS-2B11P	Band	0.432	0.068	No(4)

CHECWORKS Line Name	CHECWORKS Component Name	Inspection Period	Report Number	Section	Method	Tinit or Tnom (in.)	Wear (in.)	Used in LCF
MSD49A-1-RHDT22B to CV	MS-2B11P	Refuel 16	04UT135	MAIN	Band	0.432	0.045	Yes
MSD49A-1-RHDT22B to CV	MS-2B14P	Refuel 16	04UT098	MAIN	Band	0.432	~~0.092~~	Yes
MSD49A-1-RHDT22B to CV	MS-2B15	Refuel 16	04UT099	MAIN	Blanket	0.432	0.104	Yes
MSD49A-1-RHDT22B to CV	MS-2B15P	Refuel 16	04UT100	MAIN	Band	0.432	0.119	Yes
MSD49C-2-RHDT B HDR to FWH26C	MS-2B55	Refuel 16	04UT103	BRANCH	Band	0.432	0.228	No(5)
MSD49C-2-RHDT B HDR to FWH26C	MS-2B55	Refuel 16	04UT103	D/S MAIN	Band	0.432	0.079	Yes
MSD49C-2-RHDT B HDR to FWH26C	MS-2B55	Refuel 16	04UT103	U/S MAIN	Band	0.432	0.081	Yes
MSD49C-2-RHDT B HDR to FWH26C	MS-2B55P	Refuel 16	04UT105	MAIN	Band	0.432	0.100	Yes
MSD49C-2-RHDT B HDR to FWH26C	MS-2B55R	Refuel 16	04UT104	D/S MAIN	Band	0.500	0.082	Yes
MSD49C-2-RHDT B HDR to FWH26C	MS-2B55R	Refuel 16	04UT104	U/S MAIN	Band	0.432	0.163	Yes
MSD50A-1-RHDT23B to CV	MS-3B24P DS	Refuel 16	04UT126	Entered as U/S EXT of MS-3B25	Band	0.432	0.105	No(1)
MSD50A-1-RHDT23B to CV	MS-3B25	Refuel 16	04UT126	MAIN	Blanket	0.441	0.118	Yes
MSD50A-1-RHDT23B to CV	MS-3B25P	Refuel 16	04UT125	MAIN	Band	0.437	0.038	Yes
MSD50A-1-RHDT23B to CV	MS-3B26	Refuel 16	04UT127	MAIN	Blanket	0.432	0.101	Yes
MSD50A-1-RHDT23B to CV	MS-3B26P US	Refuel 16	04UT127	Entered as D/S EXT of MS-3B26	Band	0.432	0.113	Yes
MSD50C-1-RHDT 23B CV to FWH26	MS-3B43P US	Refuel 16	04UT144	MAIN	Band	0.500	0.128	Yes
SG51-1-CONT PEN to SGBFTK	MS46-5	Refuel 16	04UT124	MAIN	Area	0.218	0.114	Yes
SG51-1-CONT PEN to SGBFTK	MS46-5P	Refuel 16	04UT121	MAIN	Band	0.218	0.016	No(2)
SG51-1-CONT PEN to SGBFTK	MS46-6	Refuel 16	04UT123	MAIN	Area	0.218	0.017	No(2)
SG51-1-CONT PEN to SGBFTK	MS46-6P US	Refuel 16	04UT122	MAIN	Band	0.218	0.023	No(2)
xNCW_206	206-6P	Refuel 16	04UT114	MAIN	Band	0.500	0.040	No(3)
xNCW_206	206-7E	Refuel 16	04UT116	D/S EXT	Band	0.500	0.054	No(3)
xNCW_206	206-7E	Refuel 16	04UT116	MAIN	Blanket	0.500	0.079	No(3)
xNCW_213	213-4P	Cycle 16B	04UT036	MAIN	Band	0.864	0.136	No(3)
xNCW_214	214-25P	Cycle 16B	04UT029	MAIN	Band	0.218	0.086	No(3)
xNCW_215	22BFPT	Refuel 16	04UT140	MAIN	Area	0.625	0.373	No(3)
xNCW_219	219-11P US	Cycle 16B	04UT045	MAIN	Band	0.375	0.112	No(3)
xNCW_227	227-2C	Refuel 16	04UT130	MAIN	Band	0.365	0.243	No(3)
xNCW_228	228-17E	Cycle 16B	04UT047	MAIN	Blanket	0.218	0.070	No(3)
xNCW_23B	4EXD-74	Cycle 16B	04UT048	MAIN	Blanket	0.280	0.056	No(3)
xNCW_248	248-13T	Refuel 16	04UT139	BR EXT	Band	0.216	0.060	No(3)
xNCW_248	248-13T	Refuel 16	04UT139	BRANCH	Band	0.216	0.201	No(3)

CHECWORKS Line Name	CHECWORKS Component Name	Inspection Period	Report Number	Section	Method	Tinit or Tnom (in.)	Wear (in.)	Used in LCF
xNCW_248	248-13T	Refuel 16	04UT139	D/S MAIN	Band	0.337	0.142	No(3)
xNCW_248	248-13T	Refuel 16	04UT139	U/S EXT	Band	0.337	0.041	No(3)
xNCW_248	248-13T	Refuel 16	04UT139	U/S MAIN	Band	0.337	0.172	No(3)
xNCW_259	259-3E	Refuel 16	04UT145	MAIN	Blanket	0.337	0.063	No(3)
xNCW_267	267-29E	Refuel 16	04UT134	MAIN	Blanket	0.216	0.042	No(3)
xNCW_267	267-29E	Refuel 16	04UT134	U/S EXT	Band	0.216	0.046	No(3)
xNCW_267	267-30P	Refuel 16	04UT132	MAIN	Band	0.216	0.033	No(3)
xNCW_267	267-31R	Refuel 16	04UT131	D/S MAIN	Band	0.280	0.054	No(3)
xNCW_267	267-31R	Refuel 16	04UT131	U/S MAIN	Band	0.216	0.060	No(3)
xNCW_267	267-32E	Refuel 16	04UT133	MAIN	Blanket	0.280	0.062	No(3)
xNCW_2R16 Misc Inspections	DS-FE-419	Refuel 16	04UT096	MAIN	Band	1.187	0.218	No(3)
xNCW_2R16 Misc Inspections	EST-18	Cycle 16B	04UT052	D/S EXT	Band	0.147	0.015	No(3)
xNCW_2R16 Misc Inspections	EST-18	Cycle 16B	04UT052	MAIN	Band	0.154	0.061	No(3)
xNCW_2R16 Misc Inspections	MST-49	Cycle 16B	04UT050	D/S EXT	Band	0.147	0.020	No(3)
xNCW_2R16 Misc Inspections	MST-49	Cycle 16B	04UT050	MAIN	Band	0.179	0.109	No(3)
xNCW_48A	MS-1B41P	Cycle 16B	04UT032	MAIN	Band	0.432	0.079	No(3)
xNCW_85	GCD-1P	Cycle 16B	04UT049	Entered as U/S EXT of GCD-2	Band	0.322	0.028	No(3)
xNCW_85	GCD-2	Cycle 16B	04UT049	BR EXT	Band	0.322	0.026	No(3)
xNCW_85	GCD-2	Cycle 16B	04UT049	BRANCH	Band	0.322	0.049	No(3)
xNCW_85	GCD-2	Cycle 16B	04UT049	D/S MAIN	Band	0.322	0.165	No(3)
xNCW_85	GCD-2	Cycle 16B	04UT049	U/S MAIN	Band	0.322	0.174	No(3)
xNCW_FEEDWATER HEATER SHELLS	FWH 24A	Refuel 16	04UT081	MAIN	Area	0.438	0.104	No(3)
xNCW_FEEDWATER HEATER SHELLS	FWH 24B	Refuel 16	04UT085	MAIN	Area	0.438	0.136	No(3)
xNCW_FEEDWATER HEATER SHELLS	FWH 24C	Refuel 16	04UT086	MAIN	Area	0.438	0.165	No(3)
xNCW_FWH 21&22 Nozzles	LPFW22C-1N	Refuel 16	04UT128	MAIN	Band	0.375	0.292	No(3)
xNCW_FWH 21&22 Nozzles	LPFW22C-2N	Refuel 16	04UT129	MAIN	Band	0.375	0.267	No(3)
xNCW_Main Steam Traps	MST24-Pipe 1	Refuel 16	04UT101	MAIN	Band	0.179	0.074	No(3)
xNCW_Main Steam Traps	MST24-Pipe 2 DS	Refuel 16	04UT101	MAIN	Band	0.179	0.029	No(3)
xNCW_Main Steam Traps	MST24-Pipe 2 US	Refuel 16	04UT101	MAIN	Band	0.179	0.087	No(3)

CHECWORKS Line Name	CHECWORKS Component Name	Inspection Period	Report Number	Section	Method	Tinit or Tnom (in.)	Wear (in.)	Used in LCF
xNCW_Main Steam Traps	MST24-Pipe 3 DS	Refuel 16	04UT101	MAIN	Band	0.179	0.022	No(3)
xNCW_Main Steam Traps	MST24-Pipe 3 US	Refuel 16	04UT101	MAIN	Band	0.179	0.028	No(3)

* Note: Inspections prior to 2R16 (or Cycle 16B) do not appear in this table.

In LCF Calc "No"	Description
1	CHECWORKS does not use the U/S Ext. or Br. Ext. in the calculation of the LCF.
2	EPRI recommends not to use any calculated lifetime wear less than or equal to 0.030" or 5% of Tnom.
3	Component is not part of the "official" CHECWORKS model and is not analyzed during Wear Rate Analysis.
4	Downstream extension is not a pipe; CHECWORKS will not use this data in determining the LCF.
5	This wear is not indicative of FAC wear because wear readings are most likely due to manufacturing variances.
6	This component was only partially inspected and has an incomplete grid.
7	Inspection on tee or nozzle does not correlate well with inspections on other geometry types.
8	This component is an unusual geometry (valve, flange, orifice, etc.) and should not be used in calibration of the model.

Appendix G

Water Chemistry Analysis Reports

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*Estimate for Cycle 17

Company: ENTERGY NUCLEAR NORTHEAST
 Plant: INDIAN POINT
 Unit: 2
 DB Name: IP2

Report Date: 27-APR-2005 Time: 13:56:31
 Analysis Date: 27-APR-2005 Time: 13:53:51
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

Water Treatment: CHEM_1
 Power Level: 100.00%
 Plant Type: PWR

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 5.000
 Concentration of Ammonia (PPM): 0.550, Sampling at Condensate
 Concentration of Hydrazine (PPB): 20.000, Sampling at Condensate
 Hydrazine at SG steam outlet (PPB): 6.312
 Hydrazine at MSR drain (PPB): 12.624

HBD Item Description	(Note 1) Cold pH	Hot pH	Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
Steam Generator(Blowdown Line)	8.80	5.73	0.14	28.71	n/a
Steam Generator Outlet Steam	9.20	5.73	0.14	28.71	n/a
HP Extraction Line #1	9.20	5.82	0.14	29.61	n/a
HP Extraction Line #2	9.20	5.97	0.13	36.47	n/a
Moisture Separator Drain Line	8.77	5.97	0.13	12.62	n/a
LP Extraction Line #1	Note 2	Note 2	Note 2	Note 2	n/a
LP Extraction Line #2	9.22	6.65	0.14	11.06	n/a
LP Extraction Line #3	9.22	7.07	0.15	5.57	n/a
LP Extraction Line #4	9.22	7.50	0.14	5.53	n/a
#1 Feedwater Heater Tube Side	9.20	6.10	0.52	12.40	n/a
#2 Feedwater Heater Tube Side	9.22	6.29	0.55	15.65	n/a
#3 Feedwater Heater Tube Side	9.22	6.75	0.55	17.85	n/a
#4 Feedwater Heater Tube Side	9.22	7.08	0.55	18.72	n/a
#5 Feedwater Heater Tube Side	9.22	7.54	0.55	19.39	n/a
#6 Feedwater Heater Tube Side	9.22	8.06	0.55	19.76	n/a
#1 Feedwater Heater Shell Side	9.20	6.10	0.53	6.31	n/a
#2 Feedwater Heater Shell Side	9.20	6.28	0.53	6.31	n/a
#3 Feedwater Heater Shell Side	9.22	6.75	0.56	1.36	n/a
#4 Feedwater Heater Shell Side	9.22	7.08	0.56	1.36	n/a
#5 Feedwater Heater Shell Side	9.22	7.54	0.56	1.36	n/a
#6 Feedwater Heater Shell Side	9.22	8.06	0.56	1.36	n/a
Feed Pump #1 Drain Line	9.22	8.29	0.11	9.67	n/a
#1 Reheater Drain Line	9.20	5.90	0.47	6.51	n/a
#1 Drain Tank	9.15	6.20	0.44	7.65	n/a
#2 Drain Tank	8.80	5.73	0.14	28.71	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: 13.206 Mlb/hr Blowdown Flow Rate: 0.054 Mlb/hr
 SG Outlet Pressure: 754.0 psia SG Outlet Temperature: 511.4 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	13.206	754.0	511.4	0.9999	-----
HP Extraction Line #1	0.693	372.9	437.8	0.9280	1147.5
HP Extraction Line #2	1.021	206.5	384.5	0.9288	1138.9
Moisture Separator Drain Line	0.741	200.6	382.0	0.0000	354.5
LP Extraction Line #1	0.446	72.6	305.4	1.0000	1192.3
LP Extraction Line #2	0.510	34.9	259.0	0.9149	1087.1
LP Extraction Line #3	0.507	14.0	209.7	0.7760	931.9
LP Extraction Line #4	0.730	5.5	166.5	0.7668	899.9
#1 Feedwater Heater Tube Side	-----	-----	424.4	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	379.5	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	298.3	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	253.7	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	202.6	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.4	0.0000	-----
Feed Pump #1 Drain Line	0.138	1.0	101.7	0.8662	967.3
#1 Reheater Drain Line	1.032	619.9	489.7	0.0379	503.3
#1 Drain Tank	0.000	220.7	390.1	0.0000	330.6
#2 Drain Tank	0.000	754.0	511.5	0.0000	501.6

Company: ENTERGY NUCLEAR NORTHEAST
 Plant: INDIAN POINT
 Unit: 2
 DB Name: IP2

Report Date: 27-APR-2005 Time: 13:56:29
 Analysis Date: 27-APR-2005 Time: 13:53:54
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

Water Treatment: Cycle 14
 Power Level: 100.00%
 Plant Type: PWR

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 5.000
 Concentration of Ethanolamine (PPM): 2.250, Sampling at Final Feedwater
 Concentration of Ammonia (PPM): 1.000, Sampling at Condensate
 Concentration of Hydrazine (PPB): 30.000, Sampling at Condensate
 Hydrazine at SG steam outlet (PPB): 15.000
 Hydrazine at MSR drain (PPB): 36.000
 Concentration of Boron (PPM): 7.500, Sampling at Steam Generator Blowdown
 Boron Injection Rate: 0.000 lbm/hr

HBD Item Description	(Note 1)	Ethanol		Ammonia	Hydrazine	Vent Rate
	Cold pH	Hot pH	amine (PPM)			
Steam Generator(Blowdown Line)	8.44	6.26	5.98	0.23	68.22	n/a
Steam Generator Outlet Steam	9.36	6.26	5.98	0.23	68.22	n/a
HP Extraction Line #1	9.36	6.50	7.18	0.19	70.36	n/a
HP Extraction Line #2	9.36	6.77	9.34	0.16	86.67	n/a
Moisture Separator Drain Line	8.85	6.79	9.48	0.16	36.00	n/a
LP Extraction Line #1	Note 2	Note 2	Note 2	Note 2	Note 2	n/a
LP Extraction Line #2	9.47	7.62	12.47	0.11	31.53	n/a
LP Extraction Line #3	9.47	7.91	6.90	0.12	15.89	n/a
LP Extraction Line #4	9.47	8.35	6.92	0.10	15.77	n/a
#1 Feedwater Heater Tube Side	9.35	6.41	2.25	0.94	21.85	n/a
#2 Feedwater Heater Tube Side	9.45	6.58	1.71	1.00	24.69	n/a
#3 Feedwater Heater Tube Side	9.45	7.04	1.71	1.00	27.36	n/a
#4 Feedwater Heater Tube Side	9.45	7.38	1.71	1.00	28.41	n/a
#5 Feedwater Heater Tube Side	9.45	7.84	1.71	1.00	29.24	n/a
#6 Feedwater Heater Tube Side	9.45	8.35	1.71	1.00	29.69	n/a
#1 Feedwater Heater Shell Side	9.36	6.41	2.23	0.95	15.00	n/a
#2 Feedwater Heater Shell Side	9.36	6.60	2.23	0.95	15.00	n/a
#3 Feedwater Heater Shell Side	9.47	7.04	1.68	1.01	3.88	n/a
#4 Feedwater Heater Shell Side	9.47	7.38	1.68	1.01	3.88	n/a
#5 Feedwater Heater Shell Side	9.47	7.84	1.68	1.01	3.88	n/a
#6 Feedwater Heater Shell Side	9.47	8.35	1.68	1.01	3.88	n/a
Feed Pump #1 Drain Line	9.47	9.25	12.24	0.06	27.58	n/a
#1 Reheater Drain Line	9.36	6.20	2.29	0.84	15.47	n/a
#1 Drain Tank	9.14	6.61	3.77	0.78	19.46	n/a
#2 Drain Tank	8.44	6.26	5.98	0.23	68.22	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: 13.206 Mlb/hr Blowdown Flow Rate: 0.054 Mlb/hr
 SG Outlet Pressure: 754.0 psia SG Outlet Temperature: 511.4 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	13.206	754.0	511.4	0.9999	----
HP Extraction Line #1	0.693	372.9	437.8	0.9280	1147.5
HP Extraction Line #2	1.021	206.5	384.5	0.9288	1138.9
Moisture Separator Drain Line	0.741	200.6	382.0	0.0000	354.5
LP Extraction Line #1	0.446	72.6	305.4	1.0000	1192.3
LP Extraction Line #2	0.510	34.9	259.0	0.9149	1087.1
LP Extraction Line #3	0.507	14.0	209.7	0.7760	931.9
LP Extraction Line #4	0.730	5.5	166.5	0.7668	899.9
#1 Feedwater Heater Tube Side	-----	-----	424.4	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	379.5	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	298.3	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	253.7	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	202.6	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.4	0.0000	-----
Feed Pump #1 Drain Line	0.138	1.0	101.7	0.8662	967.3
#1 Reheater Drain Line	1.032	619.9	489.7	0.0379	503.3
#1 Drain Tank	0.000	220.7	390.1	0.0000	330.6
#2 Drain Tank	0.000	754.0	511.5	0.0000	501.6

Company: ENTERGY NUCLEAR NORTHEAST
 Plant: INDIAN POINT
 Unit: 2
 DB Name: IP2

Report Date: 27-APR-2005 Time: 13:56:28
 Analysis Date: 27-APR-2005 Time: 13:54:05
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

Water Treatment: Cycle 15
 Power Level: 100.00%
 Plant Type: PWR

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 5.000
 Concentration of Ethanolamine (PPM): 2.250, Sampling at Final Feedwater
 Concentration of Ammonia (PPM): 3.000, Sampling at Condensate
 Concentration of Hydrazine (PPB): 100.000, Sampling at Condensate
 Hydrazine at SG steam outlet (PPB): 60.000
 Hydrazine at MSR drain (PPB): 120.000

HBD Item Description	(Note 1) Cold pH	Hot pH	Ethanol amine (PPM)	Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
Steam Generator(Blowdown Line)	9.68	6.30	5.93	0.69	272.88	n/a
Steam Generator Outlet Steam	9.73	6.30	5.92	0.69	272.88	n/a
HP Extraction Line #1	9.73	6.54	7.12	0.56	281.44	n/a
HP Extraction Line #2	9.73	6.81	9.25	0.47	346.69	n/a
Moisture Separator Drain Line	9.77	6.82	9.39	0.47	120.00	n/a
LP Extraction Line #1	Note 2	Note 2	Note 2	Note 2	Note 2	n/a
LP Extraction Line #2	9.73	7.65	12.44	0.34	105.11	n/a
LP Extraction Line #3	9.73	7.95	6.91	0.35	52.97	n/a
LP Extraction Line #4	9.73	8.40	6.93	0.29	52.58	n/a
#1 Feedwater Heater Tube Side	9.73	6.56	2.25	2.83	81.39	n/a
#2 Feedwater Heater Tube Side	9.73	6.75	1.71	3.00	89.72	n/a
#3 Feedwater Heater Tube Side	9.73	7.23	1.71	3.00	95.03	n/a
#4 Feedwater Heater Tube Side	9.73	7.57	1.71	3.00	96.96	n/a
#5 Feedwater Heater Tube Side	9.73	8.04	1.71	3.00	98.50	n/a
#6 Feedwater Heater Tube Side	9.73	8.57	1.71	3.00	99.39	n/a
#1 Feedwater Heater Shell Side	9.73	6.56	2.23	2.85	60.00	n/a
#2 Feedwater Heater Shell Side	9.73	6.76	2.23	2.85	60.00	n/a
#3 Feedwater Heater Shell Side	9.73	7.23	1.69	3.03	12.95	n/a
#4 Feedwater Heater Shell Side	9.73	7.57	1.69	3.03	12.95	n/a
#5 Feedwater Heater Shell Side	9.73	8.04	1.69	3.03	12.95	n/a
#6 Feedwater Heater Shell Side	9.73	8.57	1.69	3.03	12.95	n/a
Feed Pump #1 Drain Line	9.73	9.41	12.24	0.17	91.94	n/a
#1 Reheater Drain Line	9.73	6.32	2.29	2.52	61.88	n/a
#1 Drain Tank	9.74	6.72	3.75	2.35	72.74	n/a
#2 Drain Tank	9.68	6.30	5.93	0.69	272.88	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: 13.206 Mlb/hr Blowdown Flow Rate: 0.054 Mlb/hr
 SG Outlet Pressure: 754.0 psia SG Outlet Temperature: 511.4 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	13.206	754.0	511.4	0.9999	----
HP Extraction Line #1	0.693	372.9	437.8	0.9280	1147.5
HP Extraction Line #2	1.021	206.5	384.5	0.9288	1138.9
Moisture Separator Drain Line	0.741	200.6	382.0	0.0000	354.5
LP Extraction Line #1	0.446	72.6	305.4	1.0000	1192.3
LP Extraction Line #2	0.510	34.9	259.0	0.9149	1087.1
LP Extraction Line #3	0.507	14.0	209.7	0.7760	931.9
LP Extraction Line #4	0.730	5.5	166.5	0.7668	899.9
#1 Feedwater Heater Tube Side	-----	-----	424.4	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	379.5	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	298.3	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	253.7	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	202.6	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.4	0.0000	-----
Feed Pump #1 Drain Line	0.138	1.0	101.7	0.8662	967.3
#1 Reheater Drain Line	1.032	619.9	489.7	0.0379	503.3
#1 Drain Tank	0.000	220.7	390.1	0.0000	330.6
#2 Drain Tank	0.000	754.0	511.5	0.0000	501.6

Company: ENTERGY NUCLEAR NORTHEAST
 Plant: INDIAN POINT
 Unit: 2
 DB Name: IP2

Report Date: 27-APR-2005 Time: 13:56:26
 Analysis Date: 27-APR-2005 Time: 13:54:07
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

Water Treatment: Cycle 16
 Power Level: 100.00%
 Plant Type: PWR

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 3.730
 Concentration of Ethanolamine (PPM): 2.680, Sampling at Final Feedwater
 Concentration of Ammonia (PPM): 2.810, Sampling at Final Feedwater
 Concentration of Hydrazine (PPB): 131.000, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 78.600
 Hydrazine at MSR drain (PPB): 157.200

HBD Item Description	(Note 1)		Ethanol amine (PPM)	Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
	Cold pH	Hot pH				
Steam Generator(Blowdown Line)	9.72	6.33	7.02	0.69	357.47	n/a
Steam Generator Outlet Steam	9.74	6.33	7.01	0.69	357.47	n/a
HP Extraction Line #1	9.74	6.57	8.40	0.56	368.68	n/a
HP Extraction Line #2	9.74	6.84	10.91	0.47	454.17	n/a
Moisture Separator Drain Line	9.81	6.85	11.07	0.47	157.20	n/a
LP Extraction Line #1	Note 2	Note 2	Note 2	Note 2	Note 2	n/a
LP Extraction Line #2	9.74	7.69	14.75	0.33	137.69	n/a
LP Extraction Line #3	9.74	7.99	8.25	0.34	69.40	n/a
LP Extraction Line #4	9.74	8.45	8.28	0.29	68.88	n/a
#1 Feedwater Heater Tube Side	9.74	6.57	2.68	2.81	131.01	n/a
#2 Feedwater Heater Tube Side	9.73	6.76	2.05	2.97	154.24	n/a
#3 Feedwater Heater Tube Side	9.73	7.24	2.05	2.97	163.21	n/a
#4 Feedwater Heater Tube Side	9.73	7.58	2.05	2.97	165.83	n/a
#5 Feedwater Heater Tube Side	9.73	8.05	2.05	2.97	167.80	n/a
#6 Feedwater Heater Tube Side	9.73	8.58	2.05	2.97	168.92	n/a
#1 Feedwater Heater Shell Side	9.74	6.57	2.66	2.85	78.60	n/a
#2 Feedwater Heater Shell Side	9.74	6.77	2.66	2.85	78.60	n/a
#3 Feedwater Heater Shell Side	9.74	7.24	2.02	3.03	16.96	n/a
#4 Feedwater Heater Shell Side	9.74	7.58	2.02	3.03	16.96	n/a
#5 Feedwater Heater Shell Side	9.74	8.05	2.02	3.03	16.96	n/a
#6 Feedwater Heater Shell Side	9.74	8.58	2.02	3.03	16.96	n/a
Feed Pump #1 Drain Line	9.74	9.45	14.63	0.17	120.44	n/a
#1 Reheater Drain Line	9.74	6.34	2.73	2.52	81.06	n/a
#1 Drain Tank	9.76	6.74	4.45	2.34	95.29	n/a
#2 Drain Tank	9.72	6.33	7.02	0.69	357.47	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: 13.206 Mlb/hr Blowdown Flow Rate: 0.054 Mlb/hr
 SG Outlet Pressure: 754.0 psia SG Outlet Temperature: 511.4 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	13.206	754.0	511.4	0.9999	-----
HP Extraction Line #1	0.693	372.9	437.8	0.9280	1147.5
HP Extraction Line #2	1.021	206.5	384.5	0.9288	1138.9
Moisture Separator Drain Line	0.741	200.6	382.0	0.0000	354.5
LP Extraction Line #1	0.446	72.6	305.4	1.0000	1192.3
LP Extraction Line #2	0.510	34.9	259.0	0.9149	1087.1
LP Extraction Line #3	0.507	14.0	209.7	0.7760	931.9
LP Extraction Line #4	0.730	5.5	166.5	0.7668	899.9
#1 Feedwater Heater Tube Side	-----	-----	424.4	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	379.5	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	298.3	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	253.7	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	202.6	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	155.4	0.0000	-----
Feed Pump #1 Drain Line	0.138	1.0	101.7	0.8662	967.3
#1 Reheater Drain Line	1.032	619.9	489.7	0.0379	503.3
#1 Drain Tank	0.000	220.7	390.1	0.0000	330.6
#2 Drain Tank	0.000	754.0	511.5	0.0000	501.6

Company: ENTERGY NUCLEAR NORTHEAST
 Plant: INDIAN POINT
 Unit: 2
 DB Name: IP2

Report Date: 27-APR-2005 Time: 13:56:24
 Analysis Date: 27-APR-2005 Time: 13:54:10
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

Water Treatment: Cycle 16
 Power Level: 101.19%
 Plant Type: PWR

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 3.730
 Concentration of Ethanolamine (PPM): 2.680, Sampling at Final Feedwater
 Concentration of Ammonia (PPM): 2.810, Sampling at Final Feedwater
 Concentration of Hydrazine (PPB): 131.000, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 78.600
 Hydrazine at MSR drain (PPB): 157.200

HBD Item Description	(Note 1)		Ethanol amine (PPM)	Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
	Cold pH	Hot pH				
Steam Generator(Blowdown Line)	9.72	6.33	6.97	0.69	354.75	n/a
Steam Generator Outlet Steam	9.74	6.33	6.96	0.69	354.75	n/a
HP Extraction Line #1	9.74	6.56	8.33	0.56	365.55	n/a
HP Extraction Line #2	9.74	6.83	10.83	0.47	451.37	n/a
Moisture Separator Drain Line	9.81	6.85	10.99	0.47	157.20	n/a
LP Extraction Line #1	Note 2	Note 2	Note 2	Note 2	Note 2	n/a
LP Extraction Line #2	9.74	7.68	14.50	0.33	135.99	n/a
LP Extraction Line #3	9.74	7.98	8.16	0.34	69.12	n/a
LP Extraction Line #4	9.74	8.43	7.88	0.29	66.01	n/a
#1 Feedwater Heater Tube Side	9.74	6.57	2.68	2.81	131.01	n/a
#2 Feedwater Heater Tube Side	9.73	6.75	2.05	2.97	154.35	n/a
#3 Feedwater Heater Tube Side	9.73	7.23	2.05	2.97	163.51	n/a
#4 Feedwater Heater Tube Side	9.73	7.60	2.05	2.97	166.22	n/a
#5 Feedwater Heater Tube Side	9.73	8.04	2.05	2.97	168.07	n/a
#6 Feedwater Heater Tube Side	9.73	8.56	2.05	2.97	169.21	n/a
#1 Feedwater Heater Shell Side	9.74	6.57	2.66	2.85	78.60	n/a
#2 Feedwater Heater Shell Side	9.74	6.76	2.66	2.85	78.60	n/a
#3 Feedwater Heater Shell Side	9.74	7.23	2.02	3.03	17.09	n/a
#4 Feedwater Heater Shell Side	9.74	7.60	2.02	3.03	17.09	n/a
#5 Feedwater Heater Shell Side	9.74	8.04	2.02	3.03	17.09	n/a
#6 Feedwater Heater Shell Side	9.74	8.56	2.02	3.03	17.09	n/a
Feed Pump #1 Drain Line	9.74	9.45	14.61	0.17	121.05	n/a
#1 Reheater Drain Line	9.74	6.33	2.72	2.56	80.72	n/a
#1 Drain Tank	9.76	6.74	4.44	2.34	95.39	n/a
#2 Drain Tank	9.72	6.33	6.97	0.69	354.75	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: 13.383 Mlb/hr Blowdown Flow Rate: 0.054 Mlb/hr
 SG Outlet Pressure: 765.0 psia SG Outlet Temperature: 513.1 F
 SG Carryover: 0.02% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.383	765.0	513.1	0.9998	-----
HP Extraction Line #1	0.689	378.3	439.2	0.9272	1147.0
HP Extraction Line #2	1.042	209.4	385.7	0.9285	1138.9
Moisture Separator Drain Line	0.755	203.4	383.2	0.0000	355.7
LP Extraction Line #1	0.454	73.5	306.2	1.0000	1191.5
LP Extraction Line #2	0.518	35.3	259.8	0.9126	1085.2
LP Extraction Line #3	0.509	14.2	210.4	0.7732	929.5
LP Extraction Line #4	0.711	5.6	167.2	0.7539	887.5
#1 Feedwater Heater Tube Side	-----	-----	425.2	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	380.5	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	299.0	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	251.4	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	203.3	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	156.8	0.0000	-----
Feed Pump #1 Drain Line	0.142	1.0	101.7	0.8658	966.9
#1 Reheater Drain Line	1.048	656.0	495.9	0.0331	506.8
#1 Drain Tank	0.000	222.8	390.9	0.0000	332.6
#2 Drain Tank	0.000	765.0	513.1	0.0000	503.6

Company: ENTERGY NUCLEAR NORTHEAST
 Plant: INDIAN POINT
 Unit: 2
 DB Name: IP2

Report Date: 27-APR-2005 Time: 13:56:20
 Analysis Date: 27-APR-2005 Time: 13:54:13
 CHECWORKS FAC Version 1.0G (Build 75)

 *** Chemistry Analysis Report ***

Water Treatment: Cycle 16
 Power Level: 104.48%
 Plant Type: PWR

Complex Chemistry Condition:

Condensate Dissolved Oxygen (PPB): 3.730
 Concentration of Ethanolamine (PPM): 2.680, Sampling at Final Feedwater
 Concentration of Ammonia (PPM): 2.810, Sampling at Final Feedwater
 Concentration of Hydrazine (PPB): 131.000, Sampling at Final Feedwater
 Hydrazine at SG steam outlet (PPB): 78.600
 Hydrazine at MSR drain (PPB): 157.200

HBD Item Description	(Note 1) Cold pH	Hot pH	Ethanol amine (PPM)	Ammonia (PPM)	Hydrazine (PPB)	Vent Rate (%)
Steam Generator(Blowdown Line)	9.72	6.33	6.98	0.69	354.75	n/a
Steam Generator Outlet Steam	9.74	6.33	6.96	0.69	354.75	n/a
HP Extraction Line #1	9.74	6.54	8.01	0.58	348.38	n/a
HP Extraction Line #2	9.74	6.82	10.51	0.48	433.96	n/a
Moisture Separator Drain Line	9.79	6.81	10.06	0.49	157.20	n/a
LP Extraction Line #1	Note 2	Note 2	Note 2	Note 2	Note 2	n/a
LP Extraction Line #2	9.74	7.67	14.39	0.34	149.72	n/a
LP Extraction Line #3	9.74	7.96	7.80	0.35	72.45	n/a
LP Extraction Line #4	9.74	8.40	7.31	0.31	67.07	n/a
#1 Feedwater Heater Tube Side	9.74	6.55	2.68	2.81	131.01	n/a
#2 Feedwater Heater Tube Side	9.73	6.74	1.91	3.04	154.62	n/a
#3 Feedwater Heater Tube Side	9.73	7.22	1.91	3.03	164.20	n/a
#4 Feedwater Heater Tube Side	9.73	7.56	1.91	3.03	166.91	n/a
#5 Feedwater Heater Tube Side	9.73	8.03	1.91	3.03	168.95	n/a
#6 Feedwater Heater Tube Side	9.73	8.54	1.91	3.03	170.12	n/a
#1 Feedwater Heater Shell Side	9.74	6.55	2.66	2.85	78.60	n/a
#2 Feedwater Heater Shell Side	9.74	6.75	2.66	2.85	78.60	n/a
#3 Feedwater Heater Shell Side	9.74	7.22	1.88	3.09	17.43	n/a
#4 Feedwater Heater Shell Side	9.74	7.56	1.88	3.09	17.43	n/a
#5 Feedwater Heater Shell Side	9.74	8.03	1.88	3.09	17.43	n/a
#6 Feedwater Heater Shell Side	9.74	8.55	1.88	3.09	17.43	n/a
Feed Pump #1 Drain Line	9.74	9.44	13.80	0.17	125.32	n/a
#1 Reheater Drain Line	9.74	6.33	2.72	2.56	80.72	n/a
#1 Drain Tank	9.75	6.73	4.70	2.20	100.21	n/a
#2 Drain Tank	9.72	6.33	6.98	0.69	354.75	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: 13.904 Mlb/hr Blowdown Flow Rate: 0.054 Mlb/hr
 SG Outlet Pressure: 765.0 psia SG Outlet Temperature: 513.1 F
 SG Carryover: 0.02% of Main Steam Flow

HBD Item Description	Flow Rate (Mlb/hr)	Pressure (psia)	Temperature (F)	Quality	Enthalpy (Btu/lb)
Steam Generator Outlet Steam	13.904	765.0	513.1	0.9998	-----
HP Extraction Line #1	0.799	400.7	444.8	0.9200	1142.0
HP Extraction Line #2	1.080	214.9	387.9	0.9223	1134.2
Moisture Separator Drain Line	1.061	210.7	386.2	0.0000	359.2
LP Extraction Line #1	0.465	75.4	308.0	1.0000	1196.2
LP Extraction Line #2	0.525	36.1	261.1	0.9227	1095.2
LP Extraction Line #3	0.513	14.6	211.5	0.7803	937.0
LP Extraction Line #4	0.702	5.8	168.4	0.7531	887.3
#1 Feedwater Heater Tube Side	-----	-----	429.6	0.0000	-----
#2 Feedwater Heater Tube Side	-----	-----	382.4	0.0000	-----
#3 Feedwater Heater Tube Side	-----	-----	300.5	0.0000	-----
#4 Feedwater Heater Tube Side	-----	-----	255.5	0.0000	-----
#5 Feedwater Heater Tube Side	-----	-----	204.3	0.0000	-----
#6 Feedwater Heater Tube Side	-----	-----	158.0	0.0000	-----
Feed Pump #1 Drain Line	0.153	1.0	101.7	0.8679	969.1
#1 Reheater Drain Line	0.918	656.0	495.9	0.0331	506.8
#1 Drain Tank	0.000	225.7	392.1	0.0000	337.5
#2 Drain Tank	0.000	754.0	511.5	0.0000	501.6