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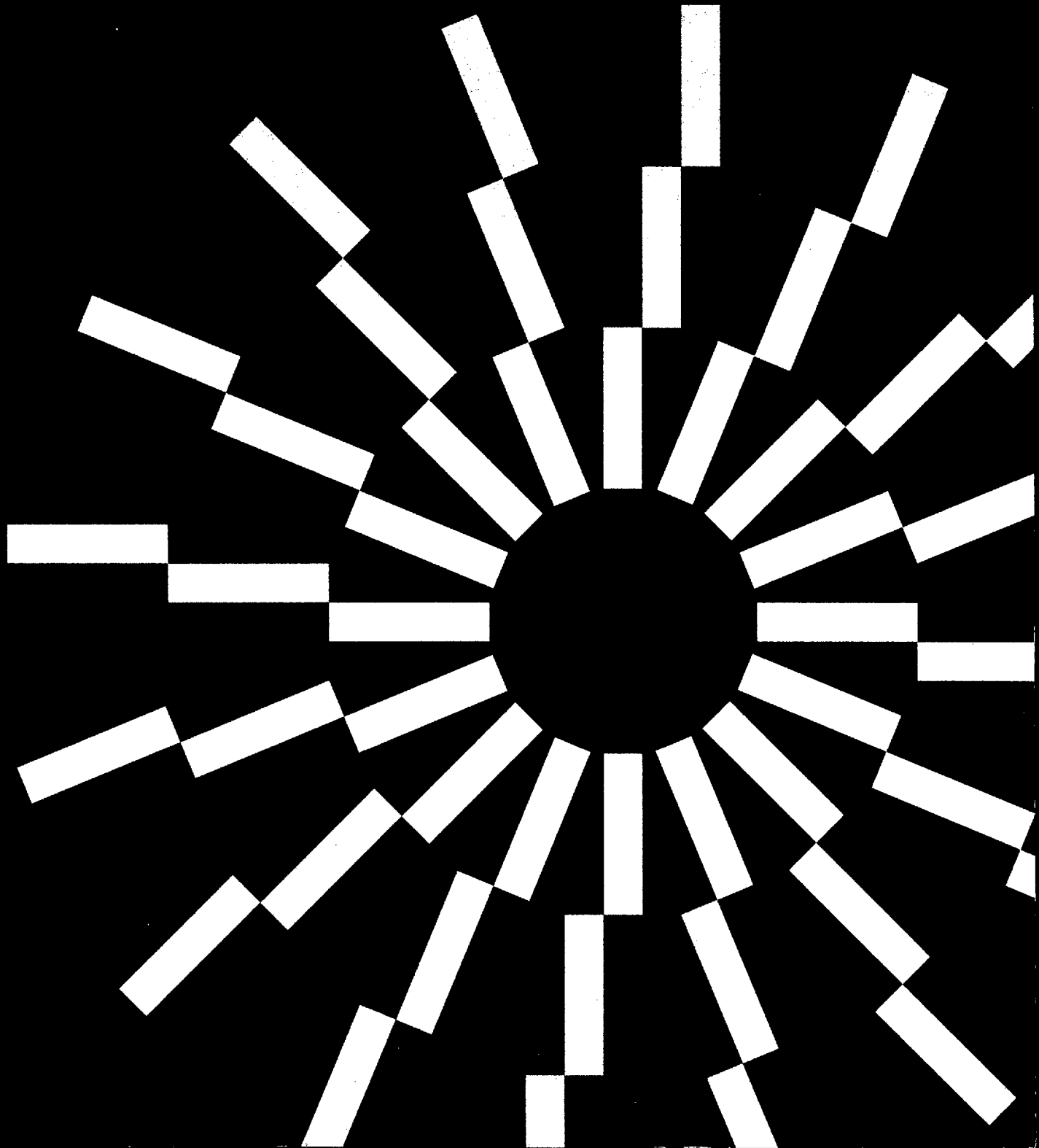
Development of Fugitive Emission Factors and Emission Profiles for Petroleum Marketing Terminals



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Development of Fugitive Emission Factors and Emission Profiles for Petroleum Marketing Terminals

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APPENDIX A
STATISTICAL EVALUATIONS
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A.1 Least Squares Estimate of a Linear Regression

The fitting of a line to describe the relationship between two variables (X and Y) via the method of least squares involves estimating a Y-intercept (β_0) and a slope (β_1). The method of least squares chooses the parameter estimates for β_0 and β_1 , as those values which minimize the sum of squares of the vertical distances from the data points to the presumed regression line. In addition, these parameters are estimated so that the average residual ($r_i = Y_i - \beta_0 - \beta_1 X_i$, $i=1, \dots, n$) is zero.

Let

$$Y_i = \text{Log}_{10} (\text{Leak Rate determined by bagging component } i),$$

and

$$X_i = \text{Log}_{10} (\text{Maximum Screening Value for component } i).$$

So that:

$$\text{Log}_{10} (\text{Leak Rate}) = \beta_0 + \beta_1 \text{Log}_{10} (\text{Screening Value}),$$

or

$$Y_i = \beta_0 + B_1 X_i$$

describes the regression line.

Then the least square regression estimators can be given by:

$$\hat{\beta}_1 = \frac{(\bar{XY}) - (\bar{X})(\bar{Y})}{\bar{X}^2 - (\bar{X})^2} ,$$

and

$$\hat{\beta}_0 = \bar{Y} - \beta_1 \bar{X} ,$$

where:

$$\bar{X} = \frac{\sum X_i}{n}$$

$$\bar{Y} = \frac{\sum Y_i}{n}$$

$$\bar{XY} = \frac{\sum X_i Y_i}{n}$$

$$\bar{X}^2 = \frac{\sum X_i^2}{n}$$

n = number of parameters.

Once these have been calculated, then the Mean Squared Error (MSE) can be given by:

$$MSE = \frac{1}{n - 2} \sum_{i=1}^n r_i^2 ,$$

where:

$$r_i = Y_i - \hat{\beta}_0 - \hat{\beta}_1 X_i$$

The MSE is a measure of how well the data fit the predicted values of the least-squares regression equation.

A.2 Scale-Bias Correction Factor

In order to predict the mean emission rate for a given screening value, one must first transform the results of the least-squares analysis from log-log space back to arithmetic scales. To do this, a scale bias correction factor (SBCF) is required to obtain the following predictive correlation equation:

$$\text{Mean Leak Rate} = \text{SBCF} \times 10^{\hat{a}_0} \times (\text{Screening Value})^{\hat{a}_1}$$

The SBCF is obtained by summing a sufficient number (generally 10-15) of terms of the infinite series given below. Specifically, the SBCF is estimated by:

$$\text{SBCF} = 1 + \frac{(m-1)t}{m} + \frac{(m-1)^2 t^2}{m^2 2! (m+1)} + \frac{(m-1)^3 t^3}{m^3 3! (m+1)(m+3)} + \dots,$$

where:

$$t = \left(\frac{\text{MSE}}{2} (\ln 10)^2 \right)$$

and

$$m = \text{number of sources bagged} - 1.$$

The equation for the mean emission rate, given above, is the best, unbiased estimator and also provides an efficient estimate for the mean of a lognormal distribution [Finney (1941), Atchinson (1955)].

A.3 Standard Error

The standard error of an estimate is a statistical measure of the amount of variation of the actual values of the dependent variable from their predicted values, as estimated by the regression equation. Its formula may be written:

$$SE_Y = \sqrt{MSE}$$

The SE_Y possesses the same units as the response variable, Y_i (for emission rates, this is lbs/hr). The standard error is also used in developing confidence intervals around the mean predicted values.

A.4 Confidence Intervals

A confidence interval for a parameter Θ is an interval:

$$a < \Theta < b,$$

where:

a and b are numbers calculated partially from sample data, within which we feel reasonably certain the unknown parameter lies. A confidence interval is derived from a probability statement that involves the unknown parameter Θ . These confidence intervals should be interpreted as follows:

When we state that the parameter falls within the computed confidence limits, we expect to be correct about $100 \times (1-\alpha)$ percent of the time.

For example, suppose a sample is drawn from some population and a 95% confidence interval ($\alpha = 0.05$) is computed for some parameter, say the mean. If a 100 samples are drawn from that population, and 100 of these confidence intervals for the mean are computed, then 95 of these intervals should contain the true population mean Θ as an interior point.

Confidence intervals for the intercept of the least-squares regression equation can be specified as:

$$\hat{\beta}_0 \pm t_{(1 - \alpha/2, n - 2)} \hat{\sigma}_{\beta_0}$$

Confidence intervals for the slope of the least-squares regression equation can be specified as:

$$\hat{\beta}_1 \pm t_{(1 - \alpha/2, n - 2)} \hat{\sigma}_{\beta_1}$$

where:

$$SXX = \sum (X_i - \bar{X})^2$$

$$\bar{X} = \frac{\sum X_i}{n}$$

$$MSE = \frac{\sum (Y_i - \hat{\beta}_0 - \hat{\beta}_1 X_i)^2}{n - 2}$$

$$\hat{\sigma}_{\beta_0} = \sqrt{MSE} \left(\frac{1}{n} + \frac{(\bar{X})^2}{SXX} \right)^{1/2}$$

$$\hat{\sigma}_{\beta_1} = \left(\frac{MSE}{SXX} \right)^{1/2}$$

and

$$t_{\left(1 - \frac{\alpha}{2}, n-2\right)}$$

is the $1 - \alpha/2$ probability point of the student's t distribution with $(n-2)$ degrees of freedom.

Confidence intervals for the predicted mean value of Y for a given X_k can be specified as:

$$\hat{Y}_K \pm t_{(1 - \alpha/2, n - 2)} \hat{\sigma}_{Y_K} \quad ,$$

where:

$$\hat{\sigma}_{Y_K} = SE_Y \left(\frac{1}{n} + \frac{(X_K - \bar{X})^2}{\sum (X_i - \bar{X})^2} \right)^{1/2}$$

$$\hat{Y}_K = \hat{\beta}_0 + \hat{\beta}_1 X_K \quad ,$$

and

$$SE_Y = \sqrt{MSE} \quad \text{as given in Appendix A.1.}$$

The confidence intervals for the predicted values are smallest when $X_k = \bar{X}$ and increase as X_k moves away from $\bar{X}$ in either direction. That is, the greater the distance an X_k is (in either direction) from $\bar{X}$, the larger the expected error is when predicting the mean value of Y at X_k .

A.5 Correlation Coefficient

The sample correlation coefficient is a statistical measure of the linear relationship between two variables. The correlation between two variables, X and Y, is computed as:

$$r_{XY} = \frac{\sum (X_i - \bar{X}) \cdot (Y_i - \bar{Y})}{\sqrt{\sum (X_i - \bar{X})^2 \cdot \sum (Y_i - \bar{Y})^2}},$$

and is bounded:

$$-1 \leq r_{XY} \leq 1.$$

The correlation coefficient squared (r_{XY}^2) can be interpreted as the fraction of the total variation which is explained by the least-squares regression line. In other words, r_{XY} measures how well the least-squares regression line fits the sample data. If the total variation is all explained by the regression line, i.e., if $r_{XY}^2 = 1$ or $r_{XY} = \pm 1$, we say there is a perfect linear correlation. On the other hand, if there is no linear relationship between sample values of X and Y, then r_{XY} will have a value near zero. In addition, if $r_{XY} > 0$, then the response variable (Y) increases as the independent variable (X) does. If $r_{XY} < 0$, the response decreases as the independent variable increases.

A.6 Wilcoxon Rank Sum Test

The Wilcoxon rank sum test for paired data compares two population distributions by ranking the absolute magnitudes of the differences of these paired observations. Under the null hypothesis of no difference in the distributions A and B, the expected number of negative differences between pairs would be $n/2$ (where n is the number of data pairs), and positive and negative differences of equal absolute magnitude should occur with equal probability. Thus, if one were to order the differences according to their absolute

values and rank them from smallest to largest, the expected rank sums for the positive and negative differences would be equal. Large departures of the rank sum of the positive (or negative) differences from its expected value would provide evidence to indicate a difference between the distribution of the responses for A and B.

Let populations A and B be the logarithm of the leak rates determined by bagging and those determined by the established EPA-SOCMI equations respectively. Say, for example, five baggings were done. For the given screening values, five responses can also be calculated from the EPA-SOCMI regression equation for a particular source, say pump seals:

$$\text{Log}_{10}(\text{Leak Rate}) = -5.34 + 0.898 \text{ Log}_{10}(\text{Screening Value})$$

These observed and calculated responses, the differences of the two, and the ranking of the magnitude of these differences are given below.

Measured Values		Calculated Values from EPA-SOCMI Equations		Difference	Rank
Log (Screening Value)	Log (Leak Rate)	Log (Leak Rate)			
1.78	-3.53	-3.68	0.15		1
1.63	-4.06	-3.87	-0.19		2
-1.39	-6.79	-6.59	-0.20		3
1.84	-3.53	-3.74	0.21		4
-0.82	-6.42	-6.08	-0.34		5

As stated, the null hypothesis is that the populations are equal, and the alternative hypothesis is that they're not equal, which implies a 2-tailed test. From a Wilcoxon Table, the critical value T_0 for a 2-tailed test with $\alpha = 0.10$ and $n=5$ is $T_0 = 1$. Hence, reject the null hypothesis if the Wilcoxon statistic, $T \leq 1$. The sum of the ranks of the positive differences is 5 and of the negative differences is 10. The smaller of the two

rank sums will be the Wilcoxon statistic, T . Since $5 > T_0$, we cannot reject H_0 , the hypothesis that the population distributions are different.

A.7 Regression Estimates for Emission Rates from SOCM I Processes (U.S. EPA, 1988)

- Flanges

Equation for predicted mean emission rate is:

$$\text{Emission Rate} = (3.731)(10^{-5})(\text{OVA_SV})^{0.82}$$

Least-Square Results (in log-log space):

$\text{Log}_{10}(\text{Emission Rate}) = -4.73 + 0.818 \text{Log}_{10}(\text{OVA Screening Value})$;

Correlation Coefficient (r) = 0.77;

Number of Data Pairs = 52;

Standard Error of Estimate = 0.52;

95% Confidence Interval for Intercept (-5.9, -4.5);

95% Confidence Interval for Slope = (0.68, 1.08); and

Scale Bias Correction Factor = 2.02.

- Valves - Light Liquid Service

Equation for predicted mean emission rate is:

$$\text{Emission Rate} = (3.74)(10^{-4})(\text{OVA_SV})^{0.47}$$

Least-Square Results (in log-log space):

$\text{Log}_{10}(\text{Emission Rate}) = -4.342 + 0.470 \text{Log}_{10}(\text{OVA Screening Value})$;

Correlation Coefficient (r) = 0.47;

Number of Data Pairs = 129;

Standard Error of Estimate = 0.902;

95% Confidence Interval for Intercept (-5.0, -3.7);

95% Confidence Interval for Slope = (0.31, 0.63); and

Scale Bias Correction Factor = 8.218.

- Valves - Gas Vapor Service

Equation for predicted mean emission rate is:

$$\text{Emission Rate} = (1.68)(10^{-5})(\text{OVA_SV})^{0.69}$$

Least-Square Results (in log-log space):

$\text{Log}_{10}(\text{Emission Rate}) = -5.35 + 0.693 \text{ Log}_{10}(\text{OVA Screening Value})$;

Correlation Coefficient (r) = 0.66;

Number of Data Pairs = 99;

Standard Error of Estimate = 0.716;

95% Confidence Interval for Intercept (-6.0, -4.7);

95% Confidence Interval for Slope = (0.53, 0.85) ; and

Scale Bias Correction Factor = 3.766.

- Pump Seals - Light Liquid Service

Equation for predicted mean emission rate is:

$$\text{Emission Rate} = (1.34)(10^{-5})(\text{OVA_SV})^{0.898}$$

Least-Square Results (in log-log space):

$\text{Log}_{10}(\text{Emission Rate}) = -5.34 + 0.898 \text{ Log}_{10}(\text{OVA Screening Value})$;

Correlation Coefficient (r) = 0.81;

Number of Data Pairs = 52;

Standard Error of Estimate = 0.650;

95% Confidence Interval for Intercept (-6.1, -4.6);

95% Confidence Interval for Slope = (0.71, 1.1) ; and

Scale Bias Correction Factor = 2.932.

A.8 Regression Estimates for Emission Rates from Refinery Processes (Radian, 1980 and Radian, 1989)

- Flanges

Equation for predicted mean emission rate is:

$$\text{Emission Rate} = (3.730)(10^{-5})(\text{OVA_SV})^{0.82}$$

$$\text{Emission Rate} = (1.275)(10^{-5})(\text{TLV_SV})^{0.88}$$

Least-Square Results (in log-log space) using OVA Screening Instrument:

$$\text{Log}_{10}(\text{Emission Rate}) = -4.73 + 0.818 \text{Log}_{10}(\text{OVA Screening Value});$$

95% Confidence Interval for Intercept (-5.43, -4.03); and

95% Confidence Interval for Slope = (0.63, 1.00).

Least-Square Results (in log-log space) using TLV Screening Instrument:

$$\text{Log}_{10}(\text{Emission Rate}) = -5.20 + 0.88 \text{Log}_{10}(\text{TLV Screening Value});$$

Correlation Coefficient (r) = 0.77;

Number of Data Pairs = 52;

Standard Error of Estimate = 0.52;

95% Confidence Interval for Intercept (-5.9, -4.5);

95% Confidence Interval for Slope = (0.68, 1.08); and

Scale Bias Correction Factor = 2.02.

- Valves - Light Liquid Service

Equation for predicted mean emission rate is:

$$\text{Emission Rate} = (8.46)(10^{-5})(\text{OVA_SV})^{0.74}$$

$$\text{Emission Rate} = (3.19)(10^{-5})(\text{TLV_SV})^{0.80}$$

Least-Square Results (in log-log space) using OVA Screening Instrument:

$$\text{Log}_{10}(\text{Emission Rate}) = -4.48 + 0.74 \text{Log}_{10}(\text{OVA Screening Value});$$

95% Confidence Interval for Intercept (-4.88, -4.08); and

95% Confidence Interval for Slope = (0.641, 0.845).

Least-Square Results (in log-log space) using TLV Screening Instrument:

$\text{Log}_{10}(\text{Emission Rate}) = -4.90 + 0.80 \text{ Log}_{10}(\text{TLV Screening Value})$;
 Correlation Coefficient (r) = 0.79;
 Number of Data Pairs = 119;
 Standard Error of Estimate = 0.60;
 95% Confidence Interval for Intercept (-5.3, -4.5);
 95% Confidence Interval for Slope = (0.69, 0.91); and
 Scale Bias Correction Factor = 2.53.

- Valves - Gas Vapor Service

Equation for predicted mean emission rate is:

$$\begin{aligned}\text{Emission Rate} &= (2.16)(10^{-6})(\text{OVA_SV})^{1.14} \\ \text{Emission Rate} &= (4.81)(10^{-7})(\text{TLV_SV})^{1.23}\end{aligned}$$

Least-Square Results (in log-log space) using OVA Screening Instrument:

$\text{Log}_{10}(\text{Emission Rate}) = -6.35 + 1.14 \text{ Log}_{10}(\text{OVA Screening Value})$;
 95% Confidence Interval for Intercept (-7.45, -5.25); and
 95% Confidence Interval for Slope = (0.92, 1.37).

Least-Square Results (in log-log space) using TLV Screening Instrument:

$\text{Log}_{10}(\text{Emission Rate}) = -7.00 + 1.23 \text{ Log}_{10}(\text{TLV Screening Value})$;
 Correlation Coefficient (r) = 0.76;
 Number of Data Pairs = 79;
 Standard Error of Estimate = 0.78;
 95% Confidence Interval for Intercept (-8.1, -5.9);
 95% Confidence Interval for Slope = (0.99, 1.47) ; and
 Scale Bias Correction Factor = 4.81.

- Pump Seals - Light Liquid Service

Equation for predicted mean emission rate is:

$$\begin{aligned}\text{Emission Rate} &= (5.022)(10^{-4})(\text{OVA_SV})^{0.771} \\ \text{Emission Rate} &= (1.823)(10^{-4})(\text{TLV_SV})^{0.830}\end{aligned}$$

Least-Square Results (in log-log space) using OVA Screening Instrument:

$\text{Log}_{10}(\text{Emission Rate}) = -3.96 + 0.771 \text{Log}_{10}(\text{OVA Screening Value})$;
 95% Confidence Interval for Intercept (-3.46, -4.46); and
 95% Confidence Interval for Slope = (0.67, 0.87).

Least-Square Results (in log-log space) using TLV Screening Instrument:

$\text{Log}_{10}(\text{Emission Rate}) = -4.40 + 0.830 \text{Log}_{10}(\text{TLV Screening Value})$;
 Correlation Coefficient (r) = 0.68;
 Number of Data Pairs = 259;
 Standard Error of Estimate = 0.760
 95% Confidence Interval for Intercept (-4.9, -3.9);
 95% Confidence Interval for Slope = (0.72, 0.94) ; and
 Scale Bias Correction Factor = 4.58.

A.9 Regression Estimates for Petroleum Marketing Terminals

- Flanges (Connectors) - All Services

Equation for predicted mean emission rate is:

$$\text{Emission Rate} = (4.652)(10^{-5})(\text{OVA_SV})^{0.426}$$

Least-Square Results (in log-log space):

$\text{Log}_{10}(\text{Emission Rate}) = -4.73 + 0.426 \text{Log}_{10}(\text{OVA Screening Value})$;
 Correlation Coefficient (r) = 0.41;
 Number of Data Pairs = 36;
 Standard Error of Estimate = 0.604;
 95% Confidence Interval for Intercept (-5.48 -3.98);
 95% Confidence Interval for Slope = (0.097, 0.754); and
 Scale Bias Correction Factor = 2.50.

- Valves - Light Liquid Service

Equation for predicted mean emission rate is:

$$\text{Emission Rate} = (6.34)(10^{-6})(\text{OVA_SV})^{0.708}$$

Least-Square Results (in log-log space):

$\text{Log}_{10}(\text{Emission Rate}) = -5.433 + 0.708 \text{ Log}_{10}(\text{OVA Screening Value})$;
 Correlation Coefficient (r) = 0.845;
 Number of Data Pairs = 46;
 Standard Error of Estimate = 0.460;
 95% Confidence Interval for Intercept (-5.81, -5.06);
 95% Confidence Interval for Slope = (0.57, 0.84); and
 Scale Bias Correction Factor = 1.72

- Loading Arm Valves - All Services

Equation for predicted mean emission rate is:

$$\text{Emission Rate} = (8.24)(10^{-6})(\text{OVA_SV})^{0.955}$$

Least-Square Results (in log-log space):

$\text{Log}_{10}(\text{Emission Rate}) = -5.469 + 0.955 \text{ Log}_{10}(\text{OVA Screening Value})$;
 Correlation Coefficient (r) = 0.825;
 Number of Data Pairs = 24;
 Standard Error of Estimate = 0.601;
 95% Confidence Interval for Intercept (-6.03, -4.91);
 95% Confidence Interval for Slope = (0.67, 1.24); and
 Scale Bias Correction Factor = 2.43

- Open-Ended Lines - All Services

Equation for predicted mean emission rate is:

$$\text{Emission Rate} = (5.69)(10^{-6})(\text{OVA_SV})^{0.995}$$

Least-Square Results (in log-log space):

$\text{Log}_{10}(\text{Emission Rate}) = -5.743 + 0.995 \text{ Log}_{10}(\text{OVA Screening Value})$;
 Correlation Coefficient (r) = 0.859;
 Number of Data Pairs = 16;
 Standard Error of Estimate = 0.701;
 95% Confidence Interval for Intercept (-6.53, -4.95);
 95% Confidence Interval for Slope = (0.65, 1.34); and
 Scale Bias Correction Factor = 3.14

- Pump Seals - Light Liquid Service

Equation for predicted mean emission rate is:

$$\text{Emission Rate} = (6.567)(10^{-5})(\text{OVA_SV})^{0.534}$$

Least-Square Results (in log-log space):

$\text{Log}_{10}(\text{Emission Rate}) = -4.619 + 0.534 \text{ Log}_{10}(\text{OVA Screening Value})$;
 Correlation Coefficient (r) = 0.757;
 Number of Data Pairs = 12;
 Standard Error of Estimate = 0.667;
 95% Confidence Interval for Intercept (-5.43, -3.81);
 95% Confidence Interval for Slope = (0.209, 0.859) ; and
 Scale Bias Correction Factor = 2.729.

- Valves (Light Liquid Services) and Connectors (All Services), Combined

Equation for predicted mean emission rate is:

$$\text{Emission Rate} = (1.255)(10^{-5})(\text{OVA_SV})^{0.635}$$

Least-Square Results (in log-log space):

$\text{Log}_{10}(\text{Emission Rate}) = -5.22 + 0.635 \text{ Log}_{10}(\text{OVA Screening Value})$;

Correlation Coefficient (r) = 0.729;

Number of Data Pairs = 82;

Standard Error of Estimate = 0.532;

95% Confidence Interval for Intercept (-5.56, -4.88);

95% Confidence Interval for Slope = (0.502, 0.768) ; and

Scale Bias Correction Factor = 2.083.

- Loading Arm Valves (All Services) and Open-Ended Lines (All Services), Combined

Equation for predicted mean emission rate is:

$$\text{Emission Rate} = (7.663)(10^{-6})(\text{OVA_SV})^{0.959}$$

Least-Square Results (in log-log space):

$\text{Log}_{10}(\text{Emission Rate}) = -5.55 + 0.959 \text{ Log}_{10}(\text{OVA Screening Value})$;

Correlation Coefficient (r) = 0.838;

Number of Data Pairs = 40;

Standard Error of Estimate = 0.632;

95% Confidence Interval for Intercept (-5.98, -5.12);

95% Confidence Interval for Slope = (0.755, 1.164) ; and

Scale Bias Correction Factor = 2.743.

A.10 Effects of Load and Service on Screening Value Concentrations

It was considered desirable to determine whether the service or the load conditions had an effect on the screening value concentrations. Table A-1 presents statistics for the mean screening value concentrations by service (gas vapor, heavy liquid, or light liquid) and load (load or no load). "Load" is defined as process fluid flowing through the component and "no load" is defined as a liquid-filled component but with no flow. The mean concentrations and sample sizes by category are also presented for the different component types in Figures A-1 through A-6.

Statistical hypothesis tests were performed to determine whether the effects of service and load on screening value concentrations were statistically significant. An effect is said to be "statistically significant" if it is too large to be explained by random chance; i.e., a statistically significant effect is one that appears to be repeatable on the basis of trends seen in the data.

To test the effects of service and load for each component type, the number of screened values within each service and load must be sufficiently large. As shown in Table A-1 and in Figures A-1 through A-6, most of the screened components were connectors and valves. In addition, there were sufficient numbers of connectors and valves representing each of the service types and load conditions. For the remaining four component types (i.e., loading arm valves, open-ended lines, pump seals, and "other"), there was not a large number of screened values representing each of the service types and load conditions. Therefore, whereas reliable statistical conclusions about the effects of service and load can be drawn for connectors and valves, results given for the remaining four component types should be regarded with caution due to the small sample sizes.

When a response variable (concentration) is computed as a function of two possible explanatory variables (load and service), a technique called "analysis of variance" is often used to determine the significance or lack of significance of the effects. Conventional

Table A-1

Summary Statistics for Phase and Load Screening Concentrations by Component

Component Type and Phase	Load					
	No			Yes		
	Number Screened	Mean (ppm)	Std. Dev. (ppm)	Number Screened	Mean (ppm)	Std. Dev. (ppm)
Connectors:						
Gas Vapor	100	199.4	1352.9	57	46.8	331.2
Heavy Liquid	281	0.8	5.0	3	15.7	27.1
Light Liquid	2,302	7.8	88.7	259	8.0	78.1
Valves:						
Gas Vapor	67	8.1	50.4	47	59.1	241.6
Heavy Liquid	269	1.1	4.9	8	2.3	4.2
Light Liquid	1874	363.3	4435.0	371	842.0	7768.6
Loading Arm Valves:						
Gas Vapor	32	15194.7	40026.1	11	423.2	1194.7
Heavy Liquid	7	10.4	6.9	1	2700.0	-- ^a
Light Liquid	93	147.0	494.8	15	166.5	296.0
Open-Ended Lines:						
Gas Vapor	16	1343.2	3804.7	1	0.0	-- ^a
Heavy Liquid	16	20.2	36.3	0	-- ^b	-- ^b
Light Liquid	73	4952.7	39783.1	19	4.5	14.0
Pump Seals:						
Gas Vapor	NA	NA	NA	NA	NA	NA
Heavy Liquid	11	6.6	12.2	1	0.0	-- ^a
Light Liquid	65	2165.2	12661.2	23	185.5	831.9
*Other**:						
Gas Vapor	8	10021.6	24271.5	11	10655.5	29766.7
Heavy Liquid	5	0.0	0.0	2	1050.0	1484.9
Light Liquid	102	918.4	4053.3	11	409.1	1356.8

^a Not sufficient data to calculate standard deviation.

^b No screening value data obtained for given load and phase.

* "Other" includes components such as hatches, covers, manholes, thermal wells, and pressure relief valves.

Connectors

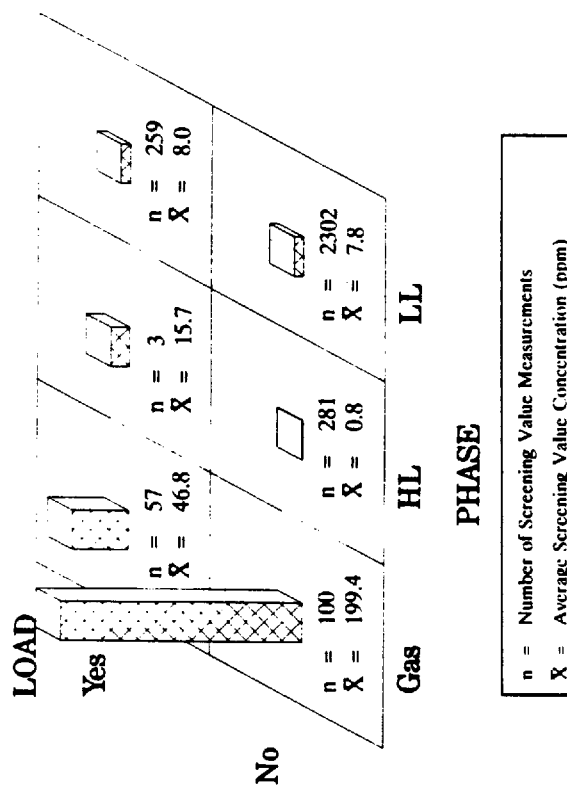


Figure A-1. Average Screening Value Concentrations by Load and Phase - Connectors.

Valves

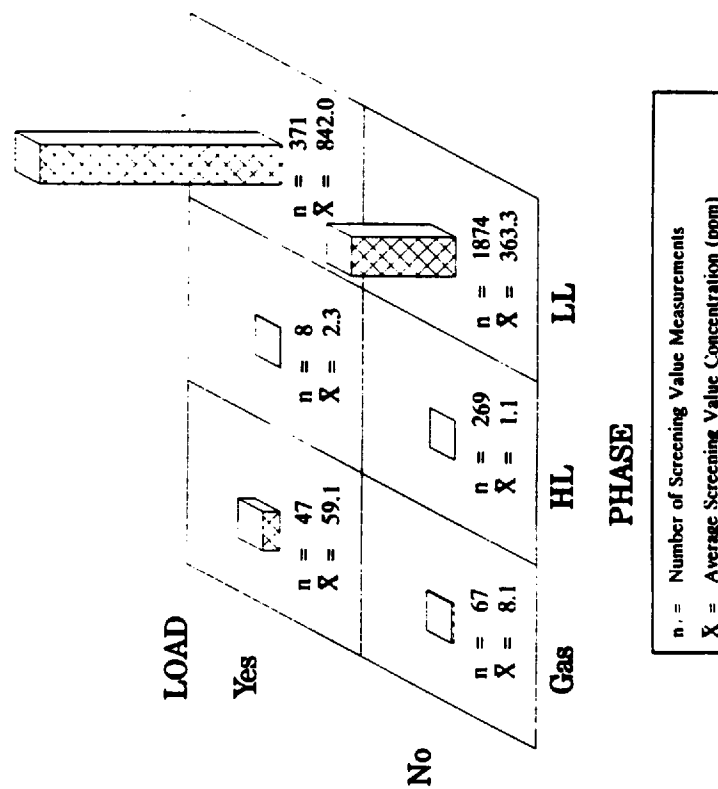


Figure A-2. Average Screening Value Concentrations by Load and Phase - Valves.

Loading Arm Valves

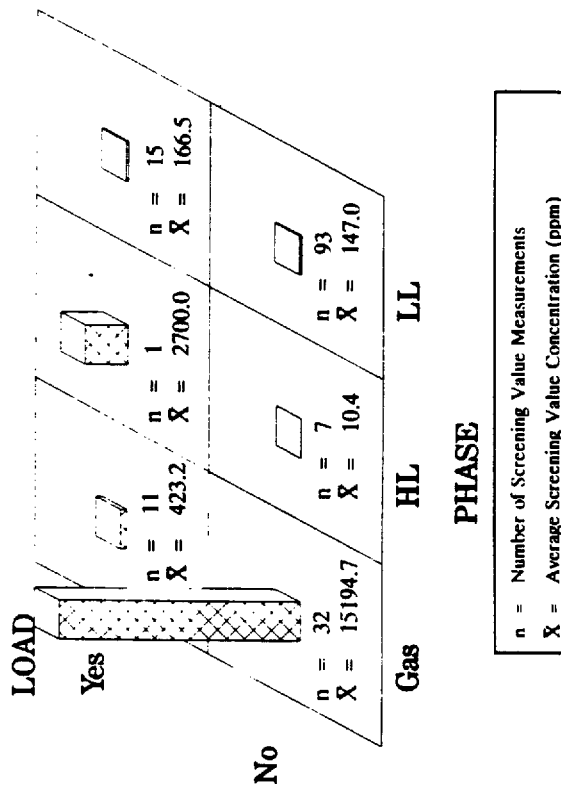


Figure A-3. Average Screening Value Concentrations by Load and Phase - Loading Arm Valves.

Open - Ended Lines

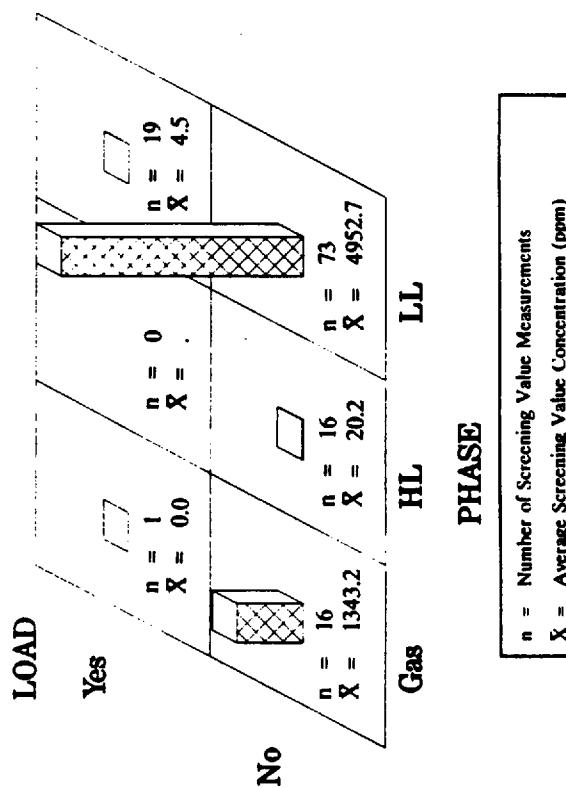


Figure A-4. Average Screening Value Concentrations by Load and Phase - Open-Ended Lines.

Pump Seals

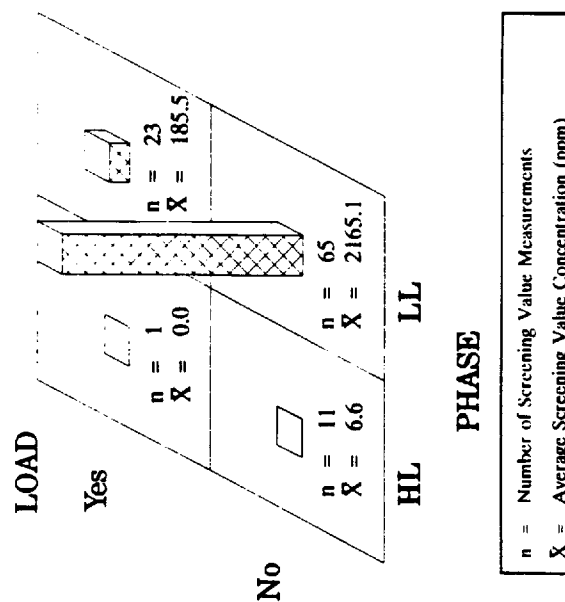


Figure A-5. Average Screening Value Concentrations by Load and Phase - Pump Seals.

Other

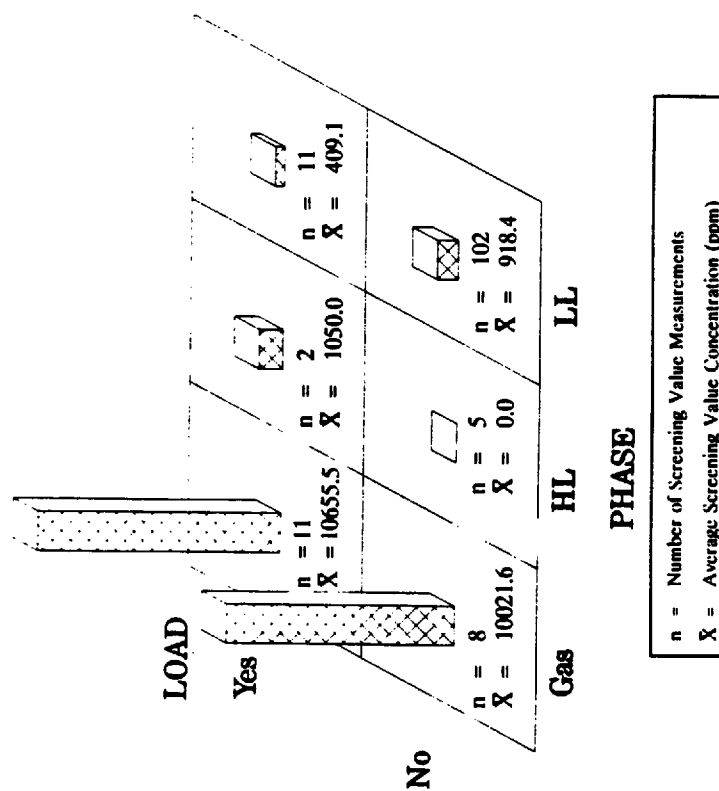


Figure A-6. Average Screening Value Concentrations by Load and Phase - "Other" Components.

analysis of variance could be used to determine whether the mean concentration varies significantly as a function of load or service. In Figure A-1, for example, it is seen that concentration is larger for the gas service with no load than for the other data cells (i.e., other load-service combinations). The question is, are the cell-to-cell differences in the mean concentrations too large to be explained by random chance?

Analysis of variance, strictly speaking, is based on the assumption that the data are normally distributed. The concentrations observed here are markedly non-normal. As discussed in Section 5.6.2, the distributions are strongly asymmetric (positively skewed). With this type of distribution, it is often possible to take logarithms of the values and produce an approximately normal distribution. Because of the large number of concentration values reported as zero, however, the log transformation was not feasible in this case. For this and other reasons, there was some doubt about the advisability of using conventional analysis of variance.

For this reason, a nonparametric analysis of variance was performed. A "nonparametric" statistical analysis is one that is designed so that a rigorous assumption regarding the type of statistical distribution is not required.

To perform the nonparametric test, the complete set of concentrations for a given component were first ordered from low to high. The lowest concentration was assigned the rank 1, the next lowest was assigned the rank 2, and so on. Average ranks were used whenever ties occurred. An analysis of variance was then performed on the ranks of the concentrations.

A fundamental difference between the parametric and nonparametric tests is as follows: In the parametric test, the mean concentrations for the different data cells are compared. In the nonparametric test based on ranks, the means are not directly compared. The question is, are the concentrations consistently (more often) higher in some cells than in others?

The nonparametric tests were preferred for theoretical reasons. Also, however, the nonparametric tests produced results which are generally more consistent with the visual effects observed in the figures.

A nonparametric test based on ranks of the type used here strictly should be based on data with equal variances in all cells (all load-service combinations). This condition is not met here, and so the significance levels discussed below in connection with the test are not strictly correct. The nonparametric test used is still preferable to the parametric test, however, and is believed to be the best readily available. The parametric test also requires the assumption of equal variances. Moreover, the reasonableness of all nonparametric results is discussed in view of graphical displays and other considerations. Thus, the results of the significance tests are believed to provide useful information, although the confidence levels are not numerically exactly correct.

The goal of a hypothesis test is not to draw conclusions with absolute certainty; this is not feasible when random variability is present in the data. The goal is to draw the most reasonable conclusions possible and to assess the confidence with which these conclusions can be drawn.

Table A-2 presents the results of the nonparametric hypothesis tests. Certain notations appear regarding instances in which a significant result was found by the parametric test but not by the nonparametric test. Factors that are not significant are denoted as "NS." For those factors that are significant, the p-value at which the indicated factor is statistically significant is given. The p-value is the probability of incorrectly concluding that there is a significant difference between the mean concentrations. Thus, for example, a p-value of 0.0001 for a phase effect would indicate that there is only a 0.01% chance of incorrectly concluding that the mean concentrations of the three phases differ significantly and thus there is a 99.99% (i.e., $1 - p\text{-value}$) chance that the mean concentrations for the three phases actually differ significantly.

Table A-2

**Results of Non-parametric Tests to Determine
Significance of Effects of Service and Load
on Screening Value Concentrations**

Component Type	Service	Load	Service x Load
Connectors	NS*	NS	NS*
Valves	0.0343	NS	NS
Loading Arm Valves	0.0409	NS	0.0231
Open-Ended Lines	NS	NS	NS
Pump Seals	NS	NS	NS
"Other"	0.0001	NS	NS

Note: The values in the table are p-values at which the indicated effect is statistically significant. Where NS appears, the effect is not statistically significant at the 0.05 level.

* Significant at the 0.05 level on the basis of a parametric test.

* "Other" includes components such as hatches, covers, manholes, thermal wells, and pressure relief valves.

Consider first the results for connectors (Figure A-1). As noted earlier, it is evident that the mean for gas service with no load is much higher than the means for the other cells. It is also evident that the concentrations are much higher on the average for the gas service than for the other services. Table A-2 indicates, however, that the service effect is not significant. As indicated by the footnote in Table A-2, however, the parametric test indicates that the service effect is significant. The same type of disparity occurs for the phase*load interaction, with the nonparametric test indicating that this is not a significant effect, whereas, the parametric test indicates that this is a significant effect.

Thus, there is an apparent anomaly for connectors in that (1) the plot and the parametric test results suggest that there is a service effect and a service*load effect, but (2) the nonparametric hypothesis tests reveal that there is no significant service and service*load effect. This is not a contradiction, however. Recall that the figure presents the mean values, and the mean values are strongly affected by a small percentage of the points that have much higher than average concentrations. The nonparametric test, being based on ranks, is not sensitive to a small number of very large values. The nonparametric test is affected by cells that more frequently have higher concentrations than do other cells. Thus, the mean values in the plots and the nonparametric results characterize two aspects of the problem, and both aspects are of some practical interest.

Further investigation reveals that the high average screening value for connectors in gas service with no load can be attributed to a two large screening concentrations of 8,000 and 11,000 ppm. In fact, of the 100 screening concentrations obtained for this category, 84 screened at 0 ppm, 11 were less than 100 ppm, one each screened at 130 ppm, 160 ppm and 340 ppm. For the gas connectors with the load on, the large average screening concentration is due primarily to a single high screening value of 2500 ppm. Of the 47 components screened in this category, 51 screened at 0 ppm and 5 screened at concentrations less than 130 ppm.

The parametric test for connectors also indicated that there was a significant difference between for the service*load interactive term. As is indicated above, however, there is some doubt as to the validity of the parametric test. The nonparametric test did not reveal a significant difference for this interaction. This result does not prove that there is no service*load interaction; the conclusion is only that there is insufficient evidence on the basis of the nonparametric test to conclude with confidence that a service*load effect exists.

The results for valves are shown in Figure A-2. Notice that the average concentrations are noticeably higher for light liquids for both load conditions than for other data cells. Note also that the average concentrations for the gas service are higher than those for the heavy liquid service. Consistently with these observations, Table A-2 indicates that the concentrations differ significantly among the different services.

The results for valves, however, do not indicate a severe imbalance in concentrations for the same service but for different load conditions. Again, the hypothesis test results are consistent with the visual observations. The interaction effect for valves is not significant, and neither is the load effect.

The results for loading arm valves are presented in Figure A-3. The results here are very similar to the results of the parametric test performed on connectors. Notice, however, that the sample sizes for loading arm valves are much smaller than those for connectors. Thus, the conclusions for loading arm valves are drawn with much less confidence. The results of the test on loading arm valves shows there is evidence of a service effect. This is consistent with the plot showing large differences in screening values for different services.

Table A-2 also indicates that the service*load interaction effect is significant for loading arm valves. As a general statement, this result means that either (1) concentration does not vary uniformly with service for a given load, (2) concentration does not vary uniformly with load for a given service, or (3) both. This result is very consistent with the data as depicted in

Figure A-3. It is evident that the higher concentration for the gas service does not occur uniformly for the cases with and without load.

The results for open ended lines are presented in Figure A-4. The results here are similar to those for the loading arm valves, in that the sample sizes are very small when the load is on. Thus, the failure to detect a significant load effect is partly due to the small sample sizes. No significant service effects were detected for open ended lines. This may seem counter intuitive in view of the appearance of Figure A-4, which shows large differences in average concentrations for different services when the load is off. However, as shown in Table A-1, the variability within each service is very large. The lack of significant service results is therefore explainable in part by the large variability within each service and in part by the small sample sizes.

Figure A-5 presents the results for pumps. There is a noticeably large mean value for light liquids with no load. The results are affected, however, by small sample sizes (one cell has only one observation). As a result, neither the parametric nor the nonparametric tests revealed a significant service, load, or service*load difference.

Figure A-6 presents the results for "other" components. "Other" components includes hatches, hoses, covers, man holes, thermal wells, and pressure relief valves. This figure reveals high mean values for the gas service for both load conditions. This seems to imply that a significant service effect exists. This is consistent with the results of the non-parametric test given in Table A-2 which shows a significant service effect for service type.

It is interesting to note that valves showed statistically significant service effects. Higher screening value concentrations were observed more often for valves in light liquid service than the other two services. Typically it would be expected that the gas service would show higher concentrations of screening values, as was shown for connectors. Further evaluation of the valve data however, showed that virtually all of the light liquid valves with large

screening values, also were larger in size (i.e., greater than 2 inches). Thus, the size of the valve appears also to have an effect on the screening value distribution.

The average concentrations for valves with different services and sizes are shown in Figure A-7. A second ANOVA was performed on valves to determine whether there were statistically significant effects on the screening value concentrations due to the valve size, service, and service*size interactions. Load was not included in this second ANOVA because it was not shown to be a significant factor in the first ANOVA. In addition, 19 valves that did not have a recorded size variable were not included in this second ANOVA. The results of this second ANOVA are given in Table A-3. As shown before, service appears to have a significant effect on screening value concentrations for valves. This ANOVA also shows that size and the service*size interactions are significant effects. It is of interest to note that all of the 15 leakers (screening values of greater than 10,000 ppm) for valves occurred in the light liquid service. Of these leakers, 1 was in the 0-2" size category, 4 were in the 2-4" category, 5 were in the 4-6" size category, 3 were in the 6-8" size category, and 2 were in the >8" size category.

In summary, reliable significant statistical conclusions were only shown for valves. For connectors there was no strong service or load effect. For valves, however, the service effect was significant. There were also indications for valves that size and the service*size interactions were significant. Loading arm valves showed statistically significant effects between service*load and load, respectively. However, the results for loading arm valves are not as reliable due to the small sample sizes obtained. In addition, the category of "other" showed a significant service effect. It should also be noted that the statistical tests performed determine whether there are systematic variations in the screening values for different parameters (e.g., service and load). In some cases, the indicated significant effects may run counter to those expected from analysis of physical principles. Thus, the results from the statistical analysis should also be viewed from a practical perspective.

Valves, All Loads

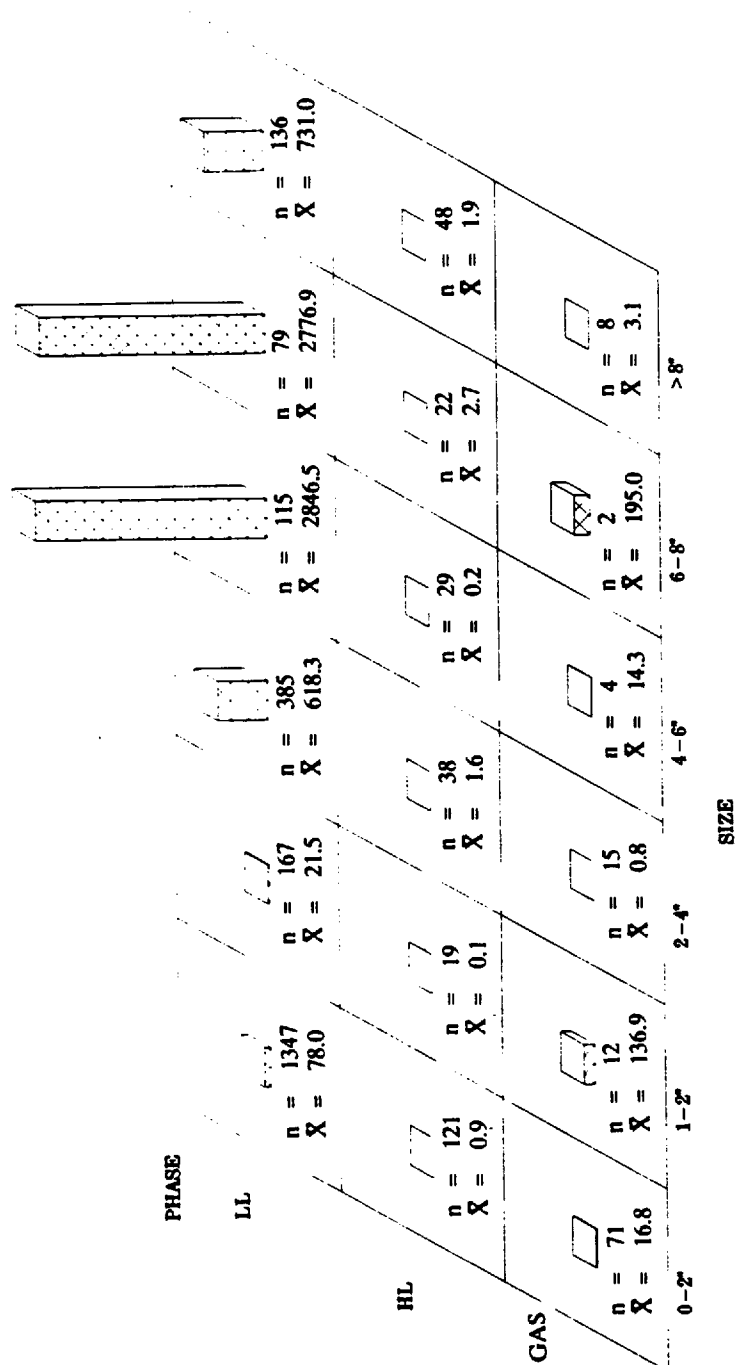


Figure A-7. Average Screening Value Concentrations by Phase and Size - Valves, All Loads.

Table A-3

**Results of Nonparametric ANOVA to Determine Significance
of Effects of Phase and Size on Screening Value Concentrations for Valves**

Component	Phase	Size	Phase*Size
Valves	0.0001	0.0001	0.0004

APPENDIX B

RAW DATA USED FOR STATISTICAL EVALUATIONS

B.1

DEFAULT ZERO EMISSIONS DATA

Data for Default Zeros Emission Estimates

1
15:45 Tuesday, October 20, 1992

----- Component*Type=Conct Service=LL -----

Terminal	Sample ID	Component ID	Load	Product	OVA SV (ppm)	Emission Rate (lbs/hr)
A	032	A356	N	Regular	0.00	.000005707
A	033	A361	N	Supreme	0.00	.000007327
A	036	A291	N	Supreme	0.00	.000019031
A	043	A147	N	Supreme	0.25	.000006936
A	044	A92	N	Plus	0.00	.000003923
B	136	D.ZER	N	Premium	0.20	.000002613
B	137	D.ZER	N	Premium	0.25	.000002999
B	138	D.ZER	N	Premium	0.10	.000001940
B	142	D.ZER	N	Regular	0.25	.000002743
B	149	D.ZER	N	Regular	0.50	.000003076
B	152	D.ZER	N	Premium	0.00	.000003042
B	153	D.ZER	N	Premium	0.00	.000023157

N = 12

----- Component*Type=OEL Service=All -----

Terminal	Sample ID	Component ID	Load	Product	OVA SV (ppm)	Emission Rate (lbs/hr)
A	030	A509	N	Interface	0.75	.0000017499
A	037	A1679	N	Regular	0.00	.0000063686
A	038	A1502	N	Regular	0.10	.0000026643
A	040*	A972	N	Supreme	0.10	.0000057232
A	041	A1519	N	VRU	0.00	.0000073704
A	042	A1523	N	VRU	0.00	.0000066932
B	144	D.ZER	N	Premium	0.75	.0000013937
B	145	D.ZER	N	Premium	0.35	.0000030918

N = 8

----- Component*Type=Pump Service=LL -----

Terminal	Sample ID	Component ID	Load	Product	OVA SV (ppm)	Emission Rate (lbs/hr)
A	052*	A193	N	Regular	0.00	.00001710
A	055	A110	N	Plus	0.35	.00004448
A	056*	A80	Y	Plus	0.00	.00001059
A	058*	A80	N	Plus	0.00	.00002202
B	139	D.ZER	N	Premium	0.00	.00003646
B	140	D.ZER	N	Clear	0.00	.00003167
B	146	D.ZER	N	Premium	0.00	.00002910
B	147	D.ZER	N	Regular	0.00	.00013821

N = 8

Data for Default Zeros Emission Estimates

2

15:45 Tuesday, October 20, 1992

----- Component*Type=Valve Service=Gas -----

Terminal	Sample ID	Component ID	Load	Product	OVA SV (ppm)	Emission Rate (lbs/hr)
D	76	235	N	VRU	0.00	.000004327
D	77	151	N	VRU	0.00	.000004447
D	78	68	N	VRU	0.00	.000017608
D	79	344	Y	VRU	0.00	.000004590
D	81	344	Y	VRU	0.00	.000005261
D	82	345	Y	VRU	0.75	.000004334
D	83	343	Y	VRU	0.00	.000002774
D	84	346	Y	VRU	0.25	.000005840

N = 8

----- Component*Type=Valve Service=LL -----

Terminal	Sample ID	Component ID	Load	Product	OVA SV (ppm)	Emission Rate (lbs/hr)
A	045	A72	N	Plus	0.30	.000002516
A	046	A181	N	Regular	0.20	.000001948
A	047	A178	N	Regular	0.10	.000001453
A	048	A191	N	Regular	0.00	.000004315
A	049	A3	N	Plus	0.15	.000011740
A	050*	A33	N	Supreme	0.00	.000004301
B	132	D.ZER	N	Premium	0.25	.000002037
B	133	D.ZER	N	Premium	0.00	.000002277
B	134	D.ZER	N	Premium	0.00	.000002491
B	135	D.ZER	N	Premium	0.10	.000002085
B	141	D.ZER	N	Regular	0.00	.000004856

N = 11

B.2

CORRELATION EQUATION EMISSIONS DATA

Data for LOG10 Correlation Equations

1

15:46 Tuesday, October 20, 1992

----- Source*Type=Conct Service=All -----

Terminal	Sample Id	Phase	Measured Emission Rate (lbs/hr)	Log(Conc)	Screening Value (ppm)	Log(SV)
A	008	LL	.0007019	-3.15370	171.5	2.23426
A	010	LL	.0006776	-3.16904	270.0	2.43136
A	012*	LL	.0004731	-3.32509	621.5	2.79344
A	019	LL	.0019859	-2.70204	37.5	1.57403
A	022	LL	.0010145	-2.99375	372.5	2.57113
A	023	LL	.0005724	-3.24231	94.0	1.97313
A	025	LL	.0001528	-3.81585	141.5	2.15076
A	027*	LL	.0008281	-3.08191	27.5	1.43933
A	061	Gas	.0000208	-4.68154	37.5	1.57403
B	074	LL	.0000942	-4.02612	670.0	2.82607
B	076	LL	.0021289	-2.67184	997.0	2.99870
B	078	LL	.0000337	-4.47223	23.0	1.36173
B	085	LL	.0001204	-3.91941	96.0	1.98227
B	086	LL	.0001197	-3.92183	112.0	2.04922
B	089	LL	.0003064	-3.51377	392.0	2.59329
B	098	LL	.0016740	-2.77624	940.0	2.97313
B	100	Gas	.0006099	-3.21478	30.0	1.47712
B	103	LL	.0001938	-3.71258	511.0	2.70842
B	104	LL	.0000575	-4.24006	45.0	1.65321
B	105	Gas	.0000382	-4.41791	30.0	1.47712
B	119	LL	.0001126	-3.94842	87.0	1.93952
B	122	LL	.0000416	-4.38042	50.0	1.69897
B	123	LL	.0000319	-4.49670	34.5	1.53782
B	124	LL	.0000092	-5.03537	35.0	1.54407
B	127	LL	.0000123	-4.90992	46.0	1.66276
B	128	LL	.0005671	-3.24636	41.0	1.61278
B	129	LL	.0000865	-4.06305	42.5	1.62839
B	130	LL	.0000355	-4.44964	23.0	1.36173
D	47	LL	.0000711	-4.14798	1096.5	3.04001
D	50	LL	.0001389	-3.85742	1096.5	3.04001
D	51	LL	.0015803	-2.80126	6996.0	3.84485
D	60	LL	.0003076	-3.51203	420.0	2.62325
D	88	LL	.0000627	-4.20273	321.0	2.50651
D	91	LL	.0000228	-4.64231	317.0	2.50106
D	93	LL	.0000981	-4.00820	446.5	2.64982
D	95	LL	.0000988	-4.00523	542.0	2.73400

N = 36

Data for LOG10 Correlation Equations

2

15:46 Tuesday, October 20, 1992

----- Source*Type=LA Service=All -----

Terminal	Sample Id	Phase	Measured Emission Rate (lbs/hr)	Log(Conc)	Screening Value (ppm)	Log(SV)
A	017	Gas	0.00877	-2.05716	1096.0	3.03981
A	018	Gas	0.00296	-2.52834	2498.5	3.39768
A	060	LL	0.00048	-3.32233	145.5	2.16286
A	062	Gas	0.00080	-3.09657	19.5	1.29003
B	113	Gas	0.00016	-3.78513	70.0	1.84510
B	114	LL	0.00004	-4.40076	33.0	1.51851
B	117	LL	0.00001	-4.97196	75.0	1.87506
B	118	LL	0.00001	-4.84552	76.0	1.88081
B	121	Gas	0.00649	-2.18806	387.0	2.58771
B	125	LL	0.00001	-4.84967	18.0	1.25527
B	126	LL	0.00006	-4.23108	45.0	1.65321
D	41	LL	0.00017	-3.75923	70.0	1.84510
D	43	LL	0.00013	-3.89486	15.0	1.17609
D	44	LL	0.00028	-3.55385	10.5	1.02119
D	52	LL	0.00024	-3.62344	96.0	1.98227
D	56	LL	0.00001	-5.23597	3.0	0.47712
D	57	LL	0.00006	-4.24408	79.0	1.89763
D	59	Gas	0.10398	-0.98305	15594.5	4.19297
D	61	LL	0.00006	-4.18785	26.5	1.42325
D	64	LL	0.00003	-4.54076	5.5	0.74036
D	66	LL	0.00003	-4.59813	4.5	0.65321
D	67	LL	0.00004	-4.39535	6.0	0.77815
D	68	LL	0.00009	-4.03077	46.5	1.66745
D	69	LL	0.00002	-4.65326	6.0	0.77815

N = 24

Data for LOG10 Correlation Equations

3

15:46 Tuesday, October 20, 1992

----- Source*Type=OEL Service=All -----

Terminal	Sample Id	Phase	Measured Emission Rate (lbs/hr)	Log(Conc)	Screening Value (ppm)	Log(SV)
A	003	LL	0.00182	-2.74067	210.00	2.32222
A	031	LL	0.00001	-5.19435	8.00	0.90309
A	039*	LL	0.00001	-5.16172	1.75	0.24304
A	059	LL	0.00010	-3.99853	51.00	1.70757
B	066	LL	0.00062	-3.20776	142.00	2.15229
B	068	LL	0.00124	-2.90553	93.00	1.96848
B	072	LL	0.00002	-4.61934	175.50	2.24428
B	073	Gas	0.00008	-4.11233	296.00	2.47129
B	079	LL	0.00118	-2.92904	495.00	2.69461
B	084	LL	0.00169	-2.77312	1186.00	3.07408
B	095	LL	0.00191	-2.72001	1039.00	3.01662
B	096	LL	0.00387	-2.41263	990.00	2.99564
B	108	LL	0.11072	-0.95577	7992.00	3.90266
B	111	LL	0.00003	-4.54679	545.50	2.73679
B	143	LL	0.00000	-5.61789	1.00	0.00000
B	150	LL	0.00000	-5.40235	2.00	0.30103

N = 16

----- Source*Type=Pump Service=LL -----

Terminal	Sample Id	Phase	Measured Emission Rate (lbs/hr)	Log(Conc)	Screening Value (ppm)	Log(SV)
A	014	LL	0.000147	-3.83203	7.5	0.87506
A	015	LL	0.000144	-3.84312	5.0	0.69897
B	069	LL	0.000056	-4.25003	20.0	1.30103
B	071	LL	0.001468	-2.83336	43.0	1.63347
D	02	LL	0.000764	-3.11671	8945.5	3.95160
D	03	LL	0.029050	-1.53685	4488.0	3.65205
D	05	LL	0.003893	-2.40976	10995.0	4.04120
D	17	LL	0.002037	-2.69097	6868.0	3.83683
D	18	LL	0.000084	-4.07401	45.5	1.65801
D	20	LL	0.000055	-4.25839	2.0	0.30103
D	34	LL	0.000068	-4.16816	95.0	1.97772
D	35	LL	0.000013	-4.90125	24.5	1.38917

N = 12

Data for LOG10 Correlation Equations

15:46 Tuesday, October 20, 1992

4

----- Source*Type=Valve Service=LL -----

Terminal	Sample Id	Phase	Measured Emission Rate (lbs/hr)	Log(Conc)	Screening Value (ppm)	Log(SV)
A	004	LL	.0029656	-2.52789	2257.50	3.35363
A	005	LL	.0008128	-3.09001	4545.00	3.65753
A	006	LL	.0000052	-5.28050	10.00	1.00000
A	007	LL	.0001188	-3.92533	205.00	2.31175
A	020	LL	.0000600	-4.22215	75.00	1.87506
A	021	LL	.0000353	-4.45197	34.00	1.53148
A	024	LL	.0001295	-3.88776	124.00	2.09342
A	028	LL	.0001538	-3.81293	71.50	1.85431
A	029	LL	.0013766	-2.86119	2147.50	3.33193
A	034	LL	.0006447	-3.19065	187.50	2.27300
B	067	LL	.0009157	-3.03824	3243.00	3.51095
B	075	LL	.0000336	-4.47356	22.00	1.34242
B	077	LL	.0001137	-3.94432	22.00	1.34242
B	080	LL	.0001106	-3.95644	109.00	2.03743
B	081	LL	.0000217	-4.66364	18.00	1.25527
B	082	LL	.0000766	-4.11578	45.00	1.65321
B	083	LL	.0001081	-3.96621	116.00	2.06446
B	087	LL	.0000864	-4.06335	181.00	2.25768
B	088	LL	.0000356	-4.44887	28.50	1.45484
B	090	LL	.0000316	-4.50066	59.50	1.77452
B	092	LL	.0000532	-4.27398	588.00	2.76938
B	093	LL	.0000842	-4.07489	119.00	2.07555
B	094	LL	.0001279	-3.89299	691.00	2.83948
B	097	LL	.0003157	-3.50073	132.00	2.12057
B	099	LL	.0007034	-3.15283	52.50	1.72016
B	106	LL	.0001372	-3.86277	116.00	2.06446
B	107	LL	.0001397	-3.85487	61.00	1.78533
B	109	LL	.0002649	-3.57692	496.50	2.69592
B	116	LL	.0000099	-5.00559	11.50	1.06070
B	151	LL	.0000045	-5.34470	4.25	0.62839
D	08	LL	.0006059	-3.21758	4996.50	3.69867
D	09	LL	.0043482	-2.36169	5494.00	3.73989
D	11	LL	.0052703	-2.27816	3844.00	3.58478
D	12	LL	.0061519	-2.21099	3389.00	3.53007
D	14	LL	.0067283	-2.17209	3302.00	3.51878
D	16	LL	.0035476	-2.45007	5434.00	3.73512
D	21	LL	.0022909	-2.63999	2745.00	3.43854
D	23	LL	.0041507	-2.38188	8994.00	3.95395
D	25	LL	.0031483	-2.50192	10981.00	4.04064
D	27	LL	.0015669	-2.80496	8091.00	3.90800
D	32	LL	.0005156	-3.28767	20897.00	4.32008
D	33	LL	.0009667	-3.01471	21994.00	4.34230
D	73	LL	.0000190	-4.72088	524.00	2.71933
D	85	LL	.0009272	-3.03282	4246.50	3.62803
D	90	LL	.0005467	-3.26224	2744.00	3.43838
D	92	LL	.0000505	-4.29713	74.00	1.86923

N = 46

B.3

PEGGED SOURCES EMISSIONS DATA

Pegged Emission Estimates

15:50 Tuesday, October 20, 1992

1

----- Component*Type=Conct Phase=Gas -----

TERMINAL	Sample ID	Component ID	Load	OVA SV (ppm)	Pegged SV (ppm)	Measured Emission Rate (lbs/hr)	Calculated Emission Rate (at 100,000)
A	013	A1067	N	100000	100000	.0061182	0.46958
B	120	B984	N	100000	100000	.0007895	0.46958

N = 2

----- Component*Type=LA Phase=Gas -----

TERMINAL	Sample ID	Component ID	Load	OVA SV (ppm)	Pegged SV (ppm)	Measured Emission Rate (lbs/hr)	Calculated Emission Rate (at 100,000)
B	112	B615	N	100000	100000	0.000464	0.39013
D	39	B315	N	310000	100000	0.096954	0.39013
D	42	B232	N	400000	100000	0.095242	0.39013

N = 3

----- Component*Type=OEL Phase=LL -----

TERMINAL	Sample ID	Component ID	Load	OVA SV (ppm)	Pegged SV (ppm)	Measured Emission Rate (lbs/hr)	Calculated Emission Rate (at 100,000)
D	110	B1077	N	127475	100000	.0064414	0.39013
D	07	B1077	N	300000	100000	.0047877	0.39013

N = 2

----- Component*Type=Other Phase=LL -----

TERMINAL	Sample ID	Component ID	Load	OVA SV (ppm)	Pegged SV (ppm)	Measured Emission Rate (lbs/hr)	Calculated Emission Rate (at 100,000)
B	102	B568	N	100000	100000	0.037675	0.46958
B	131	B1507	N	100000	100000	0.039889	0.46958

N = 2

Pegged Emission Estimates

2

15:50 Tuesday, October 20, 1992

----- Component*Type=Valve Phase=Gas -----

TERMINAL	Sample ID	Component ID	Load	OVA SV (ppm)	Pegged SV (ppm)	Measured Emission Rate (lbs/hr)	Calculated Emission Rate (at 100,000)
D	54	71	Y	300000	100000	0.13351	1.08256
D	96	71	N	300000	100000	0.00612	1.08256

N = 2

B.4

SCREENING VALUE DATA BY SITE

Date=09MAR92

Radian ID	Location	Type	Phase	Product	Load	Subtype
1	PUMP ROW	Pump	LL	Supreme	Yes	
2	PUMP ROW	Conct	LL	Supreme	No	Flange
3	PUMP ROW	Valve	LL	Supreme	No	Butterfly
4	PUMP ROW	Conct	LL	Supreme	No	Flange
5	PUMP ROW	Conct	LL	Supreme	No	Flange
6	PUMP ROW	Conct	LL	Supreme	No	Flange
7	PUMP ROW	Valve	LL	Supreme	No	Butterfly
8	PUMP ROW	Pump	LL	Supreme	No	
9	PUMP ROW	Conct	LL	Supreme	No	Flange
10	PUMP ROW	Conct	LL	Supreme	No	Flange
11	PUMP ROW	Valve	LL	Supreme	No	Butterfly
12	PUMP ROW	Valve	LL	Supreme	No	Gate
13	PUMP ROW	Conct	LL	Supreme	No	Screwed
14	PUMP ROW	Conct	LL	Supreme	No	Flange
15	PUMP ROW	Valve	LL	Supreme	No	Butterfly
16	PUMP ROW	Conct	LL	Supreme	No	Flange
17	PUMP ROW	Valve	LL	Supreme	No	Butterfly
18	PUMP ROW	Conct	LL	Supreme	No	Flange
19	PUMP ROW	Conct	LL	Supreme	No	Flange
20	PUMP ROW	Conct	LL	Supreme	No	Flange
21	PUMP ROW	Conct	LL	Supreme	No	Flange
22	PUMP ROW	Valve	LL	Supreme	No	Gate

Radian ID	Size	Screening Value	Comments
1		0.0	Pump Row
2		0.0	Flange
3	6"	0.0	Butterfly 6"
4		0.0	Flange
5		0.0	Flange
6	6"	0.0	Butterfly 6"
7		0.0	Butterfly 6"
8		0.0	Pump Row
9		0.0	Flange
10		0.0	Flange
11	6"	0.0	Butterfly 6"
12	1"	0.0	1" Gate
13		0.0	Screw
14	6"	0.0	Flange
15		0.0	Butterfly 6"
16	6"	0.0	Flange
17		0.0	Butterfly 6"
18		0.0	Flange
19		0.0	Flange
20		0.0	Flange
21		0.0	Flange
22	1"	0.0	1" Gate

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
23	PUMP ROW	Conct	LL	Supreme	No	Screwed		0.0	Screw
24	PUMP ROW	Conct	LL	Supreme	No	Flange		0.0	Flange
25	PUMP ROW	Conct	LL	Supreme	No	Flange		0.0	Flange
26	PUMP ROW	Conct	LL	Supreme	No	Flange		0.0	Flange
27	PUMP ROW	Valve	LL	Supreme	No	Gate	1"	0.0	1" Gate
28	PUMP ROW	Conct	LL	Supreme	No	Screwed		0.0	Screw
29	PUMP ROW	Conct	LL	Supreme	No	Flange		0.0	Flange
30	PUMP ROW	Conct	LL	Supreme	No	Flange		700.0	Flange
31	PUMP ROW	Conct	LL	Supreme	No	Flange		0.0	Flange
32	PUMP ROW	Conct	LL	Supreme	No	Flange		0.0	Flange
33	PUMP ROW	Valve	LL	Supreme	No	Butterfly 6"	6"	0.0	6" bfly
34	PUMP ROW	Valve	LL	Supreme	No	Gate	10"	35.0	10" Gate
35	PUMP ROW	Conct	LL	Supreme	No	Flange		0.0	Flange
36	PUMP ROW	Conct	LL	Supreme	No	Flange		0.5	Flange
37	PUMP ROW	Conct	LL	Supreme	No	Flange		0.0	Flange
38	PUMP ROW	Valve	LL	Supreme	No	Gate	1"	66.0	1" Gate
39	PUMP ROW	Conct	LL	Supreme	No	Union		0.0	Union
40	PUMP ROW	Conct	LL	Supreme	No	Flange		45.0	Flange
41	PUMP ROW	Conct	LL	Supreme	No	Flange		0.0	Flange
42	PUMP ROW	Conct	LL	Supreme	No	Flange		94.0	Flange
43	PUMP ROW	Pump	LL	Supreme	No			0.0	
44	PUMP ROW	Conct	LL	Supreme	No	Flange		0.0	Flange
45	PUMP ROW	Conct	LL	Supreme	No	Flange		100.0	Flange
46	PUMP ROW	Conct	LL	Supreme	No	Flange		0.0	Flange
47	PUMP ROW	Valve	HL	Diesel	No	Gate	1-1/2"	0.0	1.5" Gate
48	PUMP ROW	Conct	HL	Diesel	No	Screwed		0.0	Screw
49	PUMP ROW	Conct	HL	Diesel	No	Union		0.0	Union
50	PUMP ROW	Conct	HL	Diesel	No	Flange		0.0	Flange
51	PUMP ROW	Valve	HL	Diesel	No	Butterfly 6"	6"	0.0	6" bfly
52	PUMP ROW	Valve	HL	Diesel	No	Butterfly 6"	6"	0.0	6" bfly
53	PUMP ROW	Conct	HL	Diesel	No	Flange		0.0	Flange
54	PUMP ROW	Valve	HL	Diesel	No	Gate	1"	0.0	1" Gate
55	PUMP ROW	Conct	HL	Diesel	No	Union		0.0	Union
56	PUMP ROW	Conct	HL	Diesel	No	Flange		0.0	Flange
57	PUMP ROW	Pump	HL	Diesel	No			0.0	
58	PUMP ROW	Conct	HL	Diesel	No	Flange		0.0	Flange
59	PUMP ROW	Conct	HL	Diesel	No	Flange		0.5	Flange
60	PUMP ROW	Valve	HL	Diesel	No	Butterfly 6"	6"	0.0	6" bfly
61	PUMP ROW	Valve	HL	Diesel	No	Butterfly 6"	6"	0.0	6" bfly
62	PUMP ROW	Conct	HL	Diesel	No	Flange		0.0	Flange
63	PUMP ROW	Conct	HL	Diesel	No	Screwed		0.0	Screw
64	PUMP ROW	Conct	HL	Diesel	No	Flange		0.0	Flange
65	PUMP ROW	Conct	HL	Diesel	No	Flange		0.0	Flange
66	PUMP ROW	Valve	HL	Diesel	No	Gate	6"	0.0	6" Gate
67	PUMP ROW	Conct	HL	Diesel	No	Flange		0.0	Flange
68	PUMP ROW	Valve	HL	Diesel	No	Gate	1"	0.0	1" Gate
69	PUMP ROW	Conct	HL	Diesel	No	Flange		0.0	Flange
70	PUMP ROW	Conct	LL	ULPlus	No	Flange		0.0	Flange

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
71	PUMP ROW	Valve	LL	ULPlus	No	Butterfly 6"	6"	0.0	6" bfly
72	PUMP ROW	Valve	LL	ULPlus	No	Gate	1"	0.0	1" Gate
73	PUMP ROW	Conct	LL	ULPlus	No	Flange		0.5	Flange
74	PUMP ROW	Conct	LL	ULPlus	No	Flange		0.0	Flange
75	PUMP ROW	Valve	LL	ULPlus	No	Butterfly 6"	6"	0.0	6" bfly
76	PUMP ROW	Conct	LL	ULPlus	No	Flange		0.0	Flange
77	PUMP ROW	Valve	LL	ULPlus	No	Butterfly 6"	6"	0.0	6" bfly
78	PUMP ROW	Conct	LL	ULPlus	No	Flange		0.0	Flange
79	PUMP ROW	Valve	LL	ULPlus	No	Butterfly 6"	6"	0.0	6" bfly
80	PUMP ROW	Pump	LL	ULPlus	No			0.0	
81	PUMP ROW	Conct	LL	ULPlus	No	Flange		2.5	Flange
82	PUMP ROW	Conct	LL	ULPlus	No	Screw		0.0	Screw
83	PUMP ROW	Conct	LL	ULPlus	No	Screw		0.0	Screw
84	PUMP ROW	Conct	LL	ULPlus	No	Flange		0.0	Flange
85	PUMP ROW	Conct	LL	ULPlus	No	Flange		0.0	Flange
86	PUMP ROW	Valve	LL	ULPlus	No	Gate	6"	0.0	6" Gate
87	PUMP ROW	Conct	LL	ULPlus	No	Flange		0.0	Flange
88	PUMP ROW	Valve	LL	ULPlus	No	Gate	1"	0.0	1" Gate
89	PUMP ROW	Conct	LL	ULPlus	No	Screw		0.0	Screw
90	PUMP ROW	Valve	LL	ULPlus	No	Gate	1"	0.0	1" Gate
91	PUMP ROW	Conct	LL	ULPlus	No	Union		72.0	Union
92	PUMP ROW	Conct	LL	ULPlus	No	Screw		0.0	Screw
93	PUMP ROW	Conct	LL	ULPlus	No	Flange		0.0	Flange
94	PUMP ROW	Valve	LL	ULPlus	No	Butterfly 14"	14"	0.0	14" bfly
95	PUMP ROW	Conct	LL	ULPlus	No	Flange		0.0	Flange
96	PUMP ROW	Conct	LL	ULPlus	No	Flange		2.0	Flange
97	PUMP ROW	Valve	LL	ULPlus	No	Butterfly 6"	6"	0.0	6" bfly
98	PUMP ROW	Pump	LL	ULPlus	No			0.0	
99	PUMP ROW	Conct	LL	ULPlus	No	Flange		0.0	Flange
100	PUMP ROW	Conct	LL	ULPlus	No	Flange		0.0	Flange
101	PUMP ROW	Conct	LL	ULPlus	No	Flange		0.0	Flange
102	PUMP ROW	Valve	LL	ULPlus	No	Butterfly 6"	6"	0.0	6" bfly
103	PUMP ROW	Conct	LL	ULPlus	No	Flange		22.0	Flange
104	PUMP ROW	Conct	LL	ULPlus	No	Flange		0.0	Flange
105	PUMP ROW	Conct	LL	ULPlus	No	Screw		0.0	Screw
106	PUMP ROW	Conct	LL	ULPlus	No	Screw		0.0	Screw
107	PUMP ROW	Conct	LL	ULPlus	No	Flange		0.0	Flange
108	PUMP ROW	Conct	LL	ULPlus	No	Flange		0.0	Flange
109	PUMP ROW	Valve	LL	ULPlus	No	Gate	12"	0.0	12" Gate
110	PUMP ROW	Pump	LL	ULPlus	No			0.0	

N = 110

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
111	PUMP ROW	Valve	LL	SupMid	Yes			0.0	
112	PUMP ROW	Conct	LL	SupMid	No	Union		500.0	Union
113	PUMP ROW	Conct	LL	SupMid	No	Flange		0.0	Flange
114	PUMP ROW	LA	LL	SupMid	No	Butterfly 6"	6"	0.0	6" bfly
115	PUMP ROW	LA	LL	SupMid	No	Gate	1"	0.0	1" Gate
116	PUMP ROW	Pump	LL	SupMid	No			0.0	
117	PUMP ROW	Conct	LL	SupMid	No	Flange		0.0	Flange
118	PUMP ROW	Conct	LL	SupMid	No	Flange		0.0	Flange
119	PUMP ROW	Conct	LL	SupMid	No	Flange		0.0	Flange
120	PUMP ROW	Valve	LL	SupMid	No	Butterfly 6"	6"	0.0	6" bfly
121	PUMP ROW	Conct	LL	SupMid	No	Flange		0.0	Flange
122	PUMP ROW	Conct	LL	SupMid	No	Gate	1"	0.0	1" Gate
123	PUMP ROW	Valve	LL	SupMid	No	Flange		0.0	Flange
124	PUMP ROW	Conct	LL	SupMid	No	Flange		0.0	Flange
125	PUMP ROW	Conct	LL	SupMid	No	Flange		15.0	Flange
126	PUMP ROW	Valve	LL	SupMid	No	Butterfly 6"	6"	0.0	6" bfly
127	PUMP ROW	Valve	LL	SupMid	No	Gate	1"	0.0	1" Gate
128	PUMP ROW	Conct	LL	SupMid	No	Screw		0.0	Screw
129	PUMP ROW	Pump	LL	SupMid	No			1.0	
130	PUMP ROW	Conct	LL	SupMid	No	Flange		0.0	Flange
131	PUMP ROW	Conct	LL	SupMid	No	Flange		0.0	Flange
132	PUMP ROW	Conct	LL	SupMid	No	Butterfly 6"	6"	0.0	6" bfly
133	PUMP ROW	Valve	LL	SupMid	No	Flange		0.0	Flange
134	PUMP ROW	Conct	LL	SupMid	No	Flange		0.0	Flange
135	PUMP ROW	Conct	LL	SupMid	No	Flange		0.0	Flange
136	PUMP ROW	Conct	LL	SupMid	No	Flange		0.0	Flange
137	PUMP ROW	Conct	LL	SupMid	No	Screw		0.0	Screw
138	PUMP ROW	Valve	LL	SupMid	No	Gate	1"	8.5	1" Gate
139	PUMP ROW	Conct	LL	SupMid	No	Screw		0.5	Screw
140	PUMP ROW	Conct	LL	SupMid	No	Flange		0.0	Flange
141	PUMP ROW	Conct	LL	SupMid	No	Flange		0.0	Flange
142	PUMP ROW	Conct	LL	SupMid	No	Flange		0.0	Flange
143	PUMP ROW	Valve	LL	SupMid	No	Gate	2"	8.5	2" Gate
144	PUMP ROW	Conct	LL	SupMid	No	Flange		0.0	Flange
145	PUMP ROW	Valve	LL	SupMid	No	Gate	1"	0.0	1" Gate
146	PUMP ROW	Conct	LL	SupMid	No	Union		12.0	Union
147	PUMP ROW	Conct	LL	SupMid	No	Screw		0.0	Screw
148	PUMP ROW	Conct	LL	SupMid	Yes	Flange		0.0	Flange
149	PUMP ROW	Valve	LL	SupMid	Yes	Butterfly 12"	12"	0.0	12" bfly
150	PUMP ROW	Conct	LL	SupMid	Yes	Flange		0.0	Flange
151	PUMP ROW	Conct	LL	SupMid	Yes	Flange		0.0	Flange
152	PUMP ROW	Conct	LL	SupMid	Yes	Flange		0.0	Flange
153	PUMP ROW	Pump	LL	SupMid	Yes			0.0	
154	PUMP ROW	Conct	LL	SupMid	Yes	Flange		0.0	Flange
155	PUMP ROW	Valve	LL	SupMid	Yes	Butterfly 6"	6"	0.0	6" bfly
156	PUMP ROW	Valve	LL	SupMid	Yes	Gate	1"	0.0	1" Gate
157	PUMP ROW	Conct	LL	SupMid	Yes	Flange		0.0	Flange
158	PUMP ROW	Conct	LL	SupMid	Yes	Flange		0.0	Flange
159	PUMP ROW	Conct	LL	SupMid	Yes	Flange		0.0	Flange

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Radian ID	Location	Type	Phase	Product
160	PUMP ROW	Valve	LL	SupMid
161	PUMP ROW	Conct	LL	SupMid
162	PUMP ROW	Conct	LL	SupMid
163	PUMP ROW	Conct	LL	SupMid
164	PUMP ROW	Valve	LL	SupMid
165	PUMP ROW	Conct	LL	SupMid
166	PUMP ROW	Conct	LL	SupMid
167	PUMP ROW	Conct	LL	SupMid
168	PUMP ROW	Conct	LL	SupMid
169	PUMP ROW	Valve	LL	Regular
170	PUMP ROW	Conct	LL	Regular
171	PUMP ROW	Conct	LL	Regular
172	PUMP ROW	Conct	LL	Regular
173	PUMP ROW	Valve	LL	Regular
174	PUMP ROW	Conct	LL	Regular
175	PUMP ROW	Conct	LL	Regular
176	PUMP ROW	Conct	LL	Regular
177	PUMP ROW	Conct	LL	Regular
178	PUMP ROW	Valve	LL	Regular
179	PUMP ROW	Pump	LL	Regular
180	PUMP ROW	Conct	LL	Regular
181	PUMP ROW	Valve	LL	Regular

Radian ID	Load	Subtype	Size	Screening Value	Comments
160	Yes	Butterfly	6"	0.0	6" bfly
161	No	Flange		0.0	Flange
162	Yes	Flange		0.0	Flange
163	No	Flange		0.0	Flange
164	No	Gate	1"	20.0	1" Gate
165	No	Screw		0.5	Screw
166	No	Screw		0.0	Screw
167	No	Flange		0.0	Flange
168	No	Flange		4.0	Flange
169	No	Gate	1"	0.0	1" Gate
170	No	Union		1.5	Union
171	No	Screw		0.0	Screw
172	No	Flange		0.0	Flange
173	No	Gate	12"	97.0	12" Gate
174	Yes	Flange		4.0	Flange
175	Yes	Screw		0.5	Screw
176	No	Flange		0.0	Flange
177	No	Flange		0.0	Flange
178	No	Butterfly	6"	0.0	6" bfly
179	No	Flange		0.0	Flange
180	No	Gate	1"	0.0	1" Gate
181	No	Gate		0.0	

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(continued)

Radian ID	Location	Type	Phase	Product
182	PUMP ROW	Conct	LL	Regular
183	PUMP ROW	Conct	LL	Regular
184	PUMP ROW	Conct	LL	Regular
185	PUMP ROW	Valve	LL	Regular
186	PUMP ROW	Conct	LL	Regular
187	PUMP ROW	Conct	LL	Regular
188	PUMP ROW	Valve	LL	Regular
189	PUMP ROW	Conct	LL	Regular
190	PUMP ROW	Conct	LL	Regular
191	PUMP ROW	Valve	LL	Regular
192	PUMP ROW	Conct	LL	Regular
193	PUMP ROW	Pump	LL	Regular
194	PUMP ROW	Valve	LL	Regular
195	PUMP ROW	Conct	LL	Regular
196	PUMP ROW	Conct	LL	Regular
197	PUMP ROW	Conct	LL	Regular
198	PUMP ROW	Valve	LL	Regular
199	PUMP ROW	Conct	LL	Regular
200	PUMP ROW	Conct	LL	Regular
201	PUMP-OFF STATION #1	Valve	LL	
202	PUMP-OFF STATION #1	Conct	LL	
203	PUMP-OFF STATION #1	Conct	LL	

Radian ID	Load	Subtype	Size	Screening Value	Comments
182	No	Screw		0.0	Screw
183	No	Flange		0.0	Flange
184	No	Flange		0.0	Flange
185	No	Butterfly	6"	0.0	6" bfly
186	No	Flange		0.0	Flange
187	No	Flange		0.0	Flange
188	No	Gate	1"	7.0	1" Gate
189	No	Screw		2.0	Screw
190	No	Flange		0.5	Flange
191	No	Butterfly	6"	0.5	6" bfly
192	No	Flange		0.5	Flange
193	No	Gate	1"	0.5	1" Gate
194	No	Screw		0.0	Screw
195	No	Flange		0.0	Flange
196	No	Flange		0.0	Flange
197	No	Butterfly	6"	0.0	6" bfly
198	No	Screw		0.0	Screw
199	No	Flange		0.0	Flange
200	No	Ball	1/2"	0.0	0.5" Ball
201	No	Flange		0.0	Flange
202	No	Flange		0.0	Flange
203	No	Flange		0.0	Flange

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Radian ID	Location	Type	Phase	Product	Radian ID	Location	Type	Phase	Product
204	PUMP-OFF STATION #1	Conct	LL		226	PUMP-OFF STATION #1	Valve	LL	
205	PUMP-OFF STATION #1	Conct	LL		227	PUMP-OFF STATION #1	Conct	LL	
206	PUMP-OFF STATION #1	Conct	LL		228	PUMP-OFF STATION #1	Conct	LL	
207	PUMP-OFF STATION #1	Conct	LL		229	PUMP-OFF STATION #1	Conct	LL	
208	PUMP-OFF STATION #1	Conct	LL		230	PUMP-OFF STATION #1	Valve	LL	
209	PUMP-OFF STATION #1	Conct	LL		231	PUMP-OFF STATION #1	Conct	LL	
210	PUMP-OFF STATION #1	OEL	LL		232	PUMP-OFF STATION #1	Conct	LL	
211	PUMP-OFF STATION #1	Valve	LL		233	PUMP-OFF STATION #1	Conct	LL	
212	PUMP-OFF STATION #1	Conct	LL		234	PUMP-OFF STATION #1	Conct	LL	
213	PUMP-OFF STATION #1	Conct	LL		235	PUMP-OFF STATION #1	Conct	LL	
214	PUMP-OFF STATION #1	Conct	LL		236	PUMP-OFF STATION #1	Conct	LL	
215	PUMP-OFF STATION #1	Conct	LL		237	PUMP-OFF STATION #1	Conct	LL	
216	PUMP-OFF STATION #1	Conct	LL		238	PUMP-OFF STATION #1	Conct	LL	
217	PUMP-OFF STATION #1	Valve	LL		239	PUMP-OFF STATION #1	Conct	LL	
218	PUMP-OFF STATION #1	Conct	LL		240	PUMP-OFF STATION #1	Conct	LL	
219	PUMP-OFF STATION #1	Conct	LL		241	PUMP-OFF STATION #1	Conct	LL	
220	PUMP-OFF STATION #1	Conct	LL		242	PUMP-OFF STATION #1	Conct	LL	
221	PUMP-OFF STATION #1	Valve	LL		243	PUMP-OFF STATION #1	Conct	LL	
222	PUMP-OFF STATION #1	Conct	LL		244	PUMP-OFF STATION #1	Conct	LL	
223	PUMP-OFF STATION #1	Conct	LL		245	PUMP-OFF STATION #1	Conct	LL	
224	PUMP-OFF STATION #1	Conct	LL		246	PUMP-OFF STATION #1	Conct	LL	
225	PUMP-OFF STATION #1	Conct	LL		247	PUMP-OFF STATION #1	Conct	LL	

Radian ID	Load	Subtype	Size	Screening Value	Comments	Radian ID	Load	Subtype	Size	Screening Value	Comments
204	No	Flange		0.0	Flange	226	No	Ball	6"	0	6" Ball
205	No	Screw		0.5	Screw	227	No	Flange		0	Flange
206	No	Screw		0.0	Screw	228	No	Flange		0	Flange
207	No	Screw		0.0	Screw	229	No	Flange		0	Flange
208	No	Screw		0.0	Screw	230	No	Ball	1/2"	0	0.5" Ball
209	No	Screw		0.0	Screw	231	No	Tubing		0	Tubing
210	No	Screw		5.0	Screw	232	No	Tubing		0	Tubing
211	No	Ball	6"	0.0	6" Ball	233	No	Screw		0	Screw
212	No	Flange		0.0	Flange	234	No	Screw		0	Screw
213	No	Flange		0.0	Flange	235	No	Tubing		0	Tubing
214	No	Screw		0.0	Screw	236	No	Tubing		0	Tubing
215	No	Screw		0.0	Screw	237	No	Tubing		0	Tubing
216	No	Screw		0.0	Screw	238	No	Screw		0	Screw
217	No	Ball	1/2"	0.0	0.5" Ball	239	No	Screw		0	Screw
218	No	Flange		0.0	Flange	240	No	Flange		0	Flange
219	No	Flange		0.0	Flange	241	No	Tubing		0	Tubing
220	No	Flange		0.0	Flange	242	No	Tubing		0	Tubing
221	No	Ball	6"	0.0	6" Ball	243	No	Screw		0	Screw
222	No	Flange		0.0	Flange	244	No	Screw		0	Screw
223	No	Flange		0.0	Flange	245	No	Flange		0	Flange
224	No	Flange		0.0	Flange	246	No	Flange		0	Flange
225	No	Flange		1.0	Flange	247	No	Flange		0	Flange

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Radian ID	Location	Type	Phase	Product
248	PUMP-OFF STATION #1	Conct	LL	
249	PUMP-OFF STATION #1	Conct	LL	
250	PUMP-OFF STATION #1	Conct	LL	
251	PUMP-OFF STATION #1	Conct	LL	
252	PUMP-OFF STATION #1	Conct	LL	
253	PUMP-OFF STATION #1	Conct	LL	
254	PUMP-OFF STATION #1	Conct	LL	
255	PUMP-OFF STATION #1	Conct	LL	
256	PUMP-OFF STATION #1	Valve	LL	
257	PUMP-OFF STATION #1	Conct	LL	
258	PUMP-OFF STATION #1	Conct	LL	
259	PUMP-OFF STATION #1	Conct	LL	
260	PUMP-OFF STATION #1	Valve	LL	
261	PUMP-OFF STATION #1	Conct	LL	
262	PUMP-OFF STATION #1	Conct	LL	
263	PUMP-OFF STATION #1	Pump	LL	
264	ADD. UNLOADING AREA	Conct	LL	Additive
265	ADD. UNLOADING AREA	Conct	LL	Additive
266	ADD. UNLOADING AREA	Valve	LL	Additive
267	ADD. UNLOADING AREA	Conct	LL	Additive
268	ADD. UNLOADING AREA	Conct	LL	Additive
269	ADD. UNLOADING AREA	Conct	LL	Additive

Radian ID	Load	Subtype	Size	Screening Value	Comments
248	No	Flange		0	Flange
249	No	Flange		0	Flange
250	No	Flange		0	Flange
251	No	Screw		0	Screw
252	No	Flange		0	Flange
253	No	Flange		0	Flange
254	No	Flange		0	Flange
255	No	Tubing		0	Tubing
256	No	Ball	1/2"	0	0.5" Ball
257	No	Screw		0	Screw
258	No	Screw		0	Screw
259	No	Flange		0	Flange
260	No	Ball	6"	0	6" Ball
261	No	Flange		0	Flange
262	No	Screw		0	Screw
263	No			0	
264	No	Flange		0	Flange
265	No	Flange		0	Flange
266	No	Flange		0	Flange
267	No	Ball	3"	0	3" Ball
268	No	Flange		0	Flange
269	No	Screw		0	Screw

Radian ID	Location	Type	Phase	Product
270	PUMP-OFF STATION #2	Conct	LL	
271	PUMP-OFF STATION #2	Valve	LL	
272	PUMP-OFF STATION #2	Conct	LL	
273	PUMP-OFF STATION #2	Conct	LL	
274	PUMP-OFF STATION #2	Conct	LL	
275	PUMP-OFF STATION #2	Conct	LL	
276	PUMP-OFF STATION #2	Conct	LL	
277	PUMP-OFF STATION #2	Conct	LL	
278	PUMP-OFF STATION #2	Conct	LL	
279	PUMP-OFF STATION #2	Conct	LL	
280	PUMP-OFF STATION #2	Valve	LL	
281	PUMP-OFF STATION #2	Conct	LL	
282	PUMP-OFF STATION #2	Conct	LL	
283	PUMP-OFF STATION #2	Conct	LL	
284	PUMP-OFF STATION #2	Valve	LL	
285	PUMP-OFF STATION #2	Conct	LL	
286	PUMP-OFF STATION #2	Conct	LL	
287	PUMP-OFF STATION #2	Conct	LL	
288	PUMP-OFF STATION #2	Conct	LL	
289	PUMP-OFF STATION #2	Valve	LL	
290	PUMP-OFF STATION #2	Conct	LL	
291	PUMP-OFF STATION #2	Conct	LL	

Radian ID	Load	Subtype	Size	Screening Value	Comments
270	No	Flange		0.0	Flange
271	No	Ball	1/2"	0.0	0.5" Ball
272	No	Screw		0.0	Screw
273	No	Screw		0.0	Screw
274	No	Screw		0.0	Screw
275	No	Union		0.0	Union
276	No	Screw		0.0	Screw
277	No	Screw		0.0	Screw
278	No	Screw		0.0	Screw
279	No	Screw		0.0	Screw
280	No	Ball	1/2"	0.0	0.5" Ball
281	No	Flange		0.0	Flange
282	No	Flange		4.0	Flange
283	No	Flange		0.0	Flange
284	No	Ball	3"	12.0	3" Ball
285	No	Flange		0.0	Flange
286	No	Flange		0.0	Flange
287	No	Flange		0.0	Flange
288	No	Flange		0.0	Flange
289	No	Ball	4"	94.0	4" Ball
290	No	Flange		0.0	Flange
291	No	Flange		0.0	Flange

Radian ID	Location	Type	Phase	Product
292	PUMP-OFF STATION #2	Conct	LL	
293	PUMP-OFF STATION #2	Valve	LL	
294	PUMP-OFF STATION #2	Conct	LL	
295	PUMP-OFF STATION #2	Conct	LL	
296	PUMP-OFF STATION #2	Conct	LL	
297	PUMP-OFF STATION #2	Valve	LL	
298	PUMP-OFF STATION #2	Conct	LL	
299	PUMP-OFF STATION #2	Conct	LL	
300	PUMP-OFF STATION #2	Conct	LL	
301	PUMP-OFF STATION #2	Conct	LL	
302	PUMP-OFF STATION #2	Conct	LL	
303	PUMP-OFF STATION #2	Conct	LL	
304	PUMP-OFF STATION #2	Conct	LL	
305	PUMP-OFF STATION #2	Conct	LL	
306	PUMP-OFF STATION #2	Conct	LL	
307	PUMP-OFF STATION #2	Conct	LL	
308	PUMP-OFF STATION #2	Conct	LL	
309	PUMP-OFF STATION #2	Conct	LL	
310	PUMP-OFF STATION #2	Conct	LL	
311	PUMP-OFF STATION #2	Conct	LL	
312	PUMP-OFF STATION #2	Conct	LL	
313	PUMP-OFF STATION #2	Conct	LL	

Radian ID	Load	Subtype	Size	Screening Value	Comments
292	No	Flange		0.0	Flange
293	No	Ball	4"	5.0	4" Ball
294	No	Flange		4.0	Flange
295	No	Flange		0.0	Flange
296	No	Flange		0.0	Flange
297	No	Ball	1/2"	0.0	0.5" Ball
298	No	Screwed		0.0	Screw
299	No	Screwed		0.0	Screw
300	No	Screwed		0.0	Screw
301	No	Tubing		0.0	Tubing
302	No	Tubing		0.0	Tubing
303	No	Screwed		0.0	Screw
304	No	Screwed		0.0	Screw
305	No	Screwed		0.0	Screw
306	No	Tubing		0.0	Tubing
307	No	Tubing		0.0	Tubing
308	No	Screwed		0.0	Screw
309	No	Screwed		0.5	Screw
310	No	Tubing		0.0	Tubing
311	No	Tubing		0.0	Tubing
312	No	Screwed		0.0	Screw
313	No	Screwed		0.0	Screw

Radian ID	Location	Type	Phase	Product
314	PUMP-OFF STATION #2	Conct	LL	
315	PUMP-OFF STATION #2	Conct	LL	
316	PUMP-OFF STATION #2	Conct	LL	
317	PUMP-OFF STATION #2	Conct	LL	
318	PUMP-OFF STATION #2	Conct	LL	
319	PUMP-OFF STATION #2	Valve	LL	
320	PUMP-OFF STATION #2	Conct	LL	
321	PUMP-OFF STATION #2	Conct	LL	
322	PUMP-OFF STATION #2	Conct	LL	
323	PUMP-OFF STATION #2	Conct	LL	
324	PUMP-OFF STATION #2	Conct	LL	
325	PUMP-OFF STATION #2	Conct	LL	
326	PUMP-OFF STATION #2	Conct	LL	
327	PUMP-OFF STATION #2	Conct	LL	
328	PUMP-OFF STATION #2	Conct	LL	
329	PUMP-OFF STATION #2	Conct	LL	
330	PUMP-OFF STATION #2	Conct	LL	
331	PUMP-OFF STATION #2	Valve	LL	
332	PUMP-OFF STATION #2	Conct	LL	
333	PUMP-OFF STATION #2	Valve	LL	
334	PUMP-OFF STATION #2	Conct	LL	
335	PUMP-OFF STATION #2	Conct	LL	

Radian ID	Load	Subtype	Size	Screening Value	Comments
314	No	Screwed		0.0	Screw
315	No	Tubing		0.0	Tubing
316	No	Tubing		0.0	Tubing
317	No	Screwed		0.0	Screw
318	No	Screwed		0.0	Screw
319	No	Ball	1/2"	0.0	0.5" Ball
320	No	Flange		0.0	Flange
321	No	Flange		1.0	Flange
322	No	Flange		0.0	Flange
323	No	Flange		0.0	Flange
324	No	Flange		0.0	Flange
325	No	Screwed		0.0	Screw
326	No	Flange		0.0	Flange
327	No	Flange		0.0	Flange
328	No	Flange		0.0	Flange
329	No	Screwed		0.0	Screw
330	No	Tubing		0.0	Tubing
331	No	Ball	1/2"	0.0	0.5" Ball
332	No	Flange		1.0	Flange
333	No	Ball	3"	0.0	3" Ball
334	No	Flange		0.0	Flange
335	No	Screwed		19.0	Screw

Radian ID	Location	Type	Phase	Product
358	PUMP-OFF STATION #3	Conct	LL	
359	PUMP-OFF STATION #3	Valve	LL	
360	PUMP-OFF STATION #3	Conct	LL	
361	PUMP-OFF STATION #3	Conct	LL	
362	PUMP-OFF STATION #3	Conct	LL	
363	PUMP-OFF STATION #3	Conct	LL	
364	PUMP-OFF STATION #3	Valve	LL	
365	PUMP-OFF STATION #3	Conct	LL	
366	PUMP-OFF STATION #3	Conct	LL	
367	PUMP-OFF STATION #3	Conct	LL	
368	PUMP-OFF STATION #3	Conct	LL	
369	PUMP-OFF STATION #3	Conct	LL	
370	PUMP-OFF STATION #3	Conct	LL	
371	PUMP-OFF STATION #3	Valve	LL	
372	PUMP-OFF STATION #3	Conct	LL	
373	PUMP-OFF STATION #3	Conct	LL	
374	PUMP-OFF STATION #3	Conct	LL	
375	PUMP-OFF STATION #3	Conct	LL	
376	PUMP-OFF STATION #3	Conct	LL	
377	PUMP-OFF STATION #3	Conct	LL	
378	PUMP-OFF STATION #3	Conct	LL	
379	PUMP-OFF STATION #3	Conct	LL	

Radian ID	Load	Subtype	Size	Screening Value	Comments
358	No	Flange		0.5	Flange
359	No	Ball	3"	4.0	3" Ball
360	No	Flange		0.0	Flange
361	No	Flange		0.0	Flange
362	No	Flange		0.0	Flange
363	No	Flange		0.0	Flange
364	No	Ball	3"	14.0	3" Ball
365	No	Flange		0.0	Flange
366	No	Flange		0.0	Flange
367	No	Flange		0.0	Flange
368	No	Flange		0.0	Flange
369	No	Screw		0.0	Screw
370	No	Screw		0.0	Screw
371	No	Ball	1/2"	2.0	0.5" Ball
372	No	Screw		0.0	Screw
373	No	Tubing		0.0	Tubing
374	No	Tubing		0.0	Tubing
375	No	Screw		0.0	Screw
376	No	Screw		0.0	Screw
377	No	Screw		0.0	Screw
378	No	Tubing		0.0	Tubing
379	No	Tubing		0.0	Tubing

Radian ID	Location	Type	Phase	Product
336	PUMP-OFF STATION #2	Pump	LL	
337	PUMP-OFF STATION #2	DEL	LL	
338	PUMP-OFF STATION #3	Valve	LL	
339	PUMP-OFF STATION #3	Conct	LL	
340	PUMP-OFF STATION #3	Conct	LL	
341	PUMP-OFF STATION #3	Conct	LL	
342	PUMP-OFF STATION #3	Conct	LL	
343	PUMP-OFF STATION #3	Conct	LL	
344	PUMP-OFF STATION #3	Conct	LL	
345	PUMP-OFF STATION #3	Conct	LL	
346	PUMP-OFF STATION #3	Conct	LL	
347	PUMP-OFF STATION #3	Conct	LL	
348	PUMP-OFF STATION #3	Valve	LL	
349	PUMP-OFF STATION #3	Conct	LL	
350	PUMP-OFF STATION #3	Conct	LL	
351	PUMP-OFF STATION #3	Conct	LL	
352	PUMP-OFF STATION #3	Conct	LL	
353	PUMP-OFF STATION #3	Valve	LL	
354	PUMP-OFF STATION #3	Conct	LL	
355	PUMP-OFF STATION #3	Conct	LL	
356	PUMP-OFF STATION #3	Conct	LL	
357	PUMP-OFF STATION #3	Conct	LL	

Radian ID	Load	Subtype	Size	Screening Value	Comments
336	No			0.0	
337	No			4.0	
338	No	Ball	1/2"	0.0	0.5" Ball
339	No	Screw		0.0	Screw
340	No	Screw		0.0	Screw
341	No	Screw		0.0	Screw
342	No	Union		0.0	Union
343	No	Screw		0.0	Screw
344	No	Screw		0.0	Screw
345	No	Screw		0.0	Screw
346	No	Screw		0.0	Screw
347	No	Screw		0.0	Screw
348	No	Ball	1/2"	0.0	0.5" Ball
349	No	Screw		0.0	Screw
350	No	Flange		0.0	Flange
351	No	Flange		0.0	Flange
352	No	Flange		0.0	Flange
353	No	Ball	3"	0.0	3" Ball
354	No	Flange		0.0	Flange
355	No	Flange		0.0	Flange
356	No	Flange		0.0	Flange
357	No	Flange		0.0	Flange

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Radian ID	Location	Type	Phase	Product	Radian ID	Location	Type	Phase	Product
380	PUMP-OFF STATION #3	Conct	LL		402	PUMP-OFF STATION #3	Conct	LL	
381	PUMP-OFF STATION #3	Conct	LL		403	PUMP-OFF STATION #3	Conct	LL	
382	PUMP-OFF STATION #3	Conct	LL		404	PUMP-OFF STATION #3	Conct	LL	
383	PUMP-OFF STATION #3	Conct	LL		405	PUMP-OFF STATION #3	Conct	LL	
384	PUMP-OFF STATION #3	Conct	LL		406	PUMP-OFF STATION #3	Conct	LL	
385	PUMP-OFF STATION #3	Conct	LL		407	PUMP-OFF STATION #3	Valve	LL	
386	PUMP-OFF STATION #3	Conct	LL		408	PUMP-OFF STATION #3	Conct	LL	
387	PUMP-OFF STATION #3	Conct	LL		409	PUMP-OFF STATION #3	Valve	LL	
388	PUMP-OFF STATION #3	Conct	LL		410	PUMP-OFF STATION #3	Conct	LL	
389	PUMP-OFF STATION #3	Conct	LL		411	PUMP-OFF STATION #3	Conct	LL	
390	PUMP-OFF STATION #3	Conct	LL		412	PUMP-OFF STATION #3	Pump	LL	
391	PUMP-OFF STATION #3	Valve	LL		413	PUMP-OFF STATION #4	Valve	LL	
392	PUMP-OFF STATION #3	Conct	LL		414	PUMP-OFF STATION #4	Conct	LL	
393	PUMP-OFF STATION #3	Conct	LL		415	PUMP-OFF STATION #4	Valve	LL	
394	PUMP-OFF STATION #3	Conct	LL		416	PUMP-OFF STATION #4	Conct	LL	
395	PUMP-OFF STATION #3	Conct	LL		417	PUMP-OFF STATION #4	Conct	LL	
396	PUMP-OFF STATION #3	Conct	LL		418	PUMP-OFF STATION #4	Valve	LL	
397	PUMP-OFF STATION #3	Conct	LL		419	PUMP-OFF STATION #4	Conct	LL	
398	PUMP-OFF STATION #3	Conct	LL		420	PUMP-OFF STATION #4	Conct	LL	
399	PUMP-OFF STATION #3	Conct	LL		421	PUMP-OFF STATION #4	Conct	LL	
400	PUMP-OFF STATION #3	Conct	LL		422	PUMP-OFF STATION #4	Conct	LL	
401	PUMP-OFF STATION #3	Conct	LL		423	PUMP-OFF STATION #4	OEL	LL	

Radian ID	Load	Subtype	Size	Screening Value	Comments
380	No	Screwed		0	Screw
381	No	Screwed		0	Screw
382	No	Screwed		1	Screw
383	No	Tubing		0	Tubing
384	No	Tubing		0	Tubing
385	No	Screwed		0	Screw
386	No	Screwed		0	Screw
387	No	Screwed		0	Screw
388	No	Tubing		0	Tubing
389	No	Tubing		0	Tubing
390	No	Screwed		0	Screw
391	No	Ball	1/2"	0	0.5" Ball
392	No	Screwed		0	Screw
393	No	Flange		0	Flange
394	No	Flange		0	Flange
395	No	Flange		0	Flange
396	No	Flange		0	Flange
397	No	Flange		0	Flange
398	No	Flange		0	Flange
399	No	Screwed		0	Screw
400	No	Flange		0	Flange
401	No	Flange		0	Flange

Radian ID	Load	Subtype	Size	Screening Value	Comments
402	No	Flange		0	Flange
403	No	Tubing		1	Tubing
404	No	Screwed		0	Screw
405	No	Screwed		0	Screw
406	No	Screwed		0	Screw
407	No	Ball	1/2"	0	0.5" Ball
408	No	Flange		24	Flange
409	No	Ball	6"	2	6" Ball
410	No	Flange		0	Flange
411	No	Screwed		0	Screw
412	No			0	
413	No	Butterfly	3"	4	3" bfly
414	No	Flange		0	Flange
415	No	Butterfly	3"	0	3" bfly
416	No	Flange		0	Flange
417	No	Flange		0	Flange
418	No	Plug	3"	0	3" Plug
419	No	Flange		11	Flange
420	No	Screwed		0	Screw
421	No	Flange		15	Flange
422	No	Flange		0	Flange
423	No			0	

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Radian ID	Location	Type	Phase	Product
424	PUMP-OFF STATION #4	Conct	LL	
425	PUMP-OFF STATION #4	OEL	LL	
426	PUMP-OFF STATION #4	Valve	LL	
427	PUMP-OFF STATION #4	Pump	LL	
428	PUMP-OFF STATION #4	Conct	LL	
429	PUMP-OFF STATION #4	Conct	LL	
430	PUMP-OFF STATION #4	Valve	LL	
431	PUMP-OFF STATION #4	Conct	LL	
432	PUMP-OFF STATION #4	Conct	LL	
433	PUMP-OFF STATION #4	Conct	LL	
434	PUMP-OFF STATION #4	Conct	LL	
435	PUMP-OFF STATION #4	Conct	LL	
436	PUMP-OFF STATION #4	Conct	LL	
437	PUMP-OFF STATION #4	Conct	LL	
438	PUMP-OFF STATION #4	Conct	LL	
439	PUMP-OFF STATION #4	Conct	LL	
440	PUMP-OFF STATION #4	Conct	LL	
441	PUMP-OFF STATION #4	Valve	LL	
442	PUMP-OFF STATION #4	Conct	LL	
443	PUMP-OFF STATION #4	Conct	LL	
444	PUMP-OFF STATION #4	Valve	LL	
445	PUMP-OFF STATION #4	Conct	LL	

Radian ID	Load	Subtype	Size	Screening Value	Comments
424	No	Flange		0	Flange
425	No			25	
426	No	Ball	3/8"	0	3/8" Ball
427	No			0	
428	No	Flange		0	Flange
429	No	Flange		0	Flange
430	No	Butterfly	3"	0	3" bfly
431	No	Flange		0	Flange
432	No	Flange		0	Flange
433	No	Flange		0	Flange
434	No	Flange		0	Flange
435	No	Flange		0	Flange
436	No	Flange		2	Flange
437	No	Flange		10	Flange
438	No	Flange		0	Flange
439	No	Flange		0	Flange
440	No	Flange		0	Flange
441	No	Plug	3"	2	3" Plug
442	No	Flange		0	Flange
443	No	Butterfly	3"	0	3" bfly
444	No			0	
445	No	Flange		1	Flange

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Radian ID	Location	Type	Phase	Product
446	PUMP-OFF STATION #4	Conct	LL	
447	PUMP-OFF STATION #4	Conct	LL	
448	PUMP-OFF STATION #4	Valve	LL	
449	PUMP-OFF STATION #4	Conct	LL	
450	PUMP-OFF STATION #4	Conct	LL	
451	PUMP-OFF STATION #4	Valve	LL	
452	PUMP-OFF STATION #4	Conct	LL	
453	PUMP-OFF STATION #4	Conct	LL	
454	PUMP-OFF STATION #4	Conct	LL	
455	PUMP-OFF STATION #4	Conct	LL	
456	PUMP-OFF STATION #4	Conct	LL	
457	PUMP-OFF STATION #4	Conct	LL	
458	PUMP-OFF STATION #4	Conct	LL	
459	PUMP-OFF STATION #4	Conct	LL	
460	PUMP-OFF STATION #4	Conct	LL	
461	PUMP-OFF STATION #4	Conct	LL	
462	PUMP-OFF STATION #4	Conct	LL	
463	PUMP-OFF STATION #4	Conct	LL	
464	PUMP-OFF STATION #4	Valve	LL	
465	PUMP-OFF STATION #4	Conct	LL	
466	PUMP-OFF STATION #4	Conct	LL	
467	PUMP-OFF STATION #4	Conct	LL	

Radian ID	Load	Subtype	Size	Screening Value	Comments
446	No	Flange		0	Flange
447	No	Flange		0	Flange
448	No	Gate	3"	0	3" Gate
449	No	Flange		0	Flange
450	No	Screw		0	Screw
451	No	Ball	3/8"	1	3/8" Ball
452	No	Screw		0	Screw
453	No	Screw		0	Screw
454	No	Tubing		0	Tubing
455	No	Tubing		0	Tubing
456	No	Screw		0	Screw
457	No	Screw		0	Screw
458	No	Screw		0	Screw
459	No	Screw		0	Screw
460	No	Screw		0	Screw
461	No	Screw		1	Screw
462	No	Screw		0	Screw
463	No	Screw		0	Screw
464	No	Ball	3/8"	7	3/8" Ball
465	No	Screw		0	Screw
466	No	Screw		0	Screw
467	No	Tubing		0	Tubing

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Radian ID	Location	Type	Phase	Product
468	PUMP-OFF STATION #4	Conct	LL	
469	PUMP-OFF STATION #4	Conct	LL	
470	PUMP-OFF STATION #4	Conct	LL	
471	PUMP-OFF STATION #4	Conct	LL	
472	PUMP-OFF STATION #4	Conct	LL	
473	PUMP-OFF STATION #4	Conct	LL	
474	PUMP-OFF STATION #4	Conct	LL	
475	PUMP-OFF STATION #4	Conct	LL	
476	PUMP-OFF STATION #4	Conct	LL	
477	PUMP-OFF STATION #4	Valve	LL	
478	PUMP-OFF STATION #4	Conct	LL	
479	PUMP-OFF STATION #4	Conct	LL	
480	PUMP-OFF STATION #4	Valve	LL	
481	PUMP-OFF STATION #4	Conct	LL	
482	PUMP-OFF STATION #4	Conct	LL	
483	PUMP-OFF STATION #4	Conct	LL	
484	PUMP-OFF STATION #4	Conct	LL	
485	PUMP-OFF STATION #4	Conct	LL	
486	PUMP-OFF STATION #4	Conct	LL	
487	PUMP-OFF STATION #4	Conct	LL	
488	PUMP-OFF STATION #4	Conct	LL	
489	PUMP-OFF STATION #4	Conct	LL	

Radian ID	Load	Subtype	Size	Screening Value	Comments
468	No	Tubing		0	Tubing
469	No	Screwed		0	Screw
470	No	Screwed		0	Screw
471	No	Screwed		0	Screw
472	No	Screwed		0	Screw
473	No	Screwed		0	Screw
474	No	Flange		0	Flange
475	No	Flange		0	Flange
476	No	Flange		0	Flange
477	No	Butterfly	3"	0	3" bfly
478	No	Screwed		0	Screw
479	No	Screwed		0	Screw
480	No	Butterfly	3"	0	3" bfly
481	No	Screwed		0	Screw
482	No	Screwed		0	Screw
483	No	Screwed		0	Screw
484	No	Screwed		0	Screw
485	No	Screwed		0	Screw
486	No	Screwed		0	Screw
487	No	Union		0	Union
488	No	Screwed		0	Screw
489	No	Screwed		0	Screw

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Radian ID	Location	Type	Phase	Product	Load
490	PUMP-OFF STATION #4	Conct	LL		No
491	PUMP-OFF STATION #4	Conct	LL		No
492	PUMP-OFF STATION #4	Conct	LL		No
493	PUMP-OFF STATION #4	Conct	LL		No
494	PUMP-OFF STATION #4	Conct	LL		No
495	PUMP-OFF STATION #4	Conct	LL		No
496	PUMP-OFF STATION #4	Conct	LL		No
497	PUMP-OFF STATION #4	Conct	LL		No
498	PUMP-OFF STATION #4	Conct	LL		No
499	PUMP-OFF STATION #4	Conct	LL		No
500	PUMP-OFF STATION #4	Conct	LL		No
501	PUMP-OFF STATION #4	Conct	LL		No
502	PUMP-OFF STATION #4	Conct	LL		No
503	PUMP-OFF STATION #4	Conct	LL		No
504	PUMP-OFF STATION #4	Conct	LL		No
505	PUMP-OFF STATION #4	Conct	LL		No
506	PUMP-OFF STATION #4	Conct	LL		No
507	PUMP-OFF STATION #4	Conct	LL		No
508	PUMP-OFF STATION #4	Conct	LL		No
509	PUMP-OFF STATION #4	DEL	LL		No
510	PUMP ROW - LINE 699	Conct	LL	Intrfc	No
511	PUMP ROW - LINE 699	Conct	LL	Intrfc	No

Radian ID	Subtype	Size	Screening Value	Comments
490	Screwed		0	Screw
491	Screwed		0	Screw
492	Screwed		0	Screw
493	Screwed		0	Screw
494	Screwed		0	Screw
495	Screwed		0	Screw
496	Screwed		0	Screw
497	Screwed		0	Screw
498	Screwed		0	Screw
499	Screwed		0	Screw
500	Screwed		0	Screw
501	Union		0	Union
502	Screwed		0	Screw
503	Screwed		0	Screw
504	Screwed		0	Screw
505	Screwed		0	Screw
506	Screwed		0	Screw
507	Screwed		0	Screw
508	Screwed		0	Screw
509	Screwed		2	Screw
510	Screwed		0	Screw
511	Union		0	Union

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
556	PUMP ROW - LINE 699	Valve	LL	Intrfc	No	Gate	1"	0	1" Gate
557	PUMP ROW - LINE 699	Conct	LL	Intrfc	No	Screw		0	Screw
558	PUMP ROW - LINE 699	Conct	LL	Intrfc	No	Screw		0	Screw
559	PUMP ROW - LINE 699	Conct	LL	Intrfc	No	Screw		0	Screw
560	PUMP ROW - LINE 699	Conct	LL	Intrfc	No	Screw		0	Screw
561	PUMP ROW - LINE 699	Conct	LL	Intrfc	No	Union		0	Union
562	PUMP ROW - LINE 699	Conct	LL	Intrfc	No	Screw		0	Screw
563	PUMP ROW - LINE 699	Conct	LL	Intrfc	No	Screw		0	Screw
564	PUMP ROW - LINE 699	Conct	LL	Intrfc	No	Screw		0	Screw
565	PUMP ROW - LINE 699	Conct	LL	Intrfc	No	Screw		0	Screw
566	PUMP ROW - LINE 699	Conct	LL	Intrfc	No	Screw		0	Screw
567	PUMP ROW - LINE 699	Valve	LL	Intrfc	No	Screw		0	Screw
568	PUMP ROW - LINE 699	Conct	LL	Intrfc	No	Screw		0	Screw
569	PUMP ROW - LINE 699	Conct	LL	Intrfc	No	Screw		0	Screw
570	PUMP ROW - LINE 699	Conct	LL	Intrfc	No	Screw		0	Screw
571	VAR SOL - VAR #1-Ln 701	Valve	LL	Intrfc	No	Screw		0	Screw
572	VAR SOL - VAR #1-Ln 701	Conct	LL	Varsol 1	No	Screw		0	Screw
573	VAR SOL - VAR #1-Ln 701	Conct	LL	Varsol 1	No	Screw		0	Screw
574	VAR SOL - VAR #1-Ln 701	Conct	LL	Varsol 1	No	Screw		0	Screw
575	VAR SOL - VAR #1-Ln 701	Conct	LL	Varsol 1	No	Screw		0	Screw
576	VAR SOL - VAR #1-Ln 701	Conct	LL	Varsol 1	No	Screw		0	Screw
577	VAR SOL - VAR #1-Ln 701	Valve	LL	Varsol 1	No	Screw		0	Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
578	VAR SOL - VAR #1-Ln 701	Conct	LL	Varsol 1	No	Flange		0	Flange
579	VAR SOL - VAR #1-Ln 701	Conct	LL	Varsol 1	No	Flange		0	Flange
580	VAR SOL - VAR #1-Ln 701	Conct	LL	Varsol 1	No	Flange		0	Flange
581	VAR SOL - VAR #1-Ln 701	Conct	LL	Varsol 1	No	Flange		0	Flange
582	VAR SOL - VAR #1-Ln 701	Valve	LL	Varsol 1	No	Butterfly	6"	0	6" bfly
583	VAR SOL - VAR #1-Ln 701	Conct	LL	Varsol 1	No	Flange		0	Flange
584	VAR SOL - VAR #1-Ln 701	Valve	LL	Varsol 1	No	Gate	1"	6	1" Gate
585	VAR SOL - VAR #1-Ln 701	Conct	LL	Varsol 1	No	Screw		12	Screw
586	VAR SOL - VAR #1-Ln 701	Conct	LL	Varsol 1	No	Flange		0	Flange
587	VAR SOL - VAR #1-Ln 701	Pump	LL	Varsol 1	No	Flange		0	Flange
588	VAR SOL - VAR #1-Ln 701	Conct	LL	Varsol 1	No	Flange		0	Flange
589	VAR SOL - VAR #1-Ln 701	Conct	LL	Varsol 1	No	Flange		0	Flange
590	VAR SOL - VAR #1-Ln 701	Conct	LL	Varsol 1	No	Flange		0	Flange
591	VAR SOL - VAR #1-Ln 701	Valve	LL	Varsol 1	No	Butterfly	6"	0	6" bfly

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Screening Value	Size	Comments
592	PUMP ROW	Conct	LL	Varsol	1	No Flange	0		Flange
593	PUMP ROW	Conct	LL	Varsol	1	No Flange	0		Flange
594	PUMP ROW	Valve	LL	Varsol	1	No Butterfly	0	6"	bfly
595	PUMP ROW	Conct	LL	Varsol	1	No Screwed	0		Screw
596	PUMP ROW	Conct	LL	Varsol	1	No Screwed	110		Screw
597	PUMP ROW	Conct	LL	Varsol	1	No Flange	0		Flange
598	PUMP ROW	Conct	LL	Varsol	1	No Flange	0		Flange
599	PUMP ROW	Conct	LL	Varsol	1	No Screwed	0		Screw
600	PUMP ROW	Valve	LL	Varsol	1	No Gate	310	6"	Gate
601	PUMP ROW	Conct	LL	Varsol	1	No Flange	0		Flange
602	PUMP ROW	Conct	LL	Varsol	1	No Flange	0		Flange
603	PUMP ROW	Conct	LL	Varsol	1	No Screwed	0		Screw
604	PUMP ROW	Conct	LL	Varsol	1	No Screwed	0		Screw
605	PUMP ROW	Valve	LL	Varsol	1	No Gate	0	1"	Gate
606	PUMP ROW	Conct	LL	Varsol	1	No Union	80		Union
607	PUMP ROW	Conct	LL	Varsol	1	No Screwed	0		Screw
608	PUMP ROW	Conct	LL	Varsol	1	No Screwed	0		Screw
609	PUMP ROW	Conct	LL	Varsol	1	No Screwed	4		Screw
610	PUMP ROW	Conct	LL	Varsol	1	No Screwed	0		Screw
611	PUMP ROW	Conct	LL	Varsol	1	No Flange	0		Flange
612	PUMP ROW	Conct	LL	Varsol	1	No Flange	0		Flange
613	PUMP ROW	Valve	LL	Varsol	1	No Gate	0	1"	Gate
614	PUMP ROW	Conct	LL	Varsol	1	No Screwed	0		Screw
615	PUMP ROW	Conct	HL	Diesel		No Flange	0		Flange
616	PUMP ROW	Conct	HL	Diesel		No Screwed	0		Screw
617	PUMP ROW	Conct	HL	Diesel		No Screwed	0		Screw
618	PUMP ROW	Conct	HL	Diesel		No Screwed	0		Screw
619	PUMP ROW	Conct	HL	Diesel		No Union	0		Union
620	PUMP ROW	Conct	HL	Diesel		No Screwed	0		Screw
621	PUMP ROW	Conct	HL	Diesel		No Screwed	0		Screw
622	PUMP ROW	Conct	HL	Diesel		No Screwed	0		Screw
623	PUMP ROW	Conct	HL	Diesel		No Screwed	0		Screw
624	PUMP ROW	Conct	HL	Jet A		No Flange	0		Flange
625	PUMP ROW	Valve	HL	Jet A		No Gate	0	1"	Gate
626	PUMP ROW	Conct	HL	Jet A		No Screwed	0		Screw
627	PUMP ROW	Conct	HL	Jet A		No Flange	0		Flange
628	PUMP ROW	Conct	HL	Jet A		No Flange	0		Flange
629	PUMP ROW	Valve	HL	Jet A		No Butterfly	0	6"	bfly
630	PUMP ROW	Conct	HL	Jet A		No Flange	0		Flange
631	PUMP ROW	Conct	HL	Jet A		No Flange	0		Flange
632	PUMP ROW	Conct	HL	Jet A		No Flange	0		Flange
633	PUMP ROW	Conct	HL	Jet A		No Flange	0		Flange
634	PUMP ROW	Conct	HL	Jet A		No Flange	0		Flange
635	PUMP ROW	Valve	HL	Jet A		No Butterfly	0	6"	bfly
636	PUMP ROW	Conct	HL	Jet A		No Flange	26		Flange
637	PUMP ROW	Conct	HL	Jet A		No Flange	0		Flange
638	PUMP ROW	Conct	HL	Jet A		No Flange	10		Flange
639	PUMP ROW	Conct	HL	Jet A		No Screwed	10		Screw
640	PUMP ROW	Conct	HL	Jet A		No Screwed	0		Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Screening Value	Size	Comments
641	PUMP ROW	Valve	HL	Jet A	No	Gate	4	1"	Gate
642	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
643	PUMP ROW	Conct	HL	Jet A	No	Union	0		Union
644	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
645	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
646	PUMP ROW	Conct	HL	Jet A	No	Screwed	37		Screw
647	PUMP ROW	Valve	HL	Jet A	No	Ball	27	1"	Ball
648	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
649	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
650	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
651	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
652	PUMP ROW	Conct	HL	Jet A	No	Union	5		Union
653	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
654	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
655	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
656	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
657	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
658	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
659	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
660	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
661	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
662	PUMP ROW	Conct	HL	Jet A	No	Screwed	3		Screw
663	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
664	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
665	PUMP ROW	Conct	HL	Jet A	No	Union	0		Union
666	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
667	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
668	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
669	PUMP ROW	Conct	HL	Jet A	No	Screwed	2		Screw
670	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
671	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
672	PUMP ROW	Conct	HL	Jet A	No	Screwed	3		Screw
673	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
674	PUMP ROW	Valve	HL	Jet A	No	Ball	3	1"	Ball
675	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
676	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
677	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
678	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
679	PUMP ROW	Conct	HL	Jet A	No	Union	0		Union
680	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
681	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
682	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
683	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
684	PUMP ROW	Valve	HL	Jet A	No	Ball	0	1"	Ball
685	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
686	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw
687	PUMP ROW	Valve	HL	Jet A	No	Ball	0	1"	Ball
688	PUMP ROW	Conct	HL	Jet A	No	Screwed	0		Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Screening		Comments
							Size	Value	
689	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
690	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
691	PUMP ROW	Valve	HL	Jet A	No	Butterfly	6"	0	6" bfly
692	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
693	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
694	PUMP ROW	Conct	HL	Jet A	No	Flange		17	Flange
695	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
696	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
697	PUMP ROW	Valve	HL	Jet A	No	Butterfly	6"	0	6" bfly
698	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
699	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
700	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
701	PUMP ROW	Valve	HL	Jet A	No	Gate	1"	18	1" Gate
702	PUMP ROW	Pump	HL	Jet A	No			0	
703	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
704	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
705	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
706	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
707	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
708	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
709	PUMP ROW	Valve	HL	Jet A	No	Butterfly	6"	0	6" bfly
710	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
711	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
712	PUMP ROW	Valve	HL	Jet A	No	Butterfly	6"	0	6" bfly
713	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
714	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
715	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
716	PUMP ROW	Valve	HL	Jet A	No	Butterfly	6"	0	6" bfly
717	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
718	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
719	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
720	PUMP ROW	Valve	HL	Jet A	No	Ball	1"	0	1" Ball
721	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
722	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
723	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
724	PUMP ROW	Valve	HL	Jet A	No	Butterfly	6"	0	6" bfly
725	PUMP ROW	Conct	HL	Jet A	No	Flange		3	Flange
726	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
727	PUMP ROW	Valve	HL	Jet A	No	Butterfly	6"	0	6" bfly
728	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
729	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
730	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
731	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
732	PUMP ROW	Valve	HL	Jet A	No	Ball	1"	0	1" Ball
733	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
734	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
735	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
736	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw

Radian ID	Location	Type	Phase	Product	Load	Subtype	Screening		Comments
							Size	Value	
737	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
738	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
739	PUMP ROW	Valve	HL	Jet A	No	Butterfly	6"	0	6" bfly
740	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
741	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
742	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
743	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
744	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
745	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
746	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
747	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
748	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
749	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
750	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
751	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
752	PUMP ROW	Conct	HL	Jet A	No	Flange		1	Flange
753	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
754	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
755	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
756	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
757	PUMP ROW	Valve	HL	Jet A	No	Gate	1"	48	1" Gate
758	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
759	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
760	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
761	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
762	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
763	PUMP ROW	Valve	HL	Jet A	No	Gate	9"	0	9" Gate
764	PUMP ROW	Valve	HL	Jet A	No	Gate	1"	0	1" Gate
765	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
766	PUMP ROW	Conct	HL	Jet A	No	Union		0	Union
767	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
768	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
769	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
770	PUMP ROW	Conct	HL	Jet A	No	Screw		4	Screw
771	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
772	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
773	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
774	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
775	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
776	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
777	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
778	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
779	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
780	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
781	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
782	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
783	PUMP ROW	Conct	HL	Jet A	No	Union		2	Union
784	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw

Date=11MAR92
(continued)

Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
785	PUMP ROW	Valve	HL	Diesel	No	Gate	1"	0	1" Gate
786	PUMP ROW	Conct	HL	Diesel	No	Screw		0	Screw
787	PUMP ROW	Conct	HL	Diesel	No	Union		1	Union
788	PUMP ROW	Conct	HL	Diesel	No	Screw		0	Screw
789	PUMP ROW	Conct	HL	Diesel	No	Screw		0	Screw
790	PUMP ROW	Conct	HL	Diesel	No	Screw		0	Screw
791	PUMP ROW	Conct	HL	Diesel	No	Screw		0	Screw
792	PUMP ROW	Conct	HL	Diesel	No	Flange		0	Flange
793	PUMP ROW	Conct	HL	Diesel	No	Flange		0	Flange
794	PUMP ROW	Valve	HL	Diesel	No	Gate	10"	1	10" Gate
795	PUMP ROW	Conct	HL	Diesel	No	Flange		1	Flange
796	PUMP ROW	Conct	HL	Diesel	No	Flange		0	Flange
797	PUMP ROW	Conct	HL	Diesel	No	Flange		0	Flange
798	PUMP ROW	Conct	HL	Diesel	No	Flange		0	Flange
799	PUMP ROW	Conct	HL	Diesel	No	Flange		0	Flange
800	PUMP ROW	Valve	HL	Diesel	No	Butterfly	6"	0	6" bfly
801	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
802	PUMP ROW	Conct	HL	Jet A	No	Screw		1	Screw
803	PUMP ROW	Conct	HL	Jet A	No	Union		4	Union
804	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
805	PUMP ROW	Valve	HL	Jet A	No	Screw	1"	0	Screw
806	PUMP ROW	Conct	HL	Jet A	No	Screw		0	Screw
807	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
808	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
809	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
810	PUMP ROW	Valve	HL	Jet A	No	Butterfly	9"	0	9" bfly
811	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
812	PUMP ROW	Conct	HL	Jet A	No	Flange		2	Flange
813	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
814	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
815	PUMP ROW	Valve	HL	Jet A	No	Butterfly	9"	0	9" bfly
816	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
817	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
818	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
819	PUMP ROW	Conct	HL	Jet A	No	Flange		0	Flange
820	PUMP ROW	Valve	HL	Jet A	No	Butterfly	9"	0	9" bfly
821	TANK 1120	Conct	LL	Regular	No	Ball		2	4" Ball
822	TANK 1120	LA	LL	Regular	No	Flange		1	Flange
823	TANK 1120	Conct	LL	Regular	No	Screw		2	Screw
824	TANK 1120	Conct	LL	Regular	No	Screw		2	Screw
825	TANK 1120	Conct	LL	Regular	No	Screw		2	Screw
826	TANK 1120	Valve	LL	Regular	No	Screw		4	2" Ball
827	TANK 1120	OEL	LL	Regular	No	Screw		990	
828	TANK 1120	Conct	LL	Regular	No	Screw		2	Screw
829	TANK 1120	Conct	LL	Regular	No	Screw		2	Screw
830	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
831	TANK 1120	Conct	LL	Regular	No	Screw		2	1" Ball
832	TANK 1120	Valve	LL	Regular	No	Ball	1"		

Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
833	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
834	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
835	TANK 1120	Valve	LL	Regular	No	Ball	1"	0	1" Ball
836	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
837	TANK 1120	Conct	LL	Regular	No	Flange		0	Flange
838	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
839	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
840	TANK 1120	Conct	LL	Regular	No	Union		0	Union
841	TANK 1120	Conct	LL	Regular	No	Screw		1	Screw
842	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
843	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
844	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
845	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
846	TANK 1120	Conct	LL	Regular	No	Screw		1	Screw
847	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
848	TANK 1120	Conct	LL	Regular	No	Screw		1	Screw
849	TANK 1120	Conct	LL	Regular	No	Screw		1	Screw
850	TANK 1120	Conct	LL	Regular	No	Screw		1	Screw
851	TANK 1120	Conct	LL	Regular	No	Screw		2	Screw
852	TANK 1120	Valve	LL	Regular	No	Ball	1"	2	1" Ball
853	TANK 1120	Conct	LL	Regular	No	Screw		1	Screw
854	TANK 1120	Conct	LL	Regular	No	Screw		1	Screw
855	TANK 1120	Conct	LL	Regular	No	Flange		0	Flange
856	TANK 1120	Valve	LL	Regular	No	Ball	3"	0	3" Ball
857	TANK 1120	Conct	LL	Regular	No	Flange		0	Flange
858	TANK 1120	Conct	LL	Regular	No	Flange		0	Flange
859	TANK 1120	Conct	LL	Regular	No	Flange		4	Flange
860	TANK 1120	Conct	LL	Regular	No	Flange		4	Flange
861	TANK 1120	Valve	LL	Regular	No	Plug	12"	3000	12" Plug
862	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
863	TANK 1120	Valve	LL	Regular	No	Gate	1-1/2"	0	1.5" Gate
864	TANK 1120	Conct	LL	Regular	No	Screw		2	Screw
865	TANK 1120	Conct	LL	Regular	No	Screw		40	Screw
866	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
867	TANK 1120	Conct	LL	Regular	No	Union		0	Union
868	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
869	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
870	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
871	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
872	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
873	TANK 1120	Valve	LL	Regular	No	Ball	1-1/2"	0	1.5" Ball
874	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
875	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
876	TANK 1120	Conct	LL	Regular	No	Flange		0	Flange
877	TANK 1120	Conct	LL	Regular	No	Screw		0	Screw
878	TANK 1120	Conct	LL	Regular	No	Flange		0	Flange
879	TANK 1120	Conct	LL	Regular	No	Flange		0	Flange
880	TANK 1120	Valve	LL	Regular	No	Gate	6"	1	6" Gate

Radian ID	Location	Type	Phase	Product	Screening			Radian ID	Location	Type	Phase	Product	Screening		
					Value	Size	Comments						Value	Size	Comments
929	TANK 1120	Conct	LL	Regular	0		Flange	929	No	Screw		Regular	0		Screw
930	TANK 1120	Conct	LL	Regular	0		Screw	930	No	Screw		Regular	0		Screw
931	TANK 1120	Conct	LL	Regular	0		Flange	931	No	Screw		Regular	0		Screw
932	TANK 1120	Conct	LL	Regular	0		Flange	932	No	Screw		Regular	1		Screw
933	TANK 1120	Conct	LL	Regular	0		Flange	933	No	Screw		Regular	1		Screw
934	TANK 1120	Conct	LL	Regular	92	3"	Gate	934	No	Screw		Regular	0		Screw
935	TANK 1120	Conct	LL	Regular	0		Flange	935	No	Screw		Regular	24		Screw
936	TANK 1120	Conct	LL	Regular	0		Flange	936	No	Union		Regular	1500		Union
937	TANK 1120	Conct	LL	Regular	0		Thermowell	937	No	Screw		Regular	35		Screw
938	TANK 1120	Conct	LL	Regular	0		Flange	938	No	Screw		Regular	0		Screw
939	TANK 1120	Conct	LL	Regular	0		Screw	939	No	Screw		Regular	0		Screw
940	TANK 1120	Conct	LL	Regular	2		Screw	940	No	Screw		Regular	0		Screw
941	TANK 1120	Conct	LL	Regular	18	1"	Gate	941	No	Screw		Regular	0		Screw
942	TANK 1120	Conct	LL	Regular	0		Flange	942	No	Screw		Regular	0		Screw
943	TANK 1120	Conct	LL	Regular	0		2" Ball	943	No	Screw		Regular	0		Screw
944	TANK 1120	Conct	LL	Regular	0		Flange	944	No	Screw		Regular	0		Screw
945	TANK 1120	Conct	LL	Regular	22		Screw	945	No	Ball	1-1/2"	Regular	0		Screw
946	TANK 1120	Conct	LL	Regular	0		Screw	946	No	Screw		Regular	0		Screw
947	TANK 1120	Conct	LL	Regular	0		Flange	947	No	Screw		Regular	0		Screw
948	TANK 1120	Conct	LL	Regular	0	2"	Ball	948	No	Screw		Regular	18		Gauge Hatch
949	TANK 1120	Conct	LL	Regular	0		Flange	949	No	Screw		Regular	0		Gauge Hatch
950	TANK 1120	Conct	LL	Regular	0		Flange	950	No	Screw		Regular	0		Gauge Hatch
881	TANK 1120	Conct	LL	Regular	0		Flange	881	No	Screw		Regular	0		Screw
882	TANK 1120	Conct	LL	Regular	0		Screw	882	No	Screw		Regular	0		Screw
883	TANK 1120	Conct	LL	Regular	0		Flange	883	No	Screw		Regular	0		Screw
884	TANK 1120	Conct	LL	Regular	0		Flange	884	No	Screw		Regular	0		Screw
885	TANK 1120	Conct	LL	Regular	0		Flange	885	No	Screw		Regular	0		Screw
886	TANK 1120	Conct	LL	Regular	0		Flange	886	No	Screw		Regular	0		Screw
887	TANK 1120	Conct	LL	Regular	0		Flange	887	No	Screw		Regular	0		Screw
888	TANK 1120	Conct	LL	Regular	0		Flange	888	No	Screw		Regular	0		Screw
889	TANK 1120	Conct	LL	Regular	0		Flange	889	No	Screw		Regular	0		Screw
890	TANK 1120	Conct	LL	Regular	0		Flange	890	No	Screw		Regular	0		Screw
891	TANK 1120	Conct	LL	Regular	0		Flange	891	No	Screw		Regular	0		Screw
892	TANK 1120	Conct	LL	Regular	0		Flange	892	No	Screw		Regular	0		Screw
893	TANK 1120	Conct	LL	Regular	0		Flange	893	No	Screw		Regular	0		Screw
894	TANK 1120	Conct	LL	Regular	0		Flange	894	No	Screw		Regular	0		Screw
895	TANK 1120	Conct	LL	Regular	0		Flange	895	No	Screw		Regular	0		Screw
896	TANK 1120	Conct	LL	Regular	0		Flange	896	No	Screw		Regular	0		Screw
897	TANK 1120	Conct	LL	Regular	0		Flange	897	No	Screw		Regular	0		Screw
898	TANK 1120	Conct	LL	Regular	0		Flange	898	No	Screw		Regular	0		Screw
899	TANK 1120	Conct	LL	Regular	0		Flange	899	No	Screw		Regular	0		Screw
900	TANK 1120	Conct	LL	Regular	0		Flange	900	No	Screw		Regular	0		Screw
901	TANK 1120	Conct	LL	Regular	0		Flange	901	No	Screw		Regular	0		Screw
902	TANK 1120	Conct	LL	Regular	0		Flange	902	No	Screw		Regular	0		Screw
903	TANK 1120	Conct	LL	Regular	0		Flange	903	No	Screw		Regular	0		Screw
904	TANK 1120	Conct	LL	Regular	0		Flange	904	No	Screw		Regular	0		Screw
905	TANK 1120	Conct	LL	Regular	0		Flange	905	No	Screw		Regular	0		Screw
906	TANK 1120	Conct	LL	Regular	0		Flange	906	No	Screw		Regular	0		Screw
907	TANK 1120	Conct	LL	Regular	0		Flange	907	No	Screw		Regular	0		Screw
908	TANK 1120	Conct	LL	Regular	0		Flange	908	No	Screw		Regular	0		Screw
909	TANK 1120	Conct	LL	Regular	0		Flange	909	No	Screw		Regular	0		Screw
910	TANK 1120	Conct	LL	Regular	0		Flange	910	No	Screw		Regular	0		Screw
911	TANK 1120	Conct	LL	Regular	63	10"	Plug	911	No	Screw		Regular	0		Screw
912	TANK 1120	Conct	LL	Regular	40	10"	Plug	912	No	Screw		Regular	0		Screw
913	TANK 1120	Conct	LL	Regular	0		Flange	913	No	Screw		Regular	0		Screw
914	TANK 1120	Conct	LL	Regular	0		Flange	914	No	Screw		Regular	0		Screw
915	TANK 1120	Conct	LL	Regular	13	4"	Ball	915	No	Screw		Regular	0		Screw
916	TANK 1120	Conct	LL	Regular	0		Flange	916	No	Screw		Regular	0		Screw
917	TANK 1120	Conct	LL	Regular	0		Flange	917	No	Screw		Regular	0		Screw
918	TANK 1120	Conct	LL	Regular	0		Flange	918	No	Screw		Regular	0		Screw
919	TANK 1120	Conct	LL	Regular	0		Flange	919	No	Screw		Regular	0		Screw
920	TANK 1120	Conct	LL	Regular	0		Flange	920	No	Screw		Regular	0		Screw
921	TANK 1120	Conct	LL	Regular	0		Flange	921	No	Screw		Regular	0		Screw
922	TANK 1120	Conct	LL	Regular	0		Flange	922	No	Screw		Regular	0		Screw
923	TANK 1120	Conct	LL	Regular	0		Flange	923	No	Screw		Regular	0		Screw
924	TANK 1120	Conct	LL	Regular	0		Flange	924	No	Screw		Regular	0		Screw
925	TANK 1120	Conct	LL	Regular	1		Screw	925	No	Screw		Regular	0		Screw
926	TANK 1120	Conct	LL	Regular	5	1"	Gate	926	No	Screw		Regular	0		Screw
927	TANK 1120	Conct	LL	Regular	0		Screw	927	No	Screw		Regular	0		Screw
928	TANK 1120	Conct	LL	Regular	0		Screw	928	No	Screw		Regular	0		Screw

Radian ID	Location	Type	Phase	Product
951	TANK 1120	Conct	LL	Regular
952	TANK 697 -	SUP Valve	LL	Supreme
953	TANK 697 -	SUP Conct*	LL	Supreme
954	TANK 697 -	SUP Valve	LL	Supreme
955	TANK 697 -	SUP Conct*	LL	Supreme
956	TANK 697 -	SUP Valve	LL	Supreme
957	TANK 697 -	SUP Valve	LL	Supreme
958	TANK 697 -	SUP Conct*	LL	Supreme
959	TANK 697 -	SUP Valve	LL	Supreme
960	TANK 697 -	SUP Conct*	LL	Supreme
961	TANK 697 -	SUP Conct*	LL	Supreme
962	TANK 697 -	SUP Valve	LL	Supreme
963	TANK 697 -	SUP Valve	LL	Supreme
964	TANK 697 -	SUP Valve	LL	Supreme
965	TANK 697 -	SUP Conct*	LL	Supreme
966	TANK 697 -	SUP LA	LL	Supreme
967	TANK 697 -	SUP LA	LL	Supreme
968	TANK 697 -	SUP Conct*	LL	Supreme
969	TANK 697 -	SUP Conct*	LL	Supreme
970	TANK 697 -	SUP Valve	LL	Supreme
971	TANK 697 -	SUP Valve	LL	Supreme
972	TANK 697 -	SUP OEL	LL	Supreme

Radian ID	Load	Subtype	Size	Screening Value	Comments
951	No	Screwed		0	Screw
952	No	Gate	10"	2000	10" Gate
953	No	Screwed		0	Screw
954	No	Gate	4"	200	4" Gate
955	No	Screwed		0	Screw
956	No	Ball	1"	0	1" Ball
957	No	Plug	4"	0	4" Plug
958	No	Flange		0	Flange
959	No	Ball	1-1/2"	0	1.5" Ball
960	No	Screwed		50	Screw
961	No	Flange		7	Flange
962	No	Gate	4"	13	4" Gate
963	No	Plug	10"	7	10" Plug
964	No	Gate	1-1/2"	32	1.5" Gate
965	No	Screwed		12	Screw
966	No	Ball	1-1/2"	12	1.5" Ball
967	No	Ball	2"	0	2" Ball
968	No	Flange		0	Flange
969	No	Screwed		11	Screw
970	No	Plug	3"	0	3" Plug
971	No	Ball	1"	0	1" Ball
972	No			0	Tank Drain

Radian ID	Location	Type	Phase	Product
973	LOADING PLATFORM 1	Conct*	LL	PremUL
974	LOADING PLATFORM 1	Conct*	LL	PremUL
975	LOADING PLATFORM 1	Valve	LL	PremUL
976	LOADING PLATFORM 1	Valve	LL	PremUL
977	LOADING PLATFORM 1	Valve	LL	PremUL
978	LOADING PLATFORM 1	Conct*	LL	PremUL
979	LOADING PLATFORM 1	Conct*	LL	PremUL
980	LOADING PLATFORM 1	Conct*	LL	PremUL
981	LOADING PLATFORM 1	Valve	LL	PremUL
982	LOADING PLATFORM 1	Valve	LL	PremUL
983	LOADING PLATFORM 1	Conct*	LL	PremUL
984	LOADING PLATFORM 1	Conct*	LL	PremUL
985	LOADING PLATFORM 1	Conct*	LL	PremUL
986	LOADING PLATFORM 1	Conct*	LL	PremUL
987	LOADING PLATFORM 1	Valve	LL	PremUL
988	LOADING PLATFORM 1	Valve	LL	PremUL
989	LOADING PLATFORM 1	Conct*	LL	PremUL
990	LOADING PLATFORM 1	Valve	LL	PremUL
991	LOADING PLATFORM 1	Valve	LL	MidUL
992	LOADING PLATFORM 1	Valve	LL	MidUL
993	LOADING PLATFORM 1	Conct*	LL	Reg

Radian ID	Load	Subtype	Size	Screening Value	Comments
973	Yes	Flange		0	Flange
974	Yes	Tubing		15	Tubing
975	Yes			2	
976	Yes			0	
977	Yes			0	
978	Yes	Tubing		0	Tubing
979	Yes	Tubing		0	Tubing
980	Yes	Screwed		0	Screw
981	No	Butterfly	3"	0	3" bfly
982	No	Gate	1"	0	1" Gate
983	No	Flange		0	Flange
984	No	Tubing		0	Tubing
985	No	Screwed		0	Screw
986	No	Screwed		0	Screw
987	No	Gate	1"	0	1" Gate
988	No	Gate	1"	0	1" Gate
989	No	Screwed		0	Screw
990	No	Butterfly	3"	0	3" bfly
991	No	Ball	1/2"	2	0.5" Ball
992	No	Gate	1"	0	1" Gate
993	No	Flange		0	Flange

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Radian ID	Location	Type	Phase	Product	Load
994	LOADING PLATFORM 1	Conct*	LL	Reg	No
995	LOADING PLATFORM 1	Conct*	LL	Reg	No
996	LOADING PLATFORM 1	Conct*	LL	Reg	No
997	LOADING PLATFORM 1	Conct*	LL	Reg	No
998	LOADING PLATFORM 1	Valve	LL	Reg	No
999	LOADING PLATFORM 1	Valve	LL	Reg	No
1000	LOADING PLATFORM 1	Conct*	LL	Reg	No
1001	LOADING PLATFORM 1	Conct*	LL	Reg	No
1002	LOADING PLATFORM 1	Conct*	LL	Reg	No
1003	LOADING PLATFORM 1	Valve	LL	Reg	No
1004	LOADING PLATFORM 1	Valve	LL	Reg	No
1005	LOADING PLATFORM 1	Conct*	LL	SupULAdd	No
1006	LOADING PLATFORM 1	Conct*	LL	SupULAdd	No
1007	LOADING PLATFORM 1	Conct*	LL	SupULAdd	No
1008	LOADING PLATFORM 1	Conct*	LL	SupULAdd	No
1009	LOADING PLATFORM 1	Conct*	LL	SupULAdd	No
1010	LOADING PLATFORM 1	Conct*	LL	SupULAdd	No
1011	LOADING PLATFORM 1	Conct*	LL	SupULAdd	No
1012	LOADING PLATFORM 1	Conct*	LL	+UL Add	No
1013	LOADING PLATFORM 1	Valve	LL	+UL Add	No
1014	LOADING PLATFORM 1	Valve	LL	+UL Add	No
1015	LOADING PLATFORM 1	Valve	LL	+UL Add	No

Radian ID	Subtype	Size	Screening Value	Comments
994	Tubing		0	Tubing
995	Tubing		0	Tubing
996	Tubing		0	Tubing
997	Tubing		0	Tubing
998	Gate	1"	0	1" Gate
999	Gate	1/2"	0	0.5" Gate
1000	Flange		0	Flange
1001	Tubing		0	Tubing
1002	Tubing		0	Tubing
1003	Butterfly	3"	0	3" bfly
1004	Gate	1"	0	1" Gate
1005	Tubing		0	Tubing
1006	Tubing		0	Tubing
1007	Tubing		0	Tubing
1008	Tubing		0	Tubing
1009	Screw		0	Screw
1010	Tubing		0	Tubing
1011	Screw		0	Screw
1012	Tubing		0	Tubing
1013	Ball	1/2"	0	0.5" Ball
1014	Ball	1/2"	0	0.5" Ball
1015	Ball	1/2"	0	0.5" Ball

Radian ID	Location	Type	Phase	Product	Load
1016	LOADING PLATFORM 1	Valve	LL	+UL Add	No
1017	LOADING PLATFORM 1	Valve	LL	+UL Add	No
1018	LOADING PLATFORM 1	Valve	LL	+UL Add	No
1019	LOADING PLATFORM 1	Valve	LL	+UL Add	No
1020	LOADING PLATFORM 1	Conct*	LL	+UL Add	No
1021	LOADING PLATFORM 1	Conct*	LL	+UL Add	No
1022	LOADING PLATFORM 1	Conct*	LL	+UL Add	No
1023	LOADING PLATFORM 1	Conct*	LL	+UL Add	No
1024	LOADING PLATFORM 1	Conct*	LL	+UL Add	No
1025	LOADING PLATFORM 1	Conct*	LL	+UL Add	No
1026	LOADING PLATFORM 1	Valve	LL	RegULAdd	No
1027	LOADING PLATFORM 1	Valve	LL	RegULAdd	No
1028	LOADING PLATFORM 1	Valve	LL	RegULAdd	No
1029	LOADING PLATFORM 1	Conct*	LL	RegULAdd	No
1030	LOADING PLATFORM 1	Conct*	LL	RegULAdd	No
1031	LOADING PLATFORM 1	Conct*	LL	RegULAdd	No
1032	LOADING PLATFORM 1	Conct*	LL	RegULAdd	No
1033	LOADING PLATFORM 1	Conct*	LL	RegULAdd	No
1034	LOADING PLATFORM 1	Conct*	LL	Supreme	No
1035	LOADING PLATFORM 1	Valve	LL	Supreme	No
1036	LOADING PLATFORM 1	Valve	LL	Supreme	No
1037	LOADING PLATFORM 1	Valve	LL	Supreme	No

Radian ID	Subtype	Size	Screening Value	Comments
1016	Ball	1/2"	0	0.5" Ball
1017	Ball	1/2"	0	0.5" Ball
1018	Ball	1/2"	0	0.5" Ball
1019	Ball	1/2"	0	0.5" Ball
1020	Tubing		0	Tubing
1021	Tubing		0	Tubing
1022	Tubing		0	Tubing
1023	Screw		0	Screw
1024	Tubing		0	Tubing
1025	Screw		0	Screw
1026	Ball	1/2"	0	0.5" Ball
1027	Ball	1/2"	0	0.5" Ball
1028	Ball	1/2"	0	0.5" Ball
1029	Tubing		0	Tubing
1030	Tubing		0	Tubing
1031	Tubing		0	Tubing
1032	Tubing		0	Tubing
1033	Screw		0	Screw
1034	Flange		0	Flange
1035	Butterfly	3"	0	3" bfly
1036	Butterfly	3"	0	3" bfly
1037	Butterfly	3"	0	3" bfly

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Radian ID	Location	Type	Phase	Product	Load
1038	LOADING PLATFORM 1	Conct*	LL	Supreme	No
1039	LOADING PLATFORM 1	Valve	LL	Supreme	No
1040	LOADING PLATFORM 1	Conct*	LL	Supreme	No
1041	LOADING PLATFORM 1	Conct*	LL	UL	No
1042	LOADING PLATFORM 1	Conct*	LL	UL	No
1043	LOADING PLATFORM 1	Valve	LL	Plus UL	No
1044	LOADING PLATFORM 1	Conct*	LL	Plus UL	No
1045	LOADING PLATFORM 1	LA	LL	Supreme	No
1046	LOADING PLATFORM 1	LA	LL	RegUL	Yes
1047	LOADING PLATFORM 1	LA	LL	MidUL	Yes
1048	LOADING PLATFORM 1	Conct*	LL	MidUL	Yes
1049	LOADING PLATFORM 1	Conct	Gas	VaporRec	Yes
1050	LOADING PLATFORM 1	Conct	Gas	VaporRec	Yes
1051	LOADING PLATFORM 1	Conct	Gas	VaporRec	Yes
1052	LOADING PLATFORM 1	Conct	Gas	VaporRec	Yes
1053	LOADING PLATFORM 1	Conct	Gas	VaporRec	Yes
1054	LOADING PLATFORM 1	Conct	Gas	VaporRec	Yes
1055	LOADING PLATFORM 1	LA	Gas	VaporRec	No
1056	LOADING PLATFORM 1	Conct	Gas	VaporRec	No
1057	LOADING PLATFORM 1	Conct	Gas	VaporRec	No
1058	LOADING PLATFORM 1	Conct	Gas	VaporRec	No

Radian ID	Subtype	Size	Screening Value	Comments
1038	Screwed		0	Screw
1039	Butterfly	3"	0	3" bfly - loading arm
1040	Flange		5	Flange - loading arm
1041	Flange		0	Flange - loading arm
1042	Flange		0	Flange - loading arm
1043	Butterfly	3"	11	3" bfly
1044	Flange		8	Flange - loading arm
1045			10	
1046			10	
1047			0	
1048	Flange		0	Flange
1049	Screwed		0	Screw
1050	Screwed		0	Screw
1051	Flange		0	Flange
1052	Flange		0	Flange
1053	Flange		0	Flange
1054	Flange		130	Flange
1055	Check		890	Check Valve
1056	Clamp		4	Hose Clamp
1057	Clamp		0	Hose Clamp
1058	Screwed		0	Screw

Radian ID	Location	Type	Phase	Product	Load
1059	LOADING PLATFORM 1	Conct	Gas	VaporRec	No
1060	LOADING PLATFORM 1	Conct	Gas	VaporRec	No
1063	LOADING PLATFORM 1	Conct	Gas	VaporRec	No
1064	LOADING PLATFORM 1	Conct	Gas	VaporRec	No
1065	LOADING PLATFORM 1	Conct	Gas	VaporRec	No
1066	LOADING PLATFORM 1	Conct	Gas	VaporRec	No
1067	LOADING PLATFORM 1	Conct	Gas	VaporRec	No
1068	LOADING PLATFORM 1	Conct	Gas	VaporRec	No
1069	LOADING PLATFORM 1	Valve	LL	VaporRec	No
1070	LOADING PLATFORM 2	Conct*	LL	PremUL	No
1071	LOADING PLATFORM 2	Conct*	LL	PremUL	No
1072	LOADING PLATFORM 2	Conct*	LL	PremUL	No
1073	LOADING PLATFORM 2	Conct*	LL	PremUL	No
1074	LOADING PLATFORM 2	Conct*	LL	PremUL	No
1075	LOADING PLATFORM 2	Conct*	LL	PremUL	No
1076	LOADING PLATFORM 2	Conct*	LL	PremUL	No
1077	LOADING PLATFORM 2	Valve	LL	PremUL	No
1078	LOADING PLATFORM 2	Valve	LL	PremUL	No
1079	LOADING PLATFORM 2	Valve	LL	PremUL	No
1081	LOADING PLATFORM 2	Conct*	LL	PremUL	No
1082	LOADING PLATFORM 2	Valve	LL	PremUL	No
1083	LOADING PLATFORM 2	Valve	LL	PremUL	No

Radian ID	Subtype	Size	Screening Value	Comments
1059	Screwed		0	Screw
1060	Screwed		0	Screw
1063	Flange		0	Flange
1064	Flange		0	Flange
1065	Flange		0	Flange
1066	Screwed		0	Screw
1067	Screwed		11000	Screw
1068	Flange		78	Flange
1069	Butterfly	3"	0	3" bfly
1070	Flange		0	Flange
1071	Tubing		0	Tubing
1072	Tubing		0	Tubing
1073	Tubing		0	Tubing
1074	Tubing		0	Tubing
1075	Tubing		0	Tubing
1076	Screwed		0	Screw
1077	Gate	3/8"	0	3/8" Gate
1078	Gate	1/2"	0	1/2" Gate
1079	Gate	1/2"	0	1/2" Gate
1081	Tubing		0	Tubing
1082	Butterfly	3"	0	3" bfly
1083	Gate	1"	0	1" Gate

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Radian ID	Location	Type	Phase	Product	Load
1084	LOADING PLATFORM 2	Conct*	LL	MidUL	No
1085	LOADING PLATFORM 2	Conct*	LL	MidUL	No
1086	LOADING PLATFORM 2	Conct*	LL	MidUL	No
1087	LOADING PLATFORM 2	Conct*	LL	MidUL	No
1088	LOADING PLATFORM 2	Valve	LL	MidUL	No
1089	LOADING PLATFORM 2	Valve	LL	MidUL	No
1090	LOADING PLATFORM 2	Valve	LL	MidUL	No
1091	LOADING PLATFORM 2	Valve	LL	MidUL	No
1092	LOADING PLATFORM 2	Conct*	LL	MidUL	No
1093	LOADING PLATFORM 2	Valve	LL	MidUL	No
1094	LOADING PLATFORM 2	Valve	LL	MidUL	No
1095	LOADING PLATFORM 2	Conct*	LL	MidUL	No
1096	LOADING PLATFORM 2	Conct*	LL	MidUL	No
1097	LOADING PLATFORM 2	Valve	LL	MidUL	No
1098	LOADING PLATFORM 2	Valve	LL	MidUL	No
1099	LOADING PLATFORM 2	Conct*	LL	RegUL	No
1100	LOADING PLATFORM 2	Conct*	LL	RegUL	No
1101	LOADING PLATFORM 2	Valve	LL	RegUL	No
1102	LOADING PLATFORM 2	Valve	LL	RegUL	No
1103	LOADING PLATFORM 2	Valve	LL	RegUL	No
1104	LOADING PLATFORM 2	Conct*	LL	RegUL	No
1105	LOADING PLATFORM 2	Conct*	LL	RegUL	No

Radian ID	Subtype	Size	Screening Value	Comments
1084	Screwed		0	Screw
1085	Tubing		0	Tubing
1086	Tubing		0	Tubing
1087	Tubing		0	Tubing
1088	Diaphragm	3/8"	0	3/8" diaphragm
1089	Gate	1"	0	1" Gate
1090	Gate	1"	0	1" Gate
1091	Flange		0	Flange
1092	Ball	1/2"	0	1/2" Ball
1093	Ball	1/2"	0	1/2" Ball
1094	Tubing		0	Tubing
1095	Tubing		0	Tubing
1096	Screwed		0	Screw
1097	Gate	1"	0	1" Gate
1098	Butterfly	3"	0	3" bfly
1099	Tubing		0	Tubing
1100	Tubing		0	Tubing
1101	Ball	1/2"	0	1/2" Ball
1102	Butterfly	3"	0	3" bfly
1103	Gate	1"	0	1" Gate
1104	Union		0	Union
1105	Tubing		0	Tubing

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Radian ID	Location	Type	Phase	Product	Load
1106	LOADING PLATFORM 2	Conct*	LL	RegUL	No
1107	LOADING PLATFORM 2	Conct*	LL	RegUL	No
1108	LOADING PLATFORM 2	Conct*	LL	RegUL	No
1109	LOADING PLATFORM 2	Valve	LL	RegUL	No
1110	LOADING PLATFORM 2	Valve	LL	RegUL	No
1111	LOADING PLATFORM 2	Valve	LL	RegUL	No
1112	LOADING PLATFORM 2	Valve	LL	SupAdd	No
1113	LOADING PLATFORM 2	Valve	LL	SupAdd	No
1114	LOADING PLATFORM 2	Valve	LL	SupAdd	No
1115	LOADING PLATFORM 2	Conct*	LL	SupAdd	No
1116	LOADING PLATFORM 2	Conct*	LL	SupAdd	No
1117	LOADING PLATFORM 2	Conct*	LL	SupAdd	No
1118	LOADING PLATFORM 2	Conct*	LL	SupAdd	No
1119	LOADING PLATFORM 2	Conct*	LL	SupAdd	No
1120	LOADING PLATFORM 2	Conct*	LL	PlusAdd	No
1121	LOADING PLATFORM 2	Valve	LL	PlusAdd	No
1122	LOADING PLATFORM 2	Valve	LL	PlusAdd	No
1123	LOADING PLATFORM 2	Valve	LL	PlusAdd	No
1124	LOADING PLATFORM 2	Conct*	LL	PlusAdd	No
1125	LOADING PLATFORM 2	Conct*	LL	PlusAdd	No
1126	LOADING PLATFORM 2	Conct*	LL	PlusAdd	No
1127	LOADING PLATFORM 2	Conct*	LL	PlusAdd	No

Radian ID	Subtype	Size	Screening Value	Comments
1106	Tubing		0	Tubing
1107	Tubing		0	Tubing
1108	Screwed		0	Screw
1109	Gate	1"	0	1" Gate
1110	Gate	1"	25	1" Gate
1111	Diaphragm	1/2"	0	1/2" Diaphragm
1112	Ball	3/8"	0	3/8" Ball
1113	Ball	3/8"	0	3/8" Ball
1114	Ball	3/8"	0	3/8" Ball
1115	Screwed		0	Screw
1116	Tubing		0	Tubing
1117	Tubing		0	Tubing
1118	Tubing		0	Tubing
1119	Tubing		0	Tubing
1120	Screwed		0	Screw
1121	Ball	3/8"	0	3/8" Ball
1122	Ball	3/8"	0	3/8" Ball
1123	Ball	3/8"	0	3/8" Ball
1124	Screwed		0	Screw
1125	Screwed		0	Screw
1126	Tubing		0	Tubing
1127	Screwed		0	Screw

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Radian ID	Location	Type	Phase	Product	Load
1128	LOADING PLATFORM 2	Conct*	LL	PlusAdd	No
1129	LOADING PLATFORM 2	Conct*	LL	PlusAdd	No
1130	LOADING PLATFORM 2	Conct*	LL	RegAdd	No
1131	LOADING PLATFORM 2	Valve	LL	RegAdd	No
1132	LOADING PLATFORM 2	Valve	LL	RegAdd	No
1133	LOADING PLATFORM 2	Valve	LL	RegAdd	No
1134	LOADING PLATFORM 2	Conct*	LL	RegAdd	No
1135	LOADING PLATFORM 2	Conct*	LL	RegAdd	No
1136	LOADING PLATFORM 2	Conct*	LL	RegAdd	No
1137	LOADING PLATFORM 2	Conct*	LL	RegAdd	No
1138	LOADING PLATFORM 2	Conct*	LL	RegAdd	No
1139	LOADING PLATFORM 2	Conct*	LL	RegAdd	No
1140	LOADING PLATFORM 2	LA	LL	Reg	No
1141	LOADING PLATFORM 2	LA	LL	Plus	No
1142	LOADING PLATFORM 2	LA	LL	Supreme	No
1143	LOADING PLATFORM 2	Conct*	LL	Reg	No
1144	LOADING PLATFORM 2	Valve	LL	Reg	No
1145	LOADING PLATFORM 2	Valve	LL	Supreme	No
1146	LOADING PLATFORM 2	Conct*	LL	Plus	No
1147	LOADING PLATFORM 2	Valve	LL		No
1148	LOADING PLATFORM 2	Conct*	LL		No
1149	LOADING PLATFORM 2	Valve	LL		No

Radian ID	Subtype	Size	Screening Value	Comments
1128	Tubing		0.0	Tubing
1129	Screwed		0.0	Screw
1130	Screwed		0.0	Screw
1131	Ball	3/8"	0.0	3/8" Ball
1132	Ball	3/8"	0.0	3/8" Ball
1133	Ball	3/8"	0.0	3/8" Ball
1134	Tubing		0.0	Tubing
1135	Tubing		0.0	Tubing
1136	Tubing		0.0	Tubing
1137	Screwed		0.0	Screw
1138	Screwed		0.0	Screw
1139	Flange		0.0	Flange
1140	Butterfly	3"	0.0	3" bfly
1141			0.0	
1142			0.0	
1143	Flange		0.0	Flange
1144	Butterfly	3"	0.0	3" bfly
1145	Butterfly	3"	0.0	3" bfly
1146	Screwed		0.0	Screw
1147	Butterfly	3"	0.0	3" bfly
1148	Flange		0.0	Flange
1149	Butterfly	3"	0.0	3" bfly

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Radian ID	Location	Type	Phase	Product	Load
1150	LOADING PLATFORM 2	LA	LL		Yes
1151	LOADING PLATFORM 2	Conct*	LL		Yes
1152	LOADING PLATFORM 2	Conct*	LL		Yes
1153	LOADING PLATFORM 2	Valve	LL		Yes
1154	LOADING PLATFORM 2	Conct*	LL		Yes
1155	LOADING PLATFORM 2	Valve	LL		Yes
1156	LOADING PLATFORM 2	LA	Gas		Yes
1157	LOADING PLATFORM 2	Conct*	Gas		Yes
1158	LOADING PLATFORM 2	Conct*	Gas		Yes
1159	LOADING PLATFORM 2	Conct*	Gas		Yes
1160	LOADING PLATFORM 2	Conct*	Gas		Yes
1161	LOADING PLATFORM 2	Conct*	Gas		Yes
1162	LOADING PLATFORM 2	Conct*	Gas		Yes
1163	LOADING PLATFORM 2	Conct*	Gas		Yes
1164	LOADING PLATFORM 2	Conct*	Gas		Yes
1165	LOADING PLATFORM 2	Conct*	Gas		Yes
1166	LOADING PLATFORM 2	Conct*	Gas		Yes
1167	LOADING PLATFORM 2	Conct*	Gas		Yes
1168	LOADING PLATFORM 2	Conct*	Gas		Yes
1169	LOADING PLATFORM 2	LA	Gas		No
1170	LOADING PLATFORM 3	Conct*	LL		No
1171	LOADING PLATFORM 3	Conct*	LL	Premium	No

Radian ID	Subtype	Size	Screening Value	Comments
1150			3.0	
1151	Flange		7.0	Flange
1152	Screwed		0.0	Screw
1153	Butterfly	3"	0.0	3" bfly
1154	Flange		0.0	Flange
1155	Ball	3/8"	0.0	3/8" Ball
1156	Check		0.0	Check
1157	Hose		0.0	Hose
1158	Screwed		0.0	Screw
1159	Screwed		0.0	Screw
1160	Screwed		0.0	Screw
1161	Screwed		0.0	Screw
1162	Flange		1.5	Flange
1163	Flange		0.0	Flange
1164	Flange		0.0	Flange
1165	Screwed		0.0	Screw
1166	Screwed		0.0	Screw
1167	Screwed		0.0	Screw
1168	Flange		0.0	Flange
1169	Check		11000.0	Check (disconnected)
1170	Flange		0.0	Flange
1171	Tubing		3.0	Tubing

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Radian ID	Location	Type	Phase	Product
1194	LOADING PLATFORM 3	Valve	LL	
1195	LOADING PLATFORM 3	Valve	LL	
1196	LOADING PLATFORM 3	Conct*	LL	
1197	LOADING PLATFORM 3	Conct*	LL	
1198	LOADING PLATFORM 3	Conct*	LL	
1199	LOADING PLATFORM 3	Valve	LL	Regular
1200	LOADING PLATFORM 3	Valve	LL	Regular
1201	LOADING PLATFORM 3	Conct*	LL	Regular
1202	LOADING PLATFORM 3	Valve	LL	Regular
1203	LOADING PLATFORM 3	Conct*	LL	RegAdd
1204	LOADING PLATFORM 3	Valve	LL	RegAdd
1205	LOADING PLATFORM 3	Valve	LL	RegAdd
1206	LOADING PLATFORM 3	Valve	LL	RegAdd
1207	LOADING PLATFORM 3	Conct*	LL	RegAdd
1208	LOADING PLATFORM 3	Conct*	LL	RegAdd
1209	LOADING PLATFORM 3	Conct*	LL	RegAdd
1210	LOADING PLATFORM 3	Conct*	LL	RegAdd
1211	LOADING PLATFORM 3	Valve	LL	PlusAdd
1212	LOADING PLATFORM 3	Valve	LL	PlusAdd
1213	LOADING PLATFORM 3	Valve	LL	PlusAdd
1214	LOADING PLATFORM 3	Conct*	LL	PlusAdd
1215	LOADING PLATFORM 3	Conct*	LL	PlusAdd

Radian ID	Load	Subtype	Size	Screening Value	Comments
1194	No	Ball	3"	2.0	3" Ball
1195	No	Gate	1"	0.0	1" Gate
1196	No	Screw		0.0	Screw
1197	No	Tubing		0.0	Tubing
1198	No	Tubing		0.0	Tubing
1199	No	Ball	1/2"	0.0	1/2" Ball
1200	No	Gate	1"	0.0	1" Gate
1201	No	Flange		0.0	Flange
1202	No	Butterfly	3"	1.0	3" bfly
1203	No	Flange		0.0	Flange
1204	No	Ball	3/8"	0.0	3/8" Ball
1205	No	Ball	3/8"	0.0	3/8" Ball
1206	No	Ball	3/8"	0.0	3/8" Ball
1207	No	Tubing		0.0	Tubing
1208	No	Screw		0.0	Screw
1209	No	Tubing		0.0	Tubing
1210	No	Tubing		0.0	Tubing
1211	No	Ball	3/8"	0.0	3/8" Ball
1212	No	Ball	3/8"	0.0	3/8" Ball
1213	No	Ball	3/8"	0.0	3/8" Ball
1214	No	Screw		0.0	Screw
1215	No	Screw		0.0	Screw

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Radian ID	Location	Type	Phase	Product	Load
1172	LOADING PLATFORM 3	Valve	LL		No
1173	LOADING PLATFORM 3	Conct*	LL		No
1174	LOADING PLATFORM 3	Conct*	LL		No
1175	LOADING PLATFORM 3	Conct*	LL		No
1176	LOADING PLATFORM 3	Conct*	LL		No
1177	LOADING PLATFORM 3	Valve	LL		No
1178	LOADING PLATFORM 3	Conct*	LL		No
1179	LOADING PLATFORM 3	Valve	LL		No
1180	LOADING PLATFORM 3	Valve	LL		No
1181	LOADING PLATFORM 3	Conct*	LL		No
1182	LOADING PLATFORM 3	Valve	LL		No
1183	LOADING PLATFORM 3	Conct*	LL	Premium	No
1184	LOADING PLATFORM 3	Conct*	LL	Plus	No
1185	LOADING PLATFORM 3	Valve	LL		No
1186	LOADING PLATFORM 3	Conct*	LL		No
1187	LOADING PLATFORM 3	Conct*	LL		No
1188	LOADING PLATFORM 3	Valve	LL		No
1189	LOADING PLATFORM 3	Conct*	LL		No
1190	LOADING PLATFORM 3	Conct*	LL		No
1191	LOADING PLATFORM 3	Conct*	LL		No
1192	LOADING PLATFORM 3	Conct*	LL		No
1193	LOADING PLATFORM 3	Valve	LL		No

Radian ID	Subtype	Size	Screening Value	Comments
1172	Diaphragm	1/2"	0.0	1/2" Diaphragm
1173	Tubing		0.0	Tubing
1174	Screw		0.0	Screw
1175	Screw		0.0	Screw
1176	Screw		0.0	Screw
1177	Gate	1/2"	0.0	1/2" Gate
1178	Screw		0.0	Screw
1179	Ball	3/8"	0.5	3/8" Ball
1180	Gate	1"	0.0	1" Gate
1181	Screw		7.5	Screw
1182	Butterfly	3"	0.0	3" bfly
1183	Flange		0.0	Flange
1184	Screw		0.0	Screw
1185	Diaphragm	1/2"	0.0	1/2" Diaphragm
1186	Tubing		0.0	Tubing
1187	Screw		0.0	Screw
1188	Gate	3/8"	0.0	3/8" Gate
1189	Screw		0.0	Screw
1190	Screw		0.0	Screw
1191	Flange		0.0	Flange
1192	Tubing		0.0	Tubing
1193	Ball	1/2"	3.0	1/2" Ball

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Radian ID	Location	Type	Phase	Product	Screening Value	Comments
1216	LOADING PLATFORM 3	Conct*	LL	PlusAdd	0.0	Screw
1217	LOADING PLATFORM 3	Conct*	LL	PlusAdd	0.0	Tubing
1218	LOADING PLATFORM 3	Conct*	LL	PlusAdd	0.0	Tubing
1219	LOADING PLATFORM 3	Conct*	LL	SupAdd	0.0	Screw
1220	LOADING PLATFORM 3	Conct*	LL	SupAdd	0.0	Tubing
1221	LOADING PLATFORM 3	Conct*	LL	SupAdd	0.0	Screw
1222	LOADING PLATFORM 3	Conct*	LL	SupAdd	0.0	Screw
1223	LOADING PLATFORM 3	Conct*	LL	SupAdd	0.0	Screw
1224	LOADING PLATFORM 3	Conct*	LL	SupAdd	0.0	Screw
1225	LOADING PLATFORM 3	Valve	LL	SupAdd	0.0	Screw
1226	LOADING PLATFORM 3	Valve	LL	SupAdd	0.0	Screw
1227	LOADING PLATFORM 3	Valve	LL	SupAdd	0.0	Screw
1228	LOADING PLATFORM 3	Valve	LL	SupAdd	0.0	Screw
1229	LOADING PLATFORM 3	Valve	LL	SupAdd	0.0	Screw
1230	LOADING PLATFORM 3	Valve	LL	SupAdd	0.0	Screw
1231	LOADING PLATFORM 3	Conct*	LL	Regular	0.0	Screw
1232	LOADING PLATFORM 3	LA	LL	SupAdd	0.0	Screw
1233	LOADING PLATFORM 3	Conct*	LL	Plus	0.0	Screw
1234	LOADING PLATFORM 3	LA	LL	Plus	0.0	Screw
1235	LOADING PLATFORM 3	Conct*	LL	Regular	0.0	Screw
1236	LOADING PLATFORM 3	LA	LL	Regular	0.0	Screw
1237	LOADING PLATFORM 3	Valve	LL	Regular	0.0	Screw
1216	No	Screw	0.0	Screw	0.0	Flange
1217	No	Tubing	0.0	Tubing	0.0	Screw
1218	No	Tubing	0.0	Tubing	0.0	Screw
1219	No	Screw	0.0	Tubing	0.0	Screw
1220	No	Tubing	0.0	Tubing	0.0	Screw
1221	No	Screw	0.0	Screw	0.0	Screw
1222	No	Screw	0.0	Screw	0.0	Screw
1223	No	Screw	0.0	Screw	0.0	Screw
1224	No	Screw	0.0	Screw	0.0	Screw
1225	No	Ball	2.0	3/8" Ball	0.0	Screw
1226	No	Ball	0.0	3/8" Ball	0.0	Screw
1227	No	Ball	5.0	3/8" Ball	0.0	Screw
1228	No	Butterfly	0.0	3" bfly	0.0	Screw
1229	No	Butterfly	0.0	3" bfly	0.0	Screw
1230	No	Butterfly	0.0	3" bfly	0.0	Screw
1231	No	Flange	1.0	Flange	0.0	Screw
1232	No	Butterfly	66.0	3" bfly	0.0	Screw
1233	No	Flange	4.0	Flange	0.0	Screw
1234	No	Butterfly	1.0	3" bfly	0.0	Screw
1235	No	Flange	0.5	Flange	0.0	Screw
1236	No	Butterfly	0.0	3" bfly	0.0	Screw
1237	No	Butterfly	0.0	3" bfly	0.0	Screw

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Radian ID	Location	Type	Phase	Product	Screening Value	Comments
1238	LOADING PLATFORM 3	Conct	Gas	Gas	0.0	Flange
1239	LOADING PLATFORM 3	Conct	Gas	Gas	0.0	Screw
1240	LOADING PLATFORM 3	Conct	Gas	Gas	0.0	Screw
1241	LOADING PLATFORM 3	Conct	Gas	Gas	0.0	Screw
1242	LOADING PLATFORM 3	Conct	Gas	Gas	0.0	Screw
1243	LOADING PLATFORM 3	Conct	Gas	Gas	0.0	Screw
1244	LOADING PLATFORM 3	Conct	Gas	Gas	0.0	Screw
1245	LOADING PLATFORM 3	Conct	Gas	Gas	0.0	Screw
1246	LOADING PLATFORM 3	Conct	Gas	Gas	0.0	Screw
1247	LOADING PLATFORM 3	LA	Gas	Gas	2.5	Hose
1238	No	Flange	0.0	Flange	0.0	Flange
1239	No	Screw	0.0	Screw	0.0	Screw
1240	No	Screw	0.0	Screw	0.0	Screw
1241	No	Screw	0.0	Screw	0.0	Screw
1242	No	Screw	0.0	Screw	0.0	Screw
1243	No	Screw	0.0	Screw	0.0	Screw
1244	No	Screw	0.0	Screw	0.0	Screw
1245	No	Hose	0.0	Hose	0.0	Hose
1246	No	Hose	0.0	Hose	0.0	Hose
1247	No	Hose	2.5	Hose	2.5	Hose

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Radian ID	Location	Type	Phase	Product	Load	Subtype
1248	Leading Pump Row #4	Conct*	LL	Supreme	No		1270	Leading Pump Row #4	Conct*	LL	Regular	No	
1249	Leading Pump Row #4	Conct*	LL		No		1271	Leading Pump Row #4	Conct*	LL		No	Tubing
1250	Leading Pump Row #4	Conct*	LL		No		1272	Leading Pump Row #4	Conct*	LL		No	
1251	Leading Pump Row #4	Valve	LL		No	Diaphragm	1273	Leading Pump Row #4	Conct*	LL		No	
1252	Leading Pump Row #4	Valve	LL		No	Gate	1274	Leading Pump Row #4	Conct*	LL		No	
1253	Leading Pump Row #4	Valve	LL		No	Gate	1275	Leading Pump Row #4	Valve	LL		No	Diaphragm
1254	Leading Pump Row #4	Conct*	LL		No	Ball	1276	Leading Pump Row #4	Valve	LL		No	Gate
1255	Leading Pump Row #4	Valve	LL		No	Butterfly	1277	Leading Pump Row #4	Conct*	LL		No	Threaded
1256	Leading Pump Row #4	Valve	LL		No	Gate	1278	Leading Pump Row #4	Conct*	LL		No	Butterfly
1257	Leading Pump Row #4	Valve	LL		No	Tubing	1279	Leading Pump Row #4	Valve	LL		No	Ball
1258	Leading Pump Row #4	Conct*	LL	Exxon+	No		1280	Leading Pump Row #4	Valve	LL		No	Ball
1259	Leading Pump Row #4	Conct*	LL		No	Ball	1281	Leading Pump Row #4	Conct*	LL		No	
1260	Leading Pump Row #4	Valve	LL		No	Butterfly	1282	Leading Pump Row #4	Conct*	LL	Add.Supre	No	Screw
1261	Leading Pump Row #4	Valve	LL		No	Gate	1283	Leading Pump Row #4	Conct*	LL	Add.Supre	No	Tubing
1262	Leading Pump Row #4	Valve	LL		No	Tubing	1284	Leading Pump Row #4	Conct*	LL		No	Screw
1263	Leading Pump Row #4	Conct*	LL		No		1285	Leading Pump Row #4	Conct*	LL		No	Screw
1264	Leading Pump Row #4	Conct*	LL		No		1286	Leading Pump Row #4	Conct*	LL		No	Ball
1265	Leading Pump Row #4	Conct*	LL		No		1287	Leading Pump Row #4	Conct*	LL		No	Ball
1266	Leading Pump Row #4	Conct*	LL		No	Diaphragm	1288	Leading Pump Row #4	Valve	LL		No	
1267	Leading Pump Row #4	Valve	LL		No	Gate	1289	Leading Pump Row #4	Valve	LL		No	
1268	Leading Pump Row #4	Valve	LL		No	Gate	1290	Leading Pump Row #4	Valve	LL		No	
1269	Leading Pump Row #4	Valve	LL		No		1291	Leading Pump Row #4	Valve	LL		No	
Radian ID	Size	Screening Value	Comments	Radian ID	Size	Screening Value	Comments						
1248		0.0		1270		0.0							
1249		0.0		1271		0.0							
1250		0.0		1272		0.0	Tubing connection						
1251	1"	0.0	1" Diaphragm	1273		2.5							
1252	1"	7.0	1" Gate Valve Liquid	1274		0.0							
1253	1"	0.0	1" Gate Valve	1275	1"	1.0	1" Diaphragm Valve						
1254		0.0		1276	1"	66.0	1" Gate Valve (GV) Liquid on Surface						
1255	1/2"	0.0	1/2" Ball Valve	1277	1"	0.0	1" Gate Valve (GV)						
1256	3"	0.0	3" Butterfly	1278		0.0	1" Gate Valve (GV)						
1257	1"	0.0	1" Gate Valve	1279		0.0	8FLY						
1258		0.0	Tube connector	1280	1-1/2"	0.0	1.5" Ball Valve						
1259		0.0		1281		0.0							
1260	1/2"	0.0	1/2" Ball	1282		0.0							
1261	3"	0.0	3" Butterfly 8FLY	1283		0.0							
1262	1"	0.0	1" Gate	1284		0.0							
1263		0.0	Tubing connection	1285		0.0	Screw						
1264		11.0		1286		0.0	Tube						
1265		0.0		1287		0.0	Screw						
1266		0.0		1288		0.0	Screw						
1267	1"	3.0	1" Diaphragm Valve (DF)	1289	3/8"	0.0	3/8" Ball Valve						
1268	1"	4.0	1" Gate Valve (GV)	1290	3/8"	0.0	3/8" Ball Valve						
1269	1"	0.0	1" Gate Valve (GV)	1291	3/8"	0.0	3/8" Ball Valve						

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1292	Leading Pump Row #4	Conct*	LL	Additive+	No	Screwed
1293	Leading Pump Row #4	Conct*	LL		No	Screwed
1294	Leading Pump Row #4	Conct*	LL		No	Screwed
1295	Leading Pump Row #4	Conct*	LL		No	Screwed
1296	Leading Pump Row #4	Conct*	LL		No	Screwed
1297	Leading Pump Row #4	Valve	LL		No	Ball
1298	Leading Pump Row #4	Valve	LL		No	Ball
1299	Leading Pump Row #4	Valve	LL		No	Ball
1300	Leading Pump Row #4	Conct*	LL	Add. Regu	No	Screwed
1301	Leading Pump Row #4	Conct*	LL		No	Screwed
1302	Leading Pump Row #4	Conct*	LL	Add. Regu	No	
1303	Leading Pump Row #4	Conct*	LL		No	
1304	Leading Pump Row #4	Conct*	LL		No	
1305	Leading Pump Row #4	Valve	LL		No	Ball
1306	Leading Pump Row #4	Valve	LL		No	Ball
1307	Leading Pump Row #4	Valve	LL		No	Ball
1308	Leading Pump Row #4	OEL	LL		No	Flange
1309	Leading Pump Row #4	Conct*	LL		No	Butterfly
1310	Leading Pump Row #4	Valve	LL		No	Butterfly
1311	Leading Pump Row #4	Valve	LL		No	Butterfly
1312	Leading Pump Row #4	Valve	LL		No	Butterfly
1313	Leading Pump Row #4	Conct*	LL		No	Swivel

Radian ID	Size	Screening Value	Comments
1292		0	Screw
1293		0	Screw
1294		0	Screw
1295		0	Screw
1296		0	Screw 3/8" Ball Valve
1297	3/8"	0	3/8" Ball Valve
1298	3/8"	0	3/8" Ball Valve
1299	3/8"	0	3/8" Ball Valve
1300		0	Screw
1301		0	Screw
1302		0	Additive Rack Exxon Regular
1303		0	
1304		0	
1305	3/8"	0	3/8" Ball Valve
1306	3/8"	0	3/8" Ball Valve
1307	3/8"	0	3/8" Ball Valve
1308		0	Open End Hose
1309		0	Flange Loading Arm
1310	3"	1	3" BFLY
1311	3"	0	3" BFLY
1312	3"	0	3" BFLY
1313		2	Swivel Grease Seen

Radian ID	Location	Type	Phase	Product	Load	Subtype
1314	Leading Pump Row #4	LA	LL	Supreme	No	
1315	Leading Pump Row #4	Conct*	LL		No	
1316	Leading Pump Row #4	Valve	LL		No	
1317	Leading Pump Row #4	LA	LL	Regular	No	
1318	Leading Pump Row #4	Conct*	LL		No	Flange
1319	Leading Pump Row #4	Conct	LL		No	
1320	Leading Pump Row #4	Conct	LL		No	
1321	Leading Pump Row #4	Conct	LL		No	
1322	Leading Pump Row #4	LA	LL		No	Butterfly
1323	Leading Pump Row #4	LA	Gas		No	Check
1324	Leading Pump Row #4	LA	Gas		No	Check
1325	Leading Pump Row #4	Conct	Gas		No	Screwed
1326	Leading Pump Row #4	Conct	Gas		No	Screwed
1327	Leading Pump Row #4	Conct	Gas		No	Screwed
1328	Leading Pump Row #4	Conct	Gas		No	Screwed
1329	Leading Pump Row #4	Conct	Gas		No	Flange
1330	Leading Pump Row #4	Conct	Gas		No	Flange
1331	Leading Pump Row #4	Conct	Gas		No	Flange
1332	Leading Pump Row #4	Conct	Gas		No	Screwed
1333	Leading Pump Row #4	Conct	Gas		No	Screwed
1334	Leading Pump Row #4	Conct	Gas		No	Screwed
1335	Leading Pump Row #4	Conct	Gas		No	Screwed

Radian ID	Size	Screening Value	Comments
1314		0	Hose Connection
1315		0	
1316		0	Valve Connection
1317		190	Hose Connection Liquid
1318		20	Flange Connection under jacket
1319		20	
1320		0	
1321		0	
1322	3"	0	3" BFLY
1323		1400	Check
1324		0	Check Hose Connection
1325		0	Screw
1326		0	Screw
1327		0	Screw
1328		0	Screw
1329		0	Flange
1330		0	Flange
1331		0	Flange
1332		0	Screw
1333		0	Screw Swivel
1334		0	Screw Swivel
1335		0	Screw Swivel

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Radian ID	Location	Type	Phase	Product	Load
1336	Leading Pump Row #4	Conct*	Gas		No
1338	Pump Row # 5	Conct*	LL	Supreme	No
1339	Pump Row # 5	Conct*	LL		No
1340	Pump Row # 5	Conct*	LL		No
1341	Pump Row # 5	Conct*	LL		No
1342	Pump Row # 5	Conct*	LL		Yes
1343	Pump Row # 5	Conct*	LL		Yes
1344	Pump Row # 5	Conct*	LL		Yes
1345	Pump Row # 5	Valve	LL		Yes
1346	Pump Row # 5	Valve	LL		Yes
1347	Pump Row # 5	Valve	LL		Yes
1348	Pump Row # 5	Conct*	LL		Yes
1349	Pump Row # 5	Conct*	LL		No
1350	Pump Row # 5	Conct*	LL		No
1351	Pump Row # 5	Valve	LL		No
1352	Pump Row # 5	Valve	LL		No
1353	Pump Row # 5	Valve	LL		No
1354	Pump Row # 5	Conct*	LL		No
1355	Pump Row # 5	Conct*	LL		No
1356	Pump Row # 5	Valve	LL		No
1357	Pump Row # 5	Valve	LL		No
1358	Pump Row # 5	Valve	LL		No

Radian ID	Subtype	Size	Screening Value	Comments
1336	Flange		0	Flange
1338	Screwed		0	Screw
1339	Screwed		4	Screw
1340	Screwed		4	Screw
1341	Screwed		0	Screw
1342	Tubing		0	Tube
1343	Screwed		0	Screw
1344	Gate	1/2"	0	1/2" Gate Valve
1345	Gate	1/2"	2	1/2" Gate Valve
1346	Gate	1/2"	74	1/2" Gate Valve
1347	Flange		6	Flange on Bonnet
1348	Screwed		0	Screw
1349	Screwed		0	Screw
1350	Screwed		0	Screw
1351	Gate	1"	0	1" Gate Valve
1352	Butterfly	3"	0	3" BFLY Valve
1353	Ball	1/2"	0	1/2" Ball Valve
1354	Screwed		0	Screw
1355	Screwed		0	Screw
1356	Gate	1"	0	1" Gate Valve
1357	Butterfly	3"	0	3" BFLY Valve
1358	Ball	1/2"	0	1/2" Ball Valve

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1359	Pump Row # 5	Conct*	LL		No	Tubing
1360	Pump Row # 5	Conct*	LL		No	Tubing
1361	Pump Row # 5	Conct*	LL		No	Screwed
1362	Pump Row # 5	Conct*	LL		No	Screwed
1363	Pump Row # 5	Valve	LL		No	Gate
1364	Pump Row # 5	Valve	LL		No	Gate
1365	Pump Row # 5	Valve	LL		No	Gate
1366	Pump Row # 5	Valve	LL		No	Diaphragm
1367	Pump Row # 5	Conct*	LL	Regular	No	Flange
1368	Pump Row # 5	Conct*	LL		No	Screwed
1369	Pump Row # 5	Conct*	LL		No	Screwed
1370	Pump Row # 5	Conct*	LL		No	Screwed
1371	Pump Row # 5	Conct*	LL		No	Screwed
1372	Pump Row # 5	Conct*	LL		No	Screwed
1373	Pump Row # 5	Valve	LL		No	Gate
1374	Pump Row # 5	Valve	LL		No	Gate
1375	Pump Row # 5	Valve	LL		No	Gate
1376	Pump Row # 5	Valve	LL		No	Diaphragm
1377	Pump Row # 5	Conct*	LL		No	Screwed
1378	Pump Row # 5	Conct*	LL		No	Screwed
1379	Pump Row # 5	Valve	LL		No	Ball
1380	Pump Row # 5	Valve	LL		No	Butterfly

Radian ID	Size	Screening Value	Comments
1359		0	Tube
1360		0	Tube
1361		0	Screw
1362		0	Screw
1363	1"	0	1" Gate Valve
1364	1"	30	1" Gate Valve
1365	1/2"	0	1/2" Gate Valve
1366	1"	0	1" Diaphragm Valve
1367		0	Flange
1368		0	Screw
1369		0	Screw
1370		1	Screw
1371		0	Screw
1372		0	Screw
1373	1"	0	1" Gate Valve
1374	1"	0	1" Gate Valve
1375	1/2"	0	1/2" Gate Valve
1376	1/2"	0	1/2" Diaphragm Valve
1377		0	Screw
1378		0	Screw
1379	1/2"	0	1/2" Ball Valve
1380	3"	0	3" BFLY Valve

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1381	Pump Row # 5	Valve	LL		No	Gate
1382	Pump Row # 5	Conct*	LL	AddSupUnl	No	Screw
1383	Pump Row # 5	Conct*	LL	AddSupUnl	No	Screw
1384	Pump Row # 5	Conct*	LL	AddSupUnl	No	Tubing
1385	Pump Row # 5	Conct*	LL	AddSupUnl	No	Screw
1386	Pump Row # 5	Conct*	LL	AddSupUnl	No	Tubing
1387	Pump Row # 5	Valve	LL	AddSupUnl	No	Ball
1388	Pump Row # 5	Valve	LL	AddSupUnl	No	Ball
1389	Pump Row # 5	Valve	LL	AddSupUnl	No	Ball
1390	Pump Row # 5	Conct*	LL	AddSupUnl	No	Screw
1391	Pump Row # 5	Conct*	LL	+ Additiv	No	Screw
1392	Pump Row # 5	Conct*	LL	+ Additiv	No	Tubing
1393	Pump Row # 5	Conct*	LL	+ Additiv	No	Tubing
1394	Pump Row # 5	Valve	LL	+ Additiv	No	Ball
1395	Pump Row # 5	Valve	LL	+ Additiv	No	Ball
1396	Pump Row # 5	Valve	LL	+ Additiv	No	Ball
1397	Pump Row # 5	Conct*	LL	Reg Add	No	Screw
1398	Pump Row # 5	Conct*	LL	Reg Add	No	Tubing
1399	Pump Row # 5	Conct*	LL	Reg Add	No	Screw
1400	Pump Row # 5	Conct*	LL	Reg Add	No	Screw
1401	Pump Row # 5	OEL	LL		No	
1402	Pump Row # 5	Conct	LL		No	Flange

Radian ID	Size	Screening Value	Comments
1381	1"	0	1" Gate Valve
1382		0	Screw
1383		0	Screw
1384		0	Tube
1385		0	Screw
1386		0	Tube
1387	1/2"	0	1/2" Ball Valve
1388	1/2"	0	1/2" Ball Valve
1389	1/2"	0	1/2" Ball Valve
1390		0	Screw
1391		0	Screw
1392		0	Tube
1393		0	Tube
1394	1/2"	0	1/2" Ball Valve
1395	1/2"	0	1/2" Ball Valve
1396	1/2"	0	1/2" Ball Valve
1397		0	Screw
1398		0	Tube
1399		0	Screw
1400		0	Screw
1401		120	Open Ended Liq. Return Line
1402		0	Flange

Radian ID	Location	Type	Phase	Product	Load	Subtype
1403	Pump Row # 5	Valve	LL		No	Butterfly
1404	Pump Row # 5	Valve	LL	Supreme +	No	Butterfly
1405	Pump Row # 5	Valve	LL	Regular	No	Butterfly
1406	Pump Row # 5	Conct*	LL		No	Swivel
1407	Pump Row # 5	Conct	LL		No	
1408	Pump Row # 5	LA	LL	Supreme	No	Butterfly
1409	Pump Row # 5	LA	LL	+	No	Butterfly
1410	Pump Row # 5	LA	LL	Regular	No	Butterfly
1411	Pump Row # 5	Conct	LL		No	
1412	Pump Row # 5	LA	Gas		No	Check
1413	Pump Row # 5	Conct	Gas		No	Clamp
1414	Pump Row # 5	Conct	Gas		No	Clamp
1415	Pump Row # 5	Conct	Gas		No	Screw
1416	Pump Row # 5	Conct	Gas		No	Screw
1417	Pump Row # 5	Conct	Gas		No	Screw
1418	Pump Row # 5	Conct	Gas		No	Screw
1419	Pump Row # 5	Conct	Gas		No	Screw
1420	Pump Row # 5	Conct	Gas		No	Flange
1421	Pump Row # 5	Conct	Gas		No	Flange
1422	Pump Row # 5	Conct	Gas		No	Flange
1423	Pump Row # 5	Conct	Gas		No	Screw
1424	Pump Row # 5	Conct	Gas		No	Screw

Radian ID	Size	Screening Value	Comments
1403	3"	0.0	3" BF
1404		0.0	
1405	3"	0.0	3" BF
1406		350.0	Swivel
1407			(5) = Inaccessible
1408	3"	3.0	3" BF - Supreme Load Arm
1409	3"	4.0	3" BF - Plus Load Arm
1410	3"	5.0	3" BF Reg Load Arm Valve
1411			(5) = Inaccessible
1412		2700.0	Check Valve
1413		44.0	Hose Clamp
1414		0.0	Hose Clamp
1415		0.0	Screw
1416		0.0	Screw
1417		0.0	Screw - Swivel
1418		0.0	Screw
1419		0.0	Screw
1420		0.0	Flange
1421		0.0	Flange
1422		0.0	Flange
1423		0.0	Screw
1424		0.0	Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1403	Pump Row # 5	Valve	LL		No	Butterfly
1404	Pump Row # 5	Valve	LL	Supreme +	No	Butterfly
1405	Pump Row # 5	Valve	LL	Regular	No	Butterfly
1406	Pump Row # 5	Conct*	LL		No	Swivel
1407	Pump Row # 5	Conct	LL		No	
1408	Pump Row # 5	LA	LL	Supreme	No	Butterfly
1409	Pump Row # 5	LA	LL	+	No	Butterfly
1410	Pump Row # 5	LA	LL	Regular	No	Butterfly
1411	Pump Row # 5	Conct	LL		No	
1412	Pump Row # 5	LA	Gas		No	Check
1413	Pump Row # 5	Conct	Gas		No	Clamp
1414	Pump Row # 5	Conct	Gas		No	Clamp
1415	Pump Row # 5	Conct	Gas		No	Screw
1416	Pump Row # 5	Conct	Gas		No	Screw
1417	Pump Row # 5	Conct	Gas		No	Screw
1418	Pump Row # 5	Conct	Gas		No	Screw
1419	Pump Row # 5	Conct	Gas		No	Screw
1420	Pump Row # 5	Conct	Gas		No	Flange
1421	Pump Row # 5	Conct	Gas		No	Flange
1422	Pump Row # 5	Conct	Gas		No	Flange
1423	Pump Row # 5	Conct	Gas		No	Screw
1424	Pump Row # 5	Conct	Gas		No	Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1425	Pump Row # 5	Conct	Gas		No	Screwed
1426	Pump Row # 5	Conct	Gas		No	Screwed
1427	Pump Row # 5	Conct	Gas		No	Flange
1428	Vapor Recovery Unit	Valve	Gas		Yes	Gate
1429	Vapor Recovery Unit	Conct	Gas		Yes	Flange
1430	Vapor Recovery Unit	Conct	Gas		Yes	Flange
1431	Vapor Recovery Unit	Conct	Gas		Yes	Flange
1432	Vapor Recovery Unit	Conct	Gas		Yes	Flange
1433	Vapor Recovery Unit	Conct	Gas		Yes	Gate
1434	Vapor Recovery Unit	Valve	Gas		Yes	Gate
1435	Vapor Recovery Unit	Conct	Gas		No	Flange
1436	Vapor Recovery Unit	Pump	LL		Yes	
1437	Vapor Recovery Unit	Pump	LL		Yes	
1438	Vapor Recovery Unit	Pump	LL		Yes	
1439	Vapor Recovery Unit	Conct	LL		Yes	Flange
1440	Vapor Recovery Unit	Conct	LL		Yes	Flange
1441	Vapor Recovery Unit	Valve	LL		Yes	Butterfly
1442	Vapor Recovery Unit	Conct	LL		Yes	Flange
1443	Vapor Recovery Unit	Conct	LL		Yes	Flange
1444	Vapor Recovery Unit	Conct	LL		Yes	Flange
1445	Vapor Recovery Unit	Valve	LL		Yes	Rotary
1446	Vapor Recovery Unit	Conct	LL		Yes	Flange

Radian ID	Size	Screening Value	Comments
1425		0.0	Screw - Swivel
1426		0.0	Screw
1427		0.0	Flange
1428	1/2"	0.0	1/2" Gate Valve
1429		0.0	Flange
1430		0.0	Flange
1431		0.0	Flange
1432		0.0	Flange
1433	6"	56.0	6" Gate Valve
1434		0.0	Flange
1435		0.0	P2 Gaso Return
1436		7.5	P1 Gaso Supply
1437		7.5	Flange
1438		0.0	Flange
1439		0.0	3" BF
1440	3"	0.0	Flange
1441		26.0	Flange
1442		0.0	Flange
1443		0.0	Flange
1444		0.0	Flange
1445	3"	0.0	3" Rotary
1446		0.0	Flange

Radian ID	Location	Type	Phase	Product	Load	Subtype
1447	Vapor Recovery Unit	Conct	LL		Yes	Flange
1448	Vapor Recovery Unit	Conct	LL		Yes	Screwed
1449	Vapor Recovery Unit	Conct	LL		Yes	Screwed
1450	Vapor Recovery Unit	Conct	LL		Yes	Tubing
1451	Vapor Recovery Unit	Conct	LL		Yes	Flange
1452	Vapor Recovery Unit	Conct	LL		Yes	Flange
1453	Vapor Recovery Unit	Conct	LL		Yes	Flange
1454	Vapor Recovery Unit	Valve	LL		Yes	Control
1455	Vapor Recovery Unit	Conct	LL		Yes	Flange
1456	Vapor Recovery Unit	Valve	LL		Yes	Butterfly
1457	Vapor Recovery Unit	Conct	LL		Yes	Screwed
1458	Vapor Recovery Unit	Conct	LL		Yes	Screwed
1459	Vapor Recovery Unit	Conct	LL		Yes	Screwed
1460	Vapor Recovery Unit	Conct	LL		Yes	Screwed
1461	Vapor Recovery Unit	Valve	LL		Yes	Ball
1462	Vapor Recovery Unit	Conct	LL		Yes	Screwed
1463	Vapor Recovery Unit	Conct	LL		Yes	Screwed
1464	Vapor Recovery Unit	Conct	LL		Yes	Flange
1465	Vapor Recovery Unit	Conct	LL		Yes	Flange
1466	Vapor Recovery Unit	Conct	LL		Yes	Flange
1467	Vapor Recovery Unit	Valve	LL		Yes	Ball
1468	Vapor Recovery Unit	Conct	LL		Yes	Flange

Radian ID	Size	Screening Value	Comments
1447		0.0	Flange
1448		0.0	Screw
1449		0.0	Screw
1450		0.0	Tube
1451		0.0	Flange
1452		0.0	Flange
1453		0.0	Flange
1454	3"	0.0	3" Control
1455		0.0	Flange
1456	2"	0.0	2" BFLY-HCV301
1457		0.0	Screw
1458		0.0	Screw
1459		0.0	Screw
1460	1/4"	0.0	1/4" Ball Valve
1461		0.0	Screw
1462		0.0	Screw - Visible rust
1463		8.0	Flange (2) = Cannot reach all of c
1464		0.0	Flange
1465		0.0	Flange
1466		0.0	Flange
1467	2"	0.0	2" Ball Valve RDR
1468		0.0	Flange

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1469	Vapor Recovery Unit	Conct	LL		Yes	Flange
1470	Vapor Recovery Unit	Conct	LL		Yes	Flange
1471	Vapor Recovery Unit	Valve	LL		Yes	Gate
1472	Vapor Recovery Unit	Conct	LL		Yes	Tubing
1473	Vapor Recovery Unit	Conct	LL		Yes	Screw
1474	Vapor Recovery Unit	Conct	LL		Yes	Screw
1475	Vapor Recovery Unit	Conct	LL		Yes	Union
1476	Vapor Recovery Unit	Conct	LL		Yes	Screw
1477	Vapor Recovery Unit	Conct	LL		Yes	Screw
1478	Vapor Recovery Unit	Conct	LL		Yes	Tubing
1479	Vapor Recovery Unit	Conct	LL		Yes	Screw
1480	Vapor Recovery Unit	Valve	LL		Yes	Gate
1481	Vapor Recovery Unit	Conct	LL		Yes	Screw
1482	Vapor Recovery Unit	Conct*	LL		Yes	Union
1483	Vapor Recovery Unit	Conct*	LL		Yes	Screw
1484	Vapor Recovery Unit	Conct*	LL		Yes	Screw
1485	Vapor Recovery Unit	Valve	LL		Yes	Ball
1486	Vapor Recovery Unit	Valve	LL		Yes	Ball
1487	Vapor Recovery Unit	Conct*	LL		Yes	Tubing
1488	Vapor Recovery Unit	Valve	LL		Yes	Gate
1489	Vapor Recovery Unit	Valve	LL		Yes	Gate
1490	Vapor Recovery Unit	Conct*	LL		Yes	Flange

Radian ID	Size	Screening Value	Comments
1469		0.0	Flange
1470		0.0	Flange
1471	1"	2.0	1" Gate Valve
1472		36.0	Tubing type connection
1473		2.0	Screw
1474		1.0	Screw
1475		0.0	Union
1476		0.0	Screw
1477		0.0	Screw
1478		1.0	Tube
1479		0.5	Screw
1480	1"	0.0	1" Gate Valve
1481		0.0	Screw
1482		1.0	Union
1483		0.0	Screw
1484		0.5	Screw
1485	1/2"	0.0	1/2" Ball
1486	1/2"	0.0	1/2" Ball
1487		0.0	Tube
1488	1/2"	0.0	1/2" Gate
1489	1/2"	150.0	1/2" Gate
1490		0.0	Flange

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1491	Vapor Recovery Unit	Pump	LL		Yes	
1492	Vapor Recovery Unit	Valve	LL		Yes	Butterfly
1493	Vapor Recovery Unit	Valve	LL		Yes	Ball
1494	Vapor Recovery Unit	Valve	LL		Yes	Control
1495	Vapor Recovery Unit	Valve	LL		Yes	Control
1496	Vapor Recovery Unit	Valve	LL		Yes	Diaphragm
1497	Vapor Recovery Unit	Valve	LL		Yes	Butterfly
1498	Vapor Recovery Unit	Valve	LL		Yes	Ball
1499	Vapor Recovery Unit	Conct*	LL		Yes	Flange
1500	Vapor Recovery Unit	Valve	LL		Yes	Ball
1501	Vapor Recovery Unit	Pump	LL		Yes	
1502	Vapor Recovery Unit	OEL	LL		Yes	
1503	Vapor Recovery Unit	Valve	LL		Yes	Gate
1504	Vapor Recovery Unit	Conct*	LL		Yes	Screw
1505	Vapor Recovery Unit	Valve	LL		Yes	Ball
1506	Vapor Recovery Unit	Valve	LL		Yes	Ball
1507	Vapor Recovery Unit	Valve	LL		Yes	Ball
1508	Vapor Recovery Unit	Conct*	LL		Yes	Screw
1509	Vapor Recovery Unit	Valve	LL		Yes	Ball
1510	Vapor Recovery Unit	Valve	LL		Yes	Ball
1511	Vapor Recovery Unit	Conct*	LL		Yes	Screw
1512	Vapor Recovery Unit	Valve	Gas		Yes	Control

Radian ID	Size	Screening Value	Comments
1491		0.0	Pump
1492	2"		2" BFLY - inaccessible
1493	1/2"		1/2" Ball - inaccessible
1494	3"		3" Control - inaccessible
1495	3"		3" Control - inaccessible
1496	1"		1" Diaphragm - inaccessible
1497	1"	0.0	1" BFLY
1498	1/4"	0.0	1/4" Ball
1499		0.0	Flange
1500	1"	0.0	1" Ball
1501		0.0	Open Ended Line
1502		0.0	1" Gate
1503		0.0	Screw
1504		0.0	1/4" Ball
1505	1/4"	0.0	2" Ball
1506	2"	0.0	3/8" Ball
1507	3/8"	0.0	Screw
1508		0.0	Screw
1509	3/8"	0.0	3/8" Ball
1510	3/8"	0.0	3/8" Ball
1511		0.0	Screw
1512	9"	0.0	9" Control

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Location	Type	Phase	Product	Load
Vapor Recovery Unit	Conct*	Gas		Yes
Vapor Recovery Unit	Valve	Gas		Yes
Vapor Recovery Unit	Valve	Gas		No
Vapor Recovery Unit	Valve	Gas		No
Vapor Recovery Unit	Conct*	Gas		No
VRU & Dropout Tank	Valve	Gas		No
VRU & Dropout Tank	OEL	Gas		No
VRU & Dropout Tank	Valve	Gas		No
VRU & Dropout Tank	Conct*	Gas		No
VRU & Dropout Tank	Valve	Gas		No
VRU & Dropout Tank	OEL	Gas		No
VRU & Dropout Tank	Conct*	Gas		No
VRU & Dropout Tank	Valve	Gas		No
VRU & Dropout Tank	Valve	Gas		No
VRU & Dropout Tank	OEL	Gas		No
VRU & Dropout Tank	Conct*	Gas		No
VRU & Dropout Tank	Valve	Gas		No
VRU & Dropout Tank	Valve	Gas		No
VRU & Dropout Tank	OEL	Gas		No
VRU & Dropout Tank	Conct*	Gas		No
VRU & Dropout Tank	Valve	Gas		No
VRU & Dropout Tank	Valve	Gas		No
Tank 1091 Jet A	Valve	HL		No

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Location	Type	Phase	Product	Load
Tank 1091 Jet A	Valve	HL		No
Tank 1091 Jet A	Valve	HL		No
Tank 1091 Jet A	Conct*	HL		No
Tank 1091 Jet A	Valve	HL		No
Tank 1091 Jet A	OEL	HL		No
Tank 1091 Jet A	Valve	HL		No
Tank 1091 Jet A	Conct*	HL		No
Tank 1091 Jet A	Valve	HL		No
Tank 1091 Jet A	Valve	HL		No
Tank 1091 Jet A	Conct*	HL		No
Tank 1091 Jet A	Valve	HL		No
Tank 1091 Jet A	Valve	HL		No
Tank 1091 Jet A	Conct*	HL		No
Tank 1091 Jet A	Valve	HL		No
Tank 1091 Jet A	Valve	HL		No
Tank 1091 Jet A	Conct*	HL		No
Tank 1091 Jet A	OEL	HL		No

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Subtype	Size	Screening Value	Comments
Flange	9"	0.0	Flange
Control	9"	0.0	9" Control
Ball	1/2"	0.0	1/2" Ball
Ball	3/8"	0.0	3/8" Ball
Flange	9"	0.0	Flange
Butterfly	9"	0.0	9" BFLY
Gate	1/2"	0.0	1/2" BFLY
Screw	6"	0.0	1/2" Gate
Plug	6"	0.0	Screw
Screw	1"	0.0	6" Plug
Ball	1"	0.0	1" w/ screen
Solenoid	1"	0.0	Screw
Control	9"	0.0	1" Ball
Control	9"	0.0	1" Solenoid
Control	9"	0.0	9" Control
Control	9"	200.0	9" Top of VRU Vent
Flange	9"	0.0	Flange
Control	9"	0.0	9" Control
Control	9"	0.0	Vent
Control	9"	0.0	VRU Dropout Tank
Control	9"	0.0	1" Control
Plug	9"	2.0	9" Plug - Inlet

Radian
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Subtype	Size	Screening Value	Comments
Gate	4"	1.5	4" Gate
Ball	1"	0.0	1" Ball
Flange	1/2"	0.0	Flange
Gate	1/2"	0.0	1/2" Gate
Gate	2"	0.0	2" Gate
Flange	2"	0.0	2" Gate
Ball	2"	0.0	2" Ball
Ball	1"	0.0	1" Ball
Screw	18"	66.0	Screw
Gate	18"	0.0	18" Gate
Flange	18"	0.0	18" Gate
Gate	9"	1.0	9" Plug
Screw	1/2"	0.0	Screw
Gate	6"	0.0	1/2" Gate
Screw	1/2"	0.0	6" Gate
Screw	1/2"	0.0	Screw
Screw	1/2"	0.0	1/2" Ball
Screw	1/2"	0.0	1/2" Ball
Screw	1/2"	0.0	Screw
Screw	1/2"	19.0	1"

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Radian ID	Location	Type	Phase	Product	Load
1557	Tank 1091 Jet A	Valve	HL		No
1558	Tank 1091 Jet A	Conct*	HL		No
1559	Tank 1091 Jet A	Pump	HL		No
1560	Tank 1091 Jet A	Conct*	HL		No
1582	Tank 982 Jet A	Valve	HL		No
1583	Tank 982 Jet A	Valve	HL		No
1584	Tank 982 Jet A	Conct*	HL		No
1585	Tank 982 Jet A	Valve	HL		No
1586	Tank 982 Jet A	Valve	HL		No
1587	Tank 982 Jet A	Conct*	HL		No
1588	Tank 982 Jet A	Valve	HL		No
1589	Tank 982 Jet A	Conct*	HL		No
1590	Tank 982 Jet A	Valve	HL		No
1591	Tank 982 Jet A	Conct*	HL		No
1592	Tank 982 Jet A	Valve	HL		No
1593	Tank 982 Jet A	Conct*	HL		No
1594	Tank 982 Jet A	Valve	HL		No
1595	Tank 982 Jet A	Valve	HL		No
1596	Tank 982 Jet A	Conct*	HL		No
1597	Tank 982 Jet A	DEL	HL		No
1598	Tank 982 Jet A	Valve	HL		No
1599	Tank 982 Jet A	Pump	HL		No

Radian ID	Subtype	Size	Screening Value	Comments
1557	Gate	1/2"	0.0	1/2" Gate
1558	Screw		0.0	Screw
1559			0.0	Hand Pump 1/2"
1560	Union		0.0	Union
1582	Gate	18"	0.0	18" Gate
1583	Gate	18"	0.0	18" Gate
1584	Flange		0.0	Flange
1585	Ball	1"	0.0	1" Ball
1586	Ball	1"	0.0	1" Ball
1587	Flange		0.0	Flange
1588	Plug	9"	16.0	9" Plug -- Outlet
1589	Screw		0.0	Screw
1590	Gate	1"	0.0	1" Gate
1591	Screw		0.0	Screw
1592	Gate	1/2"	0.0	1/2" Gate
1593	Flange		0.0	Flange
1594	Plug	6"	0.0	6" Plug
1595	Ball	1/2"	0.0	1/2" Ball
1596	Screw		0.0	Screw
1597			12.0	Visibly Wet
1598	Ball	1/2"	0.0	1/2" Ball
1599			0.0	1/2" Hand Pump

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Radian ID	Location	Type	Phase	Product	Load
1600	Tank 982 Jet A	Conct*	HL		No
1601	Tank 982 Jet A	Valve	HL		No
1602	Tank 982 Jet A	Valve	HL		No
1603	Tank 982 Jet A	Valve	HL		No
1604	Tank 982 Jet A	Conct*	HL		No
1605	Tank 982 Jet A	Valve	HL		No
1606	Tank 982 Jet A	Conct*	HL		No
1607	Tank 701 VARSOL	Valve	LL		No
1608	Tank 701 VARSOL	Valve	LL		No
1609	Tank 701 VARSOL	Valve	LL		No
1610	Tank 701 VARSOL	Valve	LL		No
1611	Tank 701 VARSOL	Conct*	LL		No
1612	Tank 701 VARSOL	Conct*	LL		No
1613	Tank 701 VARSOL	Valve	LL		No
1614	Tank 701 VARSOL	Valve	LL		No
1615	Tank 701 VARSOL	Valve	LL		No
1616	Tank 701 VARSOL	Valve	LL		No
1617	Tank 701 VARSOL	Valve	LL		No
1618	Tank 701 VARSOL	Conct*	LL		No
1619	Tank 701 VARSOL	Valve	LL		No
1620	Tank 701 VARSOL	Conct*	LL		No
1621	Tank 701 VARSOL	Valve	LL		No

Radian ID	Subtype	Size	Screening Value	Comments
1600	Screw		0.0	Screw
1601	Ball	1/2"	0.0	1/2" Ball
1602	Plug	6"	0.0	6" Plug
1603	Gate	1/2"	0.0	1/2" Gate
1604	Screw		0.0	Screw
1605	Plug	9"	16.0	9" Plug
1606	Flange		1.0	Flange
1607	Plug	9"	0.0	9" Plug
1608	Plug	4"	0.0	4" Plug
1609	Butterfly	6"	2.5	6" BFLY
1610	Ball	1/2"	0.0	0.5" Ball
1611	Screw		0.0	Screw
1612	Screw		0.0	Screw
1613	Ball	1/2"	0.0	1/2" Ball
1614	Butterfly	4"	0.0	4" BFLY
1615	Butterfly	4"	0.0	4" BFLY
1616	Butterfly	4"	0.0	4" BFLY
1617	Butterfly	4"	0.0	4" BFLY
1618	Flange		0.0	Flange
1619	Plug	9"	0.0	9" Plug
1620	Flange		0.0	Flange
1621	Ball	3"	0.0	3" Ball

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Radian ID	Location	Type	Phase	Product	Load
1622	Tank 701 VARSOL	Valve	LL		No
1623	Tank 699 (Interface)	Valve	LL		No
1624	Tank 699 (Interface)	Valve	LL		No
1625	Tank 699 (Interface)	Valve	LL		No
1626	Tank 699 (Interface)	Conct*	LL		No
1627	Tank 699 (Interface)	Valve	LL		No
1628	Tank 699 (Interface)	OEL	LL		No
1629	Tank 699 (Interface)	Conct*	LL		No
1630	Tank 699 (Interface)	Valve	LL		No
1631	Tank 699 (Interface)	Valve	LL		No
1632	Tank 699 (Interface)	Valve	LL		No
1633	Tank 699 (Interface)	Valve	LL		No
1634	Tank 699 (Interface)	Conct*	LL		No
1635	Tank 699 (Interface)	Conct*	LL		No
1636	Tank 699 (Interface)	Valve	LL		No
1637	Tank 700	Valve	LL		No
1638	Tank 700	Valve	LL		No
1639	Tank 700	Conct*	LL		No
1640	Tank 700	Valve	LL		No
1641	Tank 700	Conct*	LL		No
1642	Tank 700	Conct*	LL		No
1643	Tank 700	Valve	LL		No

Radian ID	Location	Type	Phase	Product	Load
1644	Tank 700	Conct*	LL	+Mid UI	No
1645	Tank 700	Valve	LL	+Mid UI	No
1646	Tank 700	Valve	LL	+Mid UI	No
1647	Tank 700	Valve	LL	+Mid UI	No
1648	Tank 700	Conct*	LL	+Mid UI	No
1649	Tank 700	Valve	LL	+Mid UI	No
1650	Tank 700	Valve	LL	+Mid UI	No
1651	Tank 700	OEL	LL	+Mid UI	No
1652	Tank 700	Conct*	LL	+Mid UI	No
1653	Tank 700	Valve	LL	+Mid UI	No
1654	Tank 700	Valve	LL	+Mid UI	No
1655	Diesel Tank 698	Valve	HL		No
1656	Diesel Tank 698	Valve	HL		No
1657	Diesel Tank 698	OEL	HL		No
1658	Diesel Tank 698	Conct*	HL		No
1659	Diesel Tank 698	Valve	HL		No
1660	Diesel Tank 698	Valve	HL		No
1661	Diesel Tank 698	Conct*	HL		No
1662	Diesel Tank 698	Conct*	HL		No
1663	Diesel Tank 698	Valve	HL		No
1664	Diesel Tank 698	Valve	HL		No
1665	Diesel Tank 698	Conct*	HL		No

Radian ID	Subtype	Size	Screening Value	Comments
1622	Ball	3"	0.0	3" Ball
1623	Ball	2"		2" Ball - inaccessible
1624	Ball	2"	0.0	2" Ball
1625	Ball	2"	0.0	2" Ball
1626	Screw		0.0	Screw
1627	Plug	12"	36.0	12" Plug Inlet
1628			0.0	1/2"
1629	Union		0.0	Union
1630	Ball	1/2"	0.0	1/2" Ball
1631	Plug	6"	0.0	6" Plug Outlet
1632	Gate	3"	0.0	3" Gate
1633	Gate	1"	1.5	1" Gate
1634	Screw		0.0	Screw
1635	Screw		0.0	Screw
1636	Ball	1/2"	0.0	1/2" Ball
1637	Plug	6"	0.5	6" Plug - Visibly Wet
1638	Gate	3"	0.0	3" Gate
1639	Screw		0.0	Screw
1640	Gate	1/2"	2.5	1/2" Gate
1641	Union		32.0	Union
1642	Screw		0.0	Screw
1643	Ball	1/2"	0.0	1/2" Ball

Radian ID	Subtype	Size	Screening Value	Comments
1644	Union		0	Union
1645	Ball	1/2"	0	1/2" Ball
1646	Plug	9"	21000	9" Plug - Inlet
1647	Gate	3"	0	3" Gate
1648	Screw		0	Screw
1649	Plug	2"	0	2" Plug
1650	Ball	2"	0	2" Ball
1651			0	2" OELine
1652	Tubing		2	Tube
1653	Ball	3"	0	3" Ball
1654	Ball	2"	0	2" Ball
1655	Plug	6"	0	6" Plug - Inlet
1656	Gate	1/2"	0	1/2" Gate
1657			0	
1658	Tubing		0	Tube
1659	Gate	1/2"	0	1/2" Gate
1660	Gate	1/2"	0	1/2" Gate
1661	Screw		0	Screw
1662	Screw		0	Screw
1663	Gate	1/2"	0	1/2" Gate
1664	Gate	3"	19	3" Gate
1665	Screw		0	Screw

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Radian ID	Location	Type	Phase	Product	Load
1666	Diesel Tank 698	Valve	HL		No
1667	Diesel Tank 698	OEL	HL		No
1668	Diesel Tank 698	Valve	HL		No
1669	Diesel Tank 698	Valve	HL		No
1670	Diesel Tank 698	Valve	HL		No
1671	Diesel Tank 698	Conct*	HL		No
1672	Diesel Tank 698	Conct*	HL		No
1673	Diesel Tank 698	Valve	HL		No
1674	Diesel Tank 698	Valve	HL		No
1675	Diesel Tank 698	Valve	HL		No
1676	Diesel Tank 698	Conct*	HL		No
1677	Diesel Tank 698	Valve	HL		No
1678	Diesel Tank 698	Valve	HL		No
1679	VRU	OEL	LL		Yes

Radian ID	Subtype	Size	Screening Value	Comments
1666	Ball	1"	0	1" Ball
1667			55	Dripping
1668	Plug	3"	25	3" Plug
1669	Plug	9"	0	9" Plug
1670	Gate	1"	0	1" Gate
1671	Screwed		0	Screw
1672	Screwed		0	Screw
1673	Gate	1"	0	1" Gate
1674	Plug	9"	0	9" Plug
1675	Plug	3"	0	3" Plug
1676	Flange		0	Flange
1677	Ball	2"	0	2" Ball
1678	Ball	2"	0	2" Ball
1679			0	1/2"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1	Tank # 33	Valve	LL	Gas	No	Gate
2	Tank # 33	Valve	LL	Gas	No	Gate
3	Tank # 33	OEL	LL	Gas	No	
4	Tank # 33	Valve	LL	Gas	No	Gate
5	Tank # 33	Valve	LL	Gas	No	Gate
6	Tank # 33	Conct*	LL	Gas	No	Screw
7	Tank # 33	Conct*	LL	Gas	No	Screw
8	Tank # 33	Other	LL	Gas	No	PRV
9	Tank # 33	Valve	LL	Gas	No	Gate
10	Tank # 33	Valve	LL	Gas	No	Gate
11	Tank # 33	Valve	LL	Gas	No	Gate
12	Tank # 33	Valve	LL	Gas	No	Gate
13	Tank # 33	Conct*	LL	Gas	No	Flange
14	Tank # 33	OEL	LL	Gas	No	
15	Tank # 33	Valve	LL	Gas	No	Control
16	Tank # 33	Conct*	LL	Gas	No	Screw
17	Tank # 33	Valve	LL	Gas	No	Gate
18	Tank # 33	Valve	LL	Gas	No	Gate
19	Tanks 33&34	Conct*	LL	Gas	No	Screw
20	Tanks 33&34	Other	LL	Gas	No	PRV
21	Tanks 33&34	Valve	LL	Gas	No	Gate
22	Tanks 33&34	Valve	LL	Gas	No	Gate

Radian ID	Size	Screening Value	Comments
1	3"	0.0	3" Gate
2	2"	0.0	2" Gate
3		2.5	Water Draw
4	6"	46.0	6" Gate
5	1"	0.0	1" Gate
6		0.0	Screw
7		0.0	Screw
8	1"	0.0	1" Pressure Relief Valve
9	1/2"	0.0	1/2" Gate
10	1/2"	0.0	1/2" Gate
11	4"	0.0	4" Gate
12	2"	0.0	2" Gate
13		280.0	Flange
14		0.0	
15	12"	0.0	12" Control Valve
16		0.0	Screw
17	1/2"	0.0	1/2" Gate
18	1/2"	0.0	1/2" Gate
19		0.0	Screw
20	1"	0.0	1" Pressure Release Valve
21	1/2"	0.0	1/2" Gate
22	2"	56.0	2" Gate

Radian ID	Location	Type	Phase	Product	Load	Subtype
23	Tanks 33&34	Conct*	LL		No	
24	Tanks 33&34	Conct*	LL		No	
25	Tanks 33&34	Valve	LL		No	Gate
26	Tanks 33&34	Conct*	LL		No	Screw
27	Tanks 33&34	Other	LL		No	PRV
28	Tanks 33&34	Conct*	LL		No	Screw
29	Tanks 33&34	Valve	LL		No	Gate
30	Tanks 33&34	Valve	LL		No	Control
31	Tanks 33&34	Conct*	LL		No	Screw
32	Tanks 33&34	Valve	LL	Gas	No	Control
33	Tanks 33&34	Valve	LL	Gas	No	Ball
34	Tanks 33&34	Conct*	LL	Gas	No	Screw
35	Tanks 33&34	Conct*	LL	Gas	No	Screw
36	Tanks 33&34	Valve	LL	Gas	No	Gate
37	Tank 934	Valve	LL	Reg	No	Gate
38	Tank 934	Other	LL	Reg	No	PRV
39	Tank 934	OEL	LL	Reg	No	
40	Tank 934	Valve	LL	Reg	No	Butterfly
41	Tank 934	Valve	LL	Reg	No	Gate
42	Tank 934	Conct*	LL	Reg	No	Screw
43	Tank 934	Conct*	LL	Reg	No	Screw
44	Tank 934	Valve	LL	Reg	No	Gate

Radian ID	Size	Screening Value	Comments
23		0	2"
24		0	Threaded Connection
25	1/2"	0	1/2" Gate
26		0	Screw
27	1"	0	1" Pressure Relief Valve
28		0	Screw
29	1/2"	0	1/2" Gate
30	12"	0	12" Control
31		0	Screw
32	12"	46	12" control Valve
33	1/2"	0	1/2" Ball
34		0	Screw
35		0	Screw
36	1/2"	0	1/2" Gate
37	1"	0	1" Gate
38	1"	0	1" Pressure Release Valve
39		500	1"
40	2"	0	2" BFLY
41	2"	0	2" Gate
42		0	Screw
43		0	Screw
44	1"	1	1" Gate

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Radian ID	Location	Type	Phase	Product	Load	Subtype
45	Tank 934	Valve	LL	-Reg	No	Gate
46	Tank 934	Conct*	LL	-Reg	No	Screwed
47	Tank 934	Valve	LL	-Reg	No	Check
48	Tank 934	Other	LL	-Reg	No	PRV
49	Tank 934	Valve	LL	-Reg	No	Gate
50	Tank 934	Valve	LL	-Reg	No	Gate
51	Tank 934	Conct*	LL	-Reg	No	Flange
52	Tank 934	Conct*	LL	-Reg	No	Union
53	Tank 934	Valve	LL	-Reg	No	Gate
54	Tank 934	Valve	LL	-Reg	No	Gate
55	Tank #934	Other	LL	-Reg	No	PRV
56	Tank #934	Valve	LL	-Reg	No	Gate
57	Tank #934	Valve	LL	-Reg	No	Gate
58	Tank #934	Conct*	LL	-Reg	No	Gate
59	Tank #934	Valve	LL	-Reg	No	Control
60	Tank #934	Valve	LL	-Reg	No	Gate
61	Tank #934	Valve	LL	-Reg	No	Gate
62	Tank #934	Other	LL	-Reg	No	PRV
63	Tank #934	Conct*	LL	-Reg	No	Screwed
64	Tank #934	Conct*	LL	-Reg	Yes	Screwed
65	Tank #934	Valve	LL	-Reg	No	Ball
66	Tank #934	Conct*	LL	-Reg	No	Union

Radian ID	Size	Screening Value	Comments
45	4"	75	4" Gate
46		0	Screw
47	2"	0	2" Check
48	1"	0	1" Pressure Release Valve
49	1/2"	0	1/2" Gate
50	1"	0	1" Gate
51		0	Flange
52		0	Union
53	1"	11	1" Gate
54	2"	130	2" Gate
55	1"	0	1" Pressure Relief Valve
56	1/2"	0	1/2" Gate
57	1/2"	61	1/2" Gate
58		0	
59	12"	550	12" Control
60	1/2"	0	1/2" Gate
61	1/2"	0	1/2" Gate
62	1"	0	1" Pressure Relief Valve
63		0	Screw
64		0	Screw
65	1"	0	1" Ball
66		5	Union

Radian ID	Location	Type	Phase	Product	Load	Subtype
67	Tank #934	Conct*	LL	-Reg	No	Screwed
68	Tank #934	Valve	LL	-Reg	No	Gate
69	Tank #934	Valve	LL	-Reg	No	Gate
70	Tank #934	Valve	LL	-Reg	No	Gate
71	Tank #934	Valve	LL	-Reg	No	Gate
72	Tank #941	Valve	LL	UL Reg	No	Gate
73	Tank #941	Valve	LL	UL Reg	No	Gate
74	Tank #941	Other	LL	UL Reg	No	PRV
75	Tank #941	Valve	LL	UL Reg	No	Gate
76	Tank #941	Valve	LL	UL Reg	No	Gate
77	Tank #941	Valve	LL	UL Reg	No	Gate
78	Tank #941	Conct*	LL	UL Reg	Yes	Gate
79	Tank #941	Conct*	LL	UL Reg	Yes	Check
80	Tank #941	Valve	LL	UL Reg	Yes	Gate
81	Tank #941	Valve	LL	UL Reg	Yes	Check
82	Tank #941	Valve	LL	UL Reg	Yes	Gate
83	Tank #941	Conct*	LL	UL Reg	No	Gate
84	Tank #941	Conct*	LL	UL Reg	No	Gate
85	Tank #941	Conct*	LL	UL Reg	No	Gate
86	Tank #941	Valve	LL	UL Reg	No	Gate
87	Tank #941	Valve	LL	UL Reg	No	Gate
88	Tank #941	Other	LL	UL Reg	No	PRV

Radian ID	Size	Screening Value	Comments
67		0	Screw
68	1/2"	0	1/2" Gate
69	1/2"	0	1/2" Gate
70	1"	0	1" Gate
71	6"	100	6" Gate
72	1"	0	1" Gate
73	4"	74	4" Gate
74	1"	0	1" Pressure Release Valve
75	1/2"	0	1/2" Gate
76	1/2"	0	1/2" Gate
77	2"	84	2" Gate
78		0	
79		0	
80		0	
81	4"	110	4" Gate
82	4"	0	4" Check
83		0	
84		0	
85		0	
86	1/2"	3	1/2" Gate
87	1/2"	3	1/2" Gate
88	1"	0	1" Pressure Release Valve

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Radian ID	Location	Type	Phase	Product	Load	Subtype
89	Tank # 941	Valve	LL	UL Reg	No	Control
90	Tank # 941	Valve	LL	UL Reg	No	Gate
91	Tank # 941	Valve	LL	UL Reg	No	Gate
92	Tank # 941	OEL	LL	UL Reg	No	
93	Tank # 941	Valve	LL	UL Reg	No	Butterfly
94	Tank # 941	Valve	LL	UL Reg	Yes	Gate
95	Tank # 941	Other	LL	UL Reg	Yes	PRV
96	Tank # 941	Valve	LL	UL Reg	Yes	Gate
97	Tank # 941	Valve	LL	UL Reg	Yes	Gate
98	Tank # 941	Valve	LL	UL Reg	Yes	Control
99	Tank # 941	Valve	LL	UL Reg	No	Gate
100	Tank # 941	Other	LL	UL Reg	No	PRV
101	Tank # 941	Valve	LL	UL Reg	No	Gate
102	Tank # 941	Valve	LL	UL Reg	No	Gate
103	Tank # 941	Valve	LL	UL Reg	No	Gate
104	Tank # 941	Conct*	LL	UL Reg	No	Screw
105	Tank # 941	Conct*	LL	UL Reg	No	Flange
106	Tank # 941	Conct*	LL	UL Reg	No	Screw
107	Tank # 941	Conct*	LL	UL Reg	No	Screw
108	Tank # 941	Conct*	LL	UL Reg	No	Gate
109	Tank # 940	Valve	LL		No	
110	Tank # 940	Valve	LL		No	Gate

Radian ID	Screening Value	Size	Comments
89	140	8"	8" Control
90	5	1/2"	1/2" Gate
91	13	2"	2" Gate
92	1200		
93	0	3"	3" BFLY
94	40	1"	1" Gate
95	0	1"	1" Pressure Release Valve
96	0	1/2"	1/2" Gate
97	0	1/2"	1/2" Gate
98	150	12"	12" Control Valve
99	7	1"	1" Gate
100	0	1"	1" Pressure Release Valve
101	12	1/2"	1/2" Gate
102	0	1/2"	1/2" Gate
103	0	1/2"	1/2" Gate
104	0		Screw
105	0		Screw
106	0		Flange
107	0		Screw
108	100		Screw
109	0	1"	1" Gate
110	34	6"	6" Gate

Radian ID	Location	Type	Phase	Product	Load	Subtype
111	Tank # 940	Other	LL		No	PRV
112	Tank # 940	Valve	LL		No	Gate
113	Tank # 940	Valve	LL		No	Gate
114	Tank # 940	Conct*	LL		No	
115	Tank # 940	Conct*	LL		No	
116	Tank # 940	Conct*	LL		No	
117	Tank # 940	Conct*	LL		No	
118	Tank # 940	Valve	LL		No	Gate
119	Tank # 940	Valve	LL		No	Control
120	Tank # 940	Valve	LL		No	Gate
121	Tank # 940	Valve	LL		No	Gate
122	Tank # 940	Conct*	LL		No	
123	Tank # 940	Conct*	LL		No	
124	Tank # 940	Conct*	LL		No	
125	Tank # 940	Valve	LL		No	Gate
126	Tank # 940	Valve	LL		No	Gate
127	Tank # 940	Other	LL		No	PRV
128	Tank # 940	Valve	LL		No	Gate
129	Tank # 940	Valve	LL		No	Gate
130	Tank # 940	Conct*	LL		No	Flange
131	Tank # 940	Valve	LL		No	Gate
132	Tank # 940	Valve	LL		No	Gate

Radian ID	Screening Value	Size	Comments
111	0	1"	1" Pressure Release Valve
112	0	1/2"	1/2" Gate
113	0	1/2"	1/2" Gate
114	0		
115	0		
116	0		
117	0		
118	100	1"	1" Gate
119	110	12"	12" Control Valve
120	27	1/2"	1/2" Gate
121	0	1/2"	1/2" Gate
122	0		
123	0		
124	0		
125	0		
126	19	1"	1" Gate
127	0	3"	3" Gate
128	0	1"	1" Pressure Release Valve
129	0	1/2"	1/2" Gate
130	0	1/2"	1/2" Gate
131	0	3"	Flange
132	0	2"	3" Gate
	0		2" Gate

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Radian ID	Location	Type	Phase	Product	Load	Subtype
133	Tank # 940	OEL	LL		No	
134	Tank # 940	Valve	LL		No	Butterfly
135	Tank # 940	Valve	LL		No	Gate
136	Tank # 940	Valve	LL		No	Gate
137	Tank # 940	Other	LL		No	PRV
138	Tank # 940	Conct*	LL		No	Screw
139	Tank # 940	Conct*	LL		No	Screw
140	Tank # 940	Valve	LL		No	Gate
141	Tank # 940	Valve	LL		No	Control
142	Tank # 940	Conct*	LL		No	Screw
143	Tank # 940	Conct*	LL		No	Screw
144	Tank # 940	Conct*	LL		No	Union
145	Tank # 940	Valve	LL		No	Gate
146	Tank # 940	Valve	LL		No	Check
147	Tank # 940	Valve	LL		No	Gate
148	Tank # 940	Other	LL		No	PRV
149	Tank # 940	Valve	LL		No	Gate
150	Tank # 940	Valve	LL		No	Gate
151	Tank # 940	Conct*	LL		No	Screw
152	Tank # 940	Conct*	LL		No	Screw
153	Tank # 940	Valve	LL		No	Gate
154	Tank # 940	Valve	LL		No	Gate

Radian ID	Size	Screening Value	Comments
133	3"	84	1" 3" BFLY
134	1/2"	0	1/2" Gate
135	1/2"	0	1/2" Gate
136	1/2"	3	1/2" Gate
137	1"	0	1" Pressure Relief Valve
138		0	Screw
139		0	Screw
140	1"	10	1" Gate
141	12"	100	12" Control Valve
142		0	Screw
143		0	Screw
144		0	Union
145	1"	0	1" Gate
146	1"	240	1" Check Valve
147	1"	0	1" Gate
148	1"	0	1" Pressure Release Valve
149	1/2"	10	1/2" Gate
150	1/2"	0	1/2" Gate
151		0	Screw
152		0	Screw
153	1/2"	4	1/2" Gate
154	1/2"	0	1/2" Gate

Radian ID	Location	Type	Phase	Product	Load	Subtype
155	Tank # 940	Other	LL		No	PRV
156	Tank # 940	Valve	LL		No	Gate
157	Tank # 940	Valve	LL		No	Gate
158	Tank # 940	Valve	LL		No	Gate
159	Tank # 940	Conct*	LL		No	Screw
160	Pump Tanks 9418940	Conct*	LL		No	Screw
161	Pump Tanks 9418940	Valve	LL		No	Butterfly
162	Pump Tanks 9418940	Valve	LL		No	Ball
163	Pump Tanks 9418940	Pump	LL		No	Ball
164	Pump Tanks 9418940	Valve	LL		No	Tubing
165	Pump Tanks 9418940	Conct*	LL		No	Screw
166	Pump Tanks 9418940	Conct*	LL		No	Butterfly
167	Pump Tanks 9418940	Valve	LL		No	Butterfly
168	Pump Tanks 9418940	Valve	LL		No	Gate
169	Pump Tanks 9418940	Valve	LL	Clear UL	No	Butterfly
170	Pump Tanks 9418940	Valve	LL		No	Screw
171	Pump Tanks 9418940	Conct*	LL		No	Ball
172	Pump Tanks 9418940	Valve	LL		No	Screw
173	Pump Tanks 9418940	Conct*	LL		No	Screw
174	Pump Tanks 9418940	Valve	LL		No	Ball
175	Pump Tanks 9418940	Pump	LL		No	Screw
176	Pump Tanks 9418940	Conct*	LL		No	Screw

Radian ID	Size	Screening Value	Comments
155	1"	0.0	1" Pressure Release Valve
156	3"	16.0	3" Gate
157	1"	94.0	1" Gate
158	2"	2.0	2" Gate
159		0.0	Screw
160		0.0	Screw
161	6"	0.0	6" BFLY
162	1/2"	0.0	1/2" Ball
163		0.0	3/8" Ball
164	3/8"	8.0	Tube
165		0.0	Screw
166		0.0	6" BFLY
167	6"	0.0	6" BFLY
168	6"	0.0	1" Gate
169	1"	0.0	6" BFLY
170	6"	0.0	Screw
171		0.0	1/2" Ball
172	1/2"	5.0	Screw
173		0.0	3/8" Ball
174	3/8"	0.0	Pump
175		0.0	Screw
176		0.0	Screw

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Radian ID	Load	Subtype	Size	Screening Value	Comments	Radian ID	Size	Screening Value	Comments
177	No	Ball	1/2"	0.0	1/2" Ball	199	6"	0.0	6" BFLY
178	No			0.0		200	1/2"	0.0	1/2" Ball
179	No	Butterfly	8"	0.0	8" BFLY	201		0.0	3/8" Tube
180	Yes	Butterfly	12"	0.0	12" BFLY	202		0.0	Screw
181	Yes	Butterfly	12"	0.0	12" BFLY	203	1/2"	0.0	1/2" Ball
182	No	Butterfly	8"	0.0	8" BFLY	204		1.5	
183	No	Screw		0.0	Screw	205	1/2"	3.5	1/2" Ball
184	No	Ball	1/2"	0.0	1/2" Ball	206	6"	0.5	6" BFLY
185	No	Ball	1/2"	0.0	1/2" Ball	207	1/2"	0.0	1/2" Ball
186	No			0.0		208	12"	8.5	12" BFLY
187	No			0.0		209	6"	0.0	6" BFLY
188	No	Ball	1/2"	0.0	1/2" Ball	210	1/2"	0.0	1/2" Ball
189	Yes	Screw		0.0	Screw	211	3/8"	0.0	3/8" Ball
190	Yes	Screw		0.0	Screw	212	3/8"	1.5	3/8" Ball
191	Yes	Ball	1/2"	12.0	1/2" Ball	213		0.0	3/8"
192	Yes	Flange		0.0	Flange	214		0.0	
193	Yes	Butterfly	6"	0.0	6" BFLY	215	1/2"	9.0	1/2" Ball
194	Yes	Flange		0.0	Flange	216	6"	0.0	6" BFLY
195	Yes	Gate	4"	4.0	4" Gate	217		0.0	Screw
196	Yes	Gate	4"	0.0	4" Gate	218		0.0	Screw
197	Yes	Gate	4"	34.0	4" Gate	219		55.0	Screw
198	Yes	Gate	4"	54.0	4" Gate	220	12"	15.0	12" BFLY

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Radian ID	Location	Type	Phase	Product	Load	Subtype
221	-Lines/Pumps-	Valve	LL	Reg	Yes	Butterfly	243	Tank 931	Valve	LL	UI Suprem	No	Gate
222	-Lines/Pumps-	Valve	LL	Reg	Yes	Ball	244	Tank 931	Valve	LL	UI Suprem	Yes	Control
223	-Lines/Pumps-	Valve	LL	Reg	Yes	Ball	245	Tank 931	Valve	LL	UI Suprem	Yes	Gate
224	-Lines/Pumps-	Valve	LL	Reg	Yes	Ball	246	Tank 931	Valve	LL	UI Suprem	Yes	Ball
225	-Lines/Pumps-	Valve	LL	Reg	Yes	Butterfly	247	Tank 931	Other	LL	UI Suprem	Yes	PRV
226	-Lines/Pumps-	Valve	LL	Reg	No	Gate	248	Tank 931	Valve	LL	UI Suprem	Yes	Ball
227	-Lines/Pumps-	LA	LL	Reg	No	Butterfly	249	Tank 931	Conct*	LL	UI Suprem	Yes	Screw
228	-Lines/Pumps-	Valve	LL	Reg	No	Ball	250	Tank 931	Conct*	LL	UI Suprem	Yes	Screw
229	-Lines/Pumps-	Pump	LL	Reg	No		251	Tank 931	Valve	LL	UI Suprem	Yes	Gate
230	-Lines/Pumps-	Conct*	LL	Reg	No	Flange	252	Tank 931	Valve	LL	UI Suprem	Yes	Gate
231	-Lines/Pumps-	Conct*	LL	Reg	No	Screw	253	Tank 931	Valve	LL	UI Suprem	Yes	Gate
232	-Lines/Pumps-	Conct*	LL	Reg	No	Screw	254	Tank 931	Other	LL	Supreme	No	Gate
233	-Lines/Pumps-	Conct*	LL	Reg	No	Union	255	Tank 931	Valve	LL	Supreme	No	PRV
234	Tank 931	LA	LL	UI Suprem	No		256	Tank 931	Conct*	LL	Supreme	No	Control
235	Tank 931	Valve	LL	UI Suprem	No	Gate	257	Tank 931	Conct*	LL	Supreme	No	Screw
236	Tank 931	Conct*	LL	UI Suprem	No	Flange	258	Tank 931	Valve	LL	Supreme	No	Flange
237	Tank 931	Valve	LL	UI Suprem	No	Gate	259	Tank 931	Conct*	LL	Supreme	No	Gate
238	Tank 931	Conct*	LL	UI Suprem	No	Screw	260	Tank 931	Conct*	LL	Supreme	No	Screw
239	Tank 931	Conct*	LL	UI Suprem	No	Screw	261	Tank 931	OEL	LL	Supreme	No	
240	Tank 931	Valve	LL	UI Suprem	No	Gate	262	Tank 930	Valve	LL	Supreme	No	Butterfly
241	Tank 931	Valve	LL	UI Suprem	No	Gate	263	Tank 930	Valve	LL	Supreme	Yes	Control
242	Tank 931	Valve	LL	UI Suprem	No	Gate	264	Tank 930	Valve	LL	Supreme	Yes	Gate

Radian ID	Size	Screening Value	Comments	Radian ID	Size	Screening Value	Comments
221	6"	0	6" BFLY	243	1/2"	0	1/2" Gate
222	1/2"	0	1/2" Ball	244	12"	95	12" Control (plug)
223	1/2"	0	1/2" Ball	245	1/2"	7	1/2" Gate
224	1/2"	3	1/2" Ball	246	1/2"	0	1/2" Ball
225	6"	0	6" BFLY	247	1"	0	1" Pressure Release Valve
226	2"	0	2" Gate	248	1/2"	0	1/2" Ball
227	6"	0	6" BFLY	249		0	Screw
228	1/2"	0	1/2" Ball	250		0	Screw
229		5	1/2" from shaft	251	1/2"	0	1/2" Gate
230		0	Flange	252	1/2"	0	1/2" Gate
231		0	Screw	253	1/2"	11	1/2" Gate
232		2	Screw	254	1"	0	1" Pressure Release Valve
233		0	Union	255	8"	75	8" Control (plug)
234		0		256		0	Screw
235	2"	14	2" Gate	257		0	Flange
236		1	Flange	258	4"	150	4" Gate
237	2"	800	2" Gate	259		0	Screw
238		0	Screw	260		290	
239		0	Screw	261	3"	0	3" BFLY
240	6"	3	6" Gate	262	12"	3	12" Control plug
241	1/2"	0	1/2" Gate	263	1/2"	0	.5" Gate
242	3/8"	5	3/8" Gate	264	3/8"	0	3/8" Gate

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Radian ID	Location	Type	Phase	Product	Load	Subtype
265	Tank 930	Valve	LL	Supreme	Yes	Gate
266	Tank 930	Other	LL	Supreme	Yes	PRV
267	Tank 930	Conct*	LL	Supreme	Yes	Screw
268	Tank 930	Conct*	LL	Supreme	Yes	Screw
269	Tank 930	Valve	LL	Supreme	Yes	Gate
270	Tank 930	Valve	LL	Supreme	No	Gate
271	Tank 930	Valve	LL	Supreme	No	Gate
272	Tank 930	Other	LL	Supreme	No	PRV
273	Tank 930	Valve	LL	Supreme	No	Gate
274	Tank 930	Conct*	LL	Supreme	No	Gate
275	Tank 930	Conct*	LL	Supreme	No	Union
276	Tank 930	Valve	LL	Supreme	No	Flange
277	Tank 930	Valve	LL	Supreme	No	Gate
278	Tank 930	Valve	LL	Supreme	No	Gate
279	Tank 930	Other	LL	Supreme	No	PRV
280	Tank 930	Valve	LL	Supreme	No	Ball
281	Tank 930	Valve	LL	Supreme	No	Control
282	Tank 930	Conct*	LL	Supreme	No	Flange
283	Tank 930	Conct*	LL	Supreme	No	Union
284	Tank 930	Conct*	LL	Supreme	No	Screw
285	Tank 930	Valve	LL	Supreme	No	Gate
286	Tank 930	Conct*	LL	Supreme	No	Flange

Radian ID	Size	Screening Value	Comments
265	1/2"	4	1/2" Gate
266	1"	0	1" Pressure Release Valve
267		0	Screw
268		0	Screw
269	6"	1	6" Gate
270	1/2"	0	1/2" Gate
271	1/2"	2	1/2" Gate
272	1"	0	1" Pressure Release Valve
273	1"	0	1" Gate
274		0	Union
275		0	Flange
276	2"	95	2" Gate
277	1/2"	0	1/2" Gate
278	1/2"	0	1/2" Gate
279	1"	19	1" Pressure Release Valve
280	1/2"	0	1/2" Ball
281	12"	0	12" Control (plug)
282		0	Flange
283		0	Union
284		0	Screw
285	4"	15	4" Gate
286		0	Flange

Radian ID	Location	Type	Phase	Product	Load	Subtype
287	Tank 930	OEL	LL	Supreme	No	Butterfly
288	Tank 930	Valve	LL	Supreme	No	Gate
289		Valve	LL	Sup	No	Gate
290	- Tank 930	Valve	LL	Sup	No	PRV
291	- Tank 930	Other	LL	Sup	No	Gate
292	- Tank 930	Valve	LL	Sup	No	Gate
293	- Tank 930	Valve	LL	Sup	No	Gate
294	- Tank 930	Conct*	LL	Sup	No	Screw
295	- Tank 930	Conct*	LL	Sup	No	Flange
296	- Tank 930	Valve	LL	Sup	No	Check
297	- Tank 930	Valve	LL	Sup	No	Butterfly
298	- Tank 930	Valve	LL	Sup	No	Gate
299	- Tank 930	Valve	LL	Sup	No	Gate
300	- Tank 930	Valve	LL	Sup	No	Butterfly
301	- Tank 930	Valve	LL	Sup	No	Ball
302	- Tank 930	Pump	LL	Sup	No	Ball
303	- Tank 930	Valve	LL	Sup	No	Ball
304	- Tank 930	Valve	LL	Sup	No	Butterfly
305	- Tank 930	Valve	LL	Sup	No	Gate
306	- Tank 930	Valve	LL	Sup	No	Check
307	- Lines & Pu	Valve	LL	Supreme	No	Butterfly
308	-	Valve	LL	Supreme	No	Butterfly

Radian ID	Size	Screening Value	Comments
287	3"	95	3" BFLY
288	4"	0	4" Gate
289	1/2"	0	1/2" Gate
291	1"	0	1" Pressure Release Valve
292	3"	0	3" Gate
293	1/2"	0	1/2" Gate
294		5	Screw
295		2	Flange
296	4"	0	4" check
297	6"	0	6" BFLY
298	3/8"	0	3/8" Gate
299	1"	0	1" Gate
300	6"	0	6" BFLY
301	1"	0	1" Ball
302		0	
303	1/2"	0	1/2" Ball
304	1/2"	0	1/2" Ball
305	4"	0	4" BFLY
306	1"	0	1" Gate
307	6"	0	6" Check
308	6"	0	6" BFLY

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Radian ID	Location	Type	Phase	Product	Load	Subtype
309	Lines & Pu	Valve	LL	Supreme	No	Ball
310	Lines & Pu	Valve	LL	Supreme	No	Check
311	Lines & Pu	Conct*	LL	Supreme	No	Tubing
312	Lines & Pu	Conct*	LL	Supreme	No	Tubing
313	Lines & Pu	Valve	LL	Supreme	No	Butterfly
314	Lines & Pu	Valve	LL	Supreme	No	Butterfly
315	Lines & Pu	Valve	LL	Supreme	No	Ball
316	Lines & Pu	OEL	LL	Supreme	No	Ball
317	Lines & Pu	Valve	LL	Supreme	No	Ball
318	Lines & Pu	Pump	LL	Supreme	No	Ball
319	Lines & Pu	Valve	LL	Supreme	No	Ball
320	Lines & Pu	Valve	LL	Supreme	No	Ball
321	Lines & Pu	Valve	LL	Supreme	No	Check
322	Lines & Pu	Valve	LL	Supreme	No	Butterfly
323	Lines & Pu	Conct*	LL	Supreme	No	Screw
324	Lines & Pu	Conct*	LL	Supreme	No	Screw
325	Lines & Pu	Conct*	LL	Supreme	No	Screw
326	Lines & Pu	Valve	LL	Supreme	No	Butterfly
327	Lines & Pu	Valve	LL	Supreme	No	Ball
328	Lines & Pu	Pump	LL	Supreme	No	Ball
329	Lines & Pu	Valve	LL	Supreme	No	Ball
330	Lines & Pu	Valve	LL	Supreme	No	Ball

Radian ID	Size	Screening Value	Comments
309	1/2"	0	1/2" Ball
310	6"	0	6" Check
311		0	Tube
312		1	Tube
313	12"	5	12" BFLY
314	6"	0	6" BFLY
315	3/8"	0	3/8" Ball
316		0	
317	1/2"	0	1/2" Ball
318		1	
319	1/2"	0	1/2" Ball
320	1/2"	7	1/2" Ball
321	6"	0	6" Check
322	6"	2	6" BFLY
323		0	Screw
324		0	Screw
325		1	Screw
326	6"	0	6" BFLY
327	1/2"	0	1/2" Ball
328		0	
329	1/2"	0	1/2" Ball
330	1/2"	7	1/2" Ball

Radian ID	Location	Type	Phase	Product	Load	Subtype
331	- Lines & Pu	Valve	LL	Supreme	No	Check
332	- Lines & Pu	Valve	LL	Supreme	No	Butterfly
333	- Lines & Pu	Valve	LL	Supreme	No	Check
334	Lines & Pu	Valve	LL	Supreme	No	Butterfly
335	Lines & Pu	Valve	LL	Supreme	No	Ball
336	Lines & Pu	Conct*	LL	Supreme	No	Screw
337	Lines & Pu	Conct*	LL	Supreme	No	Flange
338	Lines & Pu	Conct*	LL	Supreme	No	Screw
339	Tank 942 UL	Valve	LL	Unleaded	No	Control
340	Tank 942 UL	Valve	LL	Unleaded	No	Ball
341	Tank 942 UL	Valve	LL	Unleaded	No	Ball
342	Tank 942 UL	Valve	LL	Unleaded	No	Gate
343	Tank 942	Valve	LL		No	Gate
344	Tank 942	Valve	LL		No	Gate
345	Tank 942	Other	LL		No	PRV
346	Tank 942	Conct*	LL		No	Screw
347	Tank 942	Conct*	LL		No	Flange
348	Tank 942	Valve	LL		No	Gate
349	Tank 942	Valve	LL		No	Gate
350	Tank 942	Valve	LL		No	Gate
351	Tank 942	OEL	LL		No	Gate
352	Tank 942	Valve	LL		No	Butterfly

Radian ID	Size	Screening Value	Comments
331	6"	0.0	6" Check
332	6"	0.0	6" BFLY
333	6"	0.0	6" Check
334	6"	0.0	6" BFLY
335	1/2"	0.0	1/2" Ball
336		0.0	Screw
337		0.0	Flange
338		7.0	Screw
339	12"	5.0	12" Control
340	3/8"	0.0	3/8" Ball
341	3/8"	0.0	3/8" Ball
342	1/2"	3.0	1/2" Gate
343	1/2"	0.0	1/2" Gate
344	1/2"	2.0	1/2" Gate
345	1"	0.0	1" Pressure Release Valve
346		0.0	Screw
347		0.0	Flange
348	4"	0.0	4" Gate
349	2"	0.0	2" Gate
350	2"	0.0	2" Gate
351		4000.0	Dripping liquid 10 drops/minute
352	4"	0.0	4" BFLY

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Radian ID	Location	Type	Phase	Product	Load	Subtype
353	Tank 942	Valve	LL		No	Control	375	Lines & Pumps	Valve	LL	Clea	No	
354	Tank 942	Valve	LL		No	Gate	376	Lines & Pumps	Valve	LL	Clea	No	Ball
355	Tank 942	Other	LL		No	PRV	377	Lines & Pumps	Valve	LL	Clea	No	Ball
356	Tank 942	Valve	LL		No	Gate	378	Lines & Pumps	Pump	LL	Clea	No	
357	Tank 942	Valve	LL		No	Gate	379	Lines & Pumps	Valve	LL	CLUL	No	Gate
358	Tank 942	Conct*	LL		No	Screw	380	Lines & Pumps	Valve	LL	CLUL	No	Check
359	Tank 942	Conct*	LL		No	Screw	381	Lines & Pumps	Valve	LL	CLUL	No	Butterfly
360	Tank 942	Conct*	LL		No	Flange	382	Lines & Pumps	Valve	LL	CLUL	No	Butterfly
361	Tank 942	Valve	LL		No	Gate	383	Lines & Pumps	Valve	LL	CLUL	No	Gate
362	Tank 942	Valve	LL		No	Gate	384	Lines & Pumps	Valve	LL	CLUL	No	Gate
363	Tank 942	Valve	LL		No	Gate	385	Lines & Pumps	Conct*	LL	CLUL	No	Flange
364	Tank 942	Valve	LL		No	Gate	386	Lines & Pumps	Conct*	LL	CLUL	No	Screw
365	Tank 942	Valve	LL		No	Gate	387	Lines & Pumps	Conct*	LL	CLUL	No	Screw
366	Tank 942	Conct*	LL		No	Screw	388	Lines & Pumps	Valve	LL	CLUL	No	Butterfly
367	Tank 942	Conct*	LL		No	Screw	389	Lines & Pumps	Valve	LL	CLUL	No	Ball
368	Tank 942	Valve	LL		No	Gate	390	Lines & Pumps	Valve	LL	CLUL	No	Ball
369	Tank 942	Valve	LL		No	Gate	391	Lines & Pumps	OEL	LL	CLUL	No	
370	Tank 942	Valve	LL		No	Gate	392	Lines & Pumps	Valve	LL	CLUL	No	Ball
371	Tank 942	Valve	LL		No	Gate	393	Lines & Pumps	Pump	LL	CLUL	No	
372	Tank 942	Conct*	LL		No	Screw	394	Lines & Pumps	Valve	LL	CLUL	No	Ball
373	Tank 942	Conct*	LL		No	Flange	395	Lines & Pumps	Valve	LL	CLUL	No	Check
374	Tank 942	Other	LL		No	PRV	396	Lines & Pumps	Valve	LL	CL	No	Butterfly

Radian ID	Size	Screening Value	Comments	Radian ID	Size	Screening Value	Comments
353	12"	15.0	12" Control (plug)	375	6"	0.0	6"
354	1 1/2"	0.0	1 1/2" Gate	376	1 1/2"	0.0	1 1/2" Ball
355	1"	0.0	1" Pressure Release Valve	377	1 1/2"	0.0	1 1/2" Ball
356	1 1/2"	0.0	1 1/2" Gate	378		1.5	
357	1 1/2"	0.0	1 1/2" Gate	379	1 1/2"	0.0	1 1/2" Gate
358		0.0	Screw	380	6"	0.0	6" Check
359		0.0	Flange	381	6"	0.0	6" 8FLY
360		0.0	4" Gate	382	6"	0.0	6" Check
361	4"	8.0	1" Gate	383	6"	0.0	6" 8FLY
362	1"	0.0	1" Gate	384	1"	0.0	1" Gate
363	6"	24.0	6" Gate	385		0.0	Flange
364	1 1/2"	0.0	1 1/2" Gate	386		3.0	Screw
365	1 1/2"	0.0	1 1/2" Gate	387		0.0	Screw
366		0.0	Screw	388	6"	0.0	6" 8FLY
367		0.0	Screw	389	1 1/2"	0.0	1 1/2" Ball
368	1 1/2"	0.0	1 1/2" Gate	390	1 1/2"	0.0	1 1/2" Ball
369	1 1/2"	0.0	1 1/2" Gate	391		0.0	
370	1 1/2"	140.0	1 1/2" Gate	392	1 1/2"	0.0	1 1/2" Ball
371	2"	0.0	2" Gate	393	1 1/2"	0.0	1 1/2" Ball
372		0.0	Screw	394	1 1/2"	16.0	1 1/2" Ball
373		0.0	Flange	395	6"	0.0	6" Check
374	1"	0.0	1" Pressure Release Valve	396	6"	0.0	6" 8FLY

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Radian ID	Location	Type	Phase	Product	Load	Subtype
397	Lines & Pumps	Conct*	LL		No	Screw
398	Lines & Pumps	Conct*	LL		No	Tubing
399	Lines & Pumps	Valve	LL		No	Butterfly
400	Lines & Pumps	Valve	LL		No	Butterfly
401	Lines & Pumps	Valve	LL		No	Ball
402	Lines & Pumps	Valve	LL		No	Ball
403	Lines & Pumps	Pump	LL		No	
404	Lines & Pumps	Valve	LL		No	Ball
405	Lines & Pumps	Valve	LL		No	Butterfly
406	Lines & Pumps	Valve	LL		No	Check
407	Lines & Pumps	Valve	LL		No	Check
408	Lines & Pumps	Valve	LL		No	Gate
409	Lines & Pumps	Valve	LL		No	Butterfly
410	Lines & Pumps	Conct*	LL		No	Flange
411	Lines & Pumps	Conct*	LL		No	Screw
412	Lines & Pumps	Conct*	LL		No	Screw
413	Lines & Pumps	Valve	LL		No	Gate
414	Tank 943	Valve	LL		No	Gate
415	Tank 943	Valve	LL		No	Gate
416	Tank 943	Valve	LL		No	Gate
417	Tank 943	Valve	LL		No	Control
418	Tank 943	Other	LL		No	PRV

Radian ID	Size	Screening Value	Comments
397		0.0	Screw
398		0.0	Tube
399	12"	0.0	12" BFLY
400	6"	0.0	6" BFLY
401	1/2"	0.0	1/2" Ball
402	1/2"	0.0	1/2" Ball
403		0.0	
404	1/2"	0.0	1/2" Ball
405	6"	0.0	6" BFLY
406	6"	0.0	6" Check
407	6"	0.0	6" Check
408	1/2"	2.0	1/2" Gate
409	6"	0.0	6" BFLY
410		0.0	Flange
411		0.0	Screw
412		0.0	Screw
413	3/8"	0.0	3/8" Gate
414	4"	25.0	4" Gate
415	1/2"	65.0	1/2" Gate
416	1/2"	0.0	1/2" Gate
417	12"	0.0	12" Control
418	1"	0.0	1" Pressure Release Valve

Radian ID	Location	Type	Phase	Product	Load	Subtype
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Radian ID	Size	Screening Value	Comments
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Radian ID	Location	Type	Phase	Product	Load	Subtype
419	Tank 943	Valve	LL		No	Gate
420	Tank 943	Valve	LL		No	Gate
421	Tank 943	Conct*	LL		No	Screw
422	Tank 943	Conct*	LL		No	Screw
423	Tank 943	Valve	LL		No	Gate
424	Tank 943	Valve	LL		No	Gate
425	Tank 943	Valve	LL		No	Check
426	Tank 943	Other	LL		No	PRV
427	Tank 943	Valve	LL		No	Gate
428	Tank 943	Valve	LL		No	Gate
429	Tank 943	Conct*	LL		No	Union
430	Tank 943	Conct*	LL		No	Screw
431	Tank 943	Valve	LL		No	Butterfly
432	Tank 943	Valve	LL		No	Gate
433	Tank 943	OEL	LL		No	
434	Tank 943	Valve	LL		No	Butterfly
435	Tank 943	Valve	LL		No	Gate
436	Tank 943	Conct*	LL		No	Flange
437	Tank 943	Valve	LL		No	Control
438	Tank 943	Valve	LL		No	Ball
439	Tank 943	Other	LL		No	PRV
440	Tank 943	Valve	LL		No	Gate

Radian ID	Size	Screening Value	Comments
419	1/2"	0.0	1/2" Gate
420	1/2"	0.0	1/2" Gate
421		7.5	Screw
422		0.0	Screw
423	1/2"	0.0	1/2" Gate
424	8"	3.5	8" Gate
425	4"	0.0	4" Check
426	1"	0.0	1" Pressure Release Valve
427	1/2"	0.5	1/2" Gate
428	1/2"	0.0	1/2" Gate
429		0.0	Union
430		0.0	Screw
431	4"	0.0	4" BFLY
432	2"	0.0	2" Gate
433		2000.0	
434	3"	0.0	3" BFLY
435	4"	28.0	4" Gate
436		0.0	Flange
437	12"	0.0	12" Control (plug)
438	1/2"	0.0	1/2" Ball
439	1"	0.0	1" Pressure Release Valve
440	1/2"	2.0	1/2" Gate

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Radian ID	Location	Type	Phase	Product	Load	Subtype
441	Tank 943	Valve	LL		No	Gate
442	Tank 943	Conct*	LL		No	Screw
443	Tank 943	Conct*	LL		No	Screw
444	Tank 943	Valve	LL		No	Gate
445	Tank 943	Valve	LL		No	Gate
446	Tank 943	Valve	LL		No	Gate
447	Tank 943	Valve	LL		No	Gate
448	Tank 943	Other	LL		No	PRV
449	Tank 943	Conct*	LL		No	Screw
450	Tank 943	Conct*	LL		No	Screw
451	Tank 943	Valve	LL		No	Gate
452	Tank 943	Valve	LL		No	Gate
453	Tank 943	Valve	LL		No	Gate
454	Tank 943	Other	LL		No	PRV
455	Tank 943	Conct*	LL		No	Screw

Radian ID	Size	Screening Value	Comments
441	1/2"	0.0	1/2" Gate
442		0.0	Screw
443		0.0	Screw
444	1/2"	20.0	1/2" Gate
445	2"	180.0	2" Gate
446	1/2"	0.0	1/2" Gate
447	1/2"	5.0	1/2" Gate
448	1"	0.0	1" Pressure Release Valve
449		0.0	Screw
450		1.0	Screw
451	4"	95.0	4" Gate
452	1/2"	0.0	1/2" Gate
453	1/2"	0.0	1/2" Gate
454	1"	0.0	1" Pressure Release Valve
455		0.0	Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype
456	Tank Pipeline	Valve	LL		Yes	Gate
457	Tank Pipeline	Valve	LL		Yes	Gate
458	Tank Pipeline	Conct*	LL		Yes	Screw
459	Tank Pipeline	Valve	LL		Yes	Gate
460	Tank Pipeline	Valve	LL		Yes	Ball
461	Tank Pipeline	Other	LL		Yes	PRV
462	Tank Pipeline	Conct*	LL		Yes	Screw
463	Tank Pipeline	Valve	LL		Yes	Ball
464	Tank Pipeline	Valve	LL	UL	No	Gate
465	Tank Pipeline	Valve	LL		No	Ball
466	Tank Pipeline	Conct*	LL		No	Screw
467	Tank Pipeline	Valve	LL		No	Butterfly
468	Tank Pipeline	Valve	LL		No	Gate
469	Tank Pipeline	Valve	LL		No	Gate
470	Tank Pipeline	Valve	LL		No	Gate
471	Tank Pipeline	Conct*	LL		No	Flange
472	Tank Pipeline	Valve	LL		Yes	Gate
473	Tank Pipeline	Conct*	LL		Yes	Screw
474	Tank Pipeline	Valve	LL		Yes	Gate
475	Tank Pipeline	Valve	LL		Yes	Ball
476	Tank Pipeline	Conct*	LL		Yes	Screw
477	Tank Pipeline	Valve	LL		Yes	Gate

Radian ID	Size	Screening Value	Comments
456	2"	0	2" Gate
457	4"	41	4" Gate
458		0	Screw
459	1/2"	0	1/2" Gate
460	1"	0	1" Ball
461	1"	0	1" Pressure Release Valve
462		0	Screw
463	1/2"	0	1/2" Ball
464	2"	0	2" Gate
465	1/2"	0	1/2" Ball
466		0	Screw
467	2"	0	2" BFLY
468	1/2"	0	1/2" Gate
469	1/2"	0	1/2" Gate
470	8"	10	8" gate
471		0	Flange
472	4"	0	4" Gate
473		0	Screw
474	1"	0	1" Gate
475	3/8"	0	3/8" Ball
476		0	Screw
477	10"	240	10" Gate

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Radian ID	Location	Type	Phase	Product	Load	Subtype
478	Tank Pipeline	Conct*	LL		Yes	Screwed
479	Tank Pipeline	Valve	LL		Yes	Gate
480	Tank Pipeline	Valve	LL		Yes	Gate
481	Tank Pipeline	Other	LL		Yes	PRV
482	Tank Pipeline	Valve	LL		Yes	Gate
483	Tank Pipeline	Conct*	LL		Yes	Screwed
484	Tank Pipeline	Valve	LL		Yes	Gate
485	Tank Pipeline	Valve	LL		Yes	Gate
486	Tank Pipeline	Other	LL		Yes	PRV
487	Tank Pipeline	Conct*	LL		Yes	Screwed
488	Tank Pipeline	Conct*	LL		Yes	Screwed
489	Tank Pipeline	Valve	LL		Yes	Gate
490	Tank Pipeline	Valve	LL		Yes	Gate
491	Tank Pipeline	Conct*	LL		Yes	Union
492	Tank Pipeline	Valve	LL		Yes	Gate
493	Tank Pipeline	Valve	LL		Yes	Gate
494	Tank Pipeline	Other	LL		Yes	PRV
495	Tank Pipeline	Conct*	LL		Yes	Screwed
496	Tank Pipeline	Valve	LL		Yes	Gate
497	Refill St.	Conct*	LL		No	Hose
498	Refill St.	Valve	LL		No	Butterfly
499	Refill St.	Valve	LL		No	Gate

Radian ID	Size	Screening Value	Comments
478		0	Screw
479	1/2"	12	1/2" Gate
480	3/8"	9	3/8" Gate
481	1"	0	1" Pressure Release Valve
482	1"	8	1" Gate
483		0	Screw
484	1"	2	1" Gate
485	3/8"	8	3/8" Gate
486	1"	0	1" Pressure Release Valve
487		0	Screw
488		0	Screw
489	1/2"	8	1/2" Gate
490	1"	8	1" Gate
491		0	Union
492	1"	2	1" Gate
493	1/2"	0	1/2" Gate
494	1"	0	1" Pressure Release Valve
495		0	Screw
496	3/8"	0	3/8" Gate
497		0	Hose
498	3"	0	3" BFLY
499	2"	0	2" Gate

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Radian ID	Location	Type	Phase	Product	Load	Subtype
500	Refill St.	Conct*	LL		No	Hose
501	Refill St.	Valve	LL		No	Butterfly
502	Refill St.	Valve	LL		No	Check
503	Refill St.	OEL	LL		No	
504	Refill St.	Other	LL		No	Cover
505	Refill St.	Other	LL		No	Cover
506	Refill St.	Conct*	LL		No	Screwed
507	Refill St.	Pump	LL		No	
508	Refill St.	Valve	LL		No	Control
509	Refill St.	Conct*	LL		No	Screwed
510	Refill St.	Conct*	LL		No	Screwed
511	Refill St.	Valve	LL		No	Gate
512	Refill St.	Other	LL		No	PRV
513	Refill St.	Conct*	LL		No	Screwed
514	Refill St.	Conct*	LL		No	Screwed
515	Refill St.	Valve	LL		No	Control
516	Refill St.	Valve	LL	Supreme	No	Control
517	Refill St.	Valve	LL	Clear	No	Control
518	Refill St.	Valve	LL	Reg	No	Control
519	Refill St.	Conct*	LL		No	Flange
520	Refill St.	Valve	LL		No	Check
521	Refill St.	Valve	LL		No	Check

Radian ID	Size	Screening Value	Comments
500		0	Hose
501	3"	0	3" BFLY
502	3"	0	3" Check
503		0	OELine
504		340	Cover
505		30000	Cover
506		0	Screw
507		0	Pump
508	3"	0	3" Control
509		0	Screw
510		0	Screw
511	1"	6	1" Gate
512	1"	0	1" Pressure Release Valve
513		0	Screw 1/2" Gate
514		0	Screw
515	4"	2	4" Control
516	4"	5	4" Control
517	4"	0	4" Control
518	4"	0	4" Control
519		0	Flange
520	4"	0	4" Check
521	4"	0	4" Check

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Radian ID	Location	Type	Phase	Product	Load
522	Refill St.	Valve	LL		No
523	Refill St.	Valve	LL		No
524	Refill St.	Conct*	LL		No
525	VRU Pumps	Valve	LL		No
526	VRU Pumps	Valve	LL		No
527	VRU Pumps	Valve	LL		No
528	VRU Pumps	Valve	LL		No
529	VRU Pumps	Conct	LL		No
530	VRU Pumps	Valve	LL		No
531	VRU Pumps	Conct*	LL		No
532	VRU	Conct*	Gas		Yes
533	VRU	Conct*	Gas		Yes
534	VRU	Conct*	Gas		Yes
535	VRU	Conct*	Gas		No
536	VRU	Conct*	Gas		No
537	VRU	Conct*	Gas		No
538	VRU	Conct*	Gas		No
539	VRU	Conct*	Gas		No
540	VRU	Conct*	Gas		No
541	VRU	Conct*	Gas		No
542	VRU	Conct*	Gas		No
543	VRU	Conct*	Gas		No

Radian ID	Subtype	Size	Screening Value	Comments
544	Union	1"	0	Union
545	Gate	1"	0	1" Gate
546	Gate	1"	0	1" Gate
547	Gate	1"	0	1" Gate
548	Check	7/8"	0	7/8" Check
549	Gate	1/2"	0	1/2" Gate
550	Gate	3/8"	0	3/8" Gate
551	Gate	3/8"	0	3/8" Gate
552	Gate	3/8"	0	3/8" Gate
553	Gate	1/2"	0	1/2" Gate
554	Gate	1"	0	1" Gate
555	Check	1"	0	1" Check
556	Check	1"	0	1" Check
557	Screw		0	Screw
558	Screw		0	Screw
559	Gate	1"	0	1" Gate
560	Tubing		0	Tube
561	Screw		0	Screw
562	Control	2"	0	2" Control
563	Ball	3/8"	0	3/8" Ball
564	Ball	1/2"	0	1/2" Ball
565			15000	

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Radian ID	Location	Type	Phase	Product	Load
566	VRUI	Valve	Gas		No
567	VRUI	OEL	Gas		No
568	VRUI	Other	Gas		No
569	VRUI	Other	Gas		No
570	VRUI	Other	Gas		No
571	Load Dock 1	Conct*	LL	Clear UL	No
572	Load Dock 1	Conct*	LL	Clear UL	No
573	Load Dock 1	Conct*	LL	Clear UL	No
574	Load Rack 1	Valve	LL	Clear UL	No
575	Load Rack 1	Valve	LL	Clear UL	No
576	Load Rack 1	Valve	LL	Clear UL	No
577	Load Rack 1	Conct*	LL	Clear UL	No
578	Load Rack 1	Conct*	LL	Reg	No
579	Load Rack 1	Valve	LL	Reg	No
580	Load Rack 1	Valve	LL	Reg	No
581	Load Rack 1	Valve	LL	Reg	No
582	Load Rack 1	Valve	LL	Reg	No
583	Load Rack 1	Conct*	LL	Prem	No
584	Load Rack 1	Conct*	LL	Prem	No
585	Load Rack 1	Valve	LL	Prem	No
586	Load Rack 1	Valve	LL	Prem	No
587	Load Rack 1	Valve	LL	Prem	No

Radian ID	Subtype	Size	Screening Value	Comments
566	Ball	3/8"	0	3/8" Ball
567			0	
568	Hatch		70000	8" Hatch Vover
569	Hatch		160	8" Hatch Vover
570	Hatch		320	8" Hatch Vover
571	Screw		0	Screw
572	Screw		0	Screw
573	Tubing		0	Tube
574	Meter	4"	10	4" Meter
575	Ball	3/8"	0	3/8" Ball
576	Butterfly	3"	0	3" BFLY
577	Screw		0	Screw
578	Screw		0	Screw
579	Butterfly	3"	0	3" BFLY
580	Ball	3/8"	0	3/8" Ball
581	Meter	4"	0	4" Meter
582	Ball	3/8"	0	3/8" Ball
583	Flange		0	Flange
584	Tubing		0	Tube
585	Ball	3/8"	0	3/8" Ball
586	Ball	3/8"	0	3/8" Ball
587	Meter	4"	0	4" Meter

Radian ID	Location	Type	Phase	Product	Load	Subtype
588	Load Rack 1	Conct*	LL		No	Screw
589	Load Rack 1	Conct*	LL		No	Screw
590	Load Rack 1	Conct*	LL	C1 UL ADD	No	Screw
591	Load Rack 1	Conct*	LL	C1 UL ADD	No	Screw
592	Load Rack 1	Conct*	LL	C1 UL ADD	No	Screw
593	Load Rack 1	Valve	LL	C1 UL ADD	No	3/8" Ball
594	Load Rack 1	Valve	LL	C1 UL ADD	No	3/8" Ball
595	Load Rack 1	Valve	LL	C1 UL ADD	No	3/8" Ball
596	Load Rack 1	Conct*	LL		No	Union
597	Load Rack 1	Conct*	LL	RegADD	No	Screw
598	Load Rack 1	Conct*	LL	1 Reg	No	Tubing
599	Load Rack 1	Conct*	LL	Additive	No	Screw
600	Load Rack 1	Conct*	LL		No	Screw
601	Load Rack 1	Conct*	LL		No	Screw
602	Load Rack 1	Valve	LL		No	Ball
603	Load Rack 1	Valve	LL		No	Ball
604	Load Rack 1	Valve	LL		No	Ball
605	Load Rack 1	Conct*	LL	PremADD	No	Screw
606	Load Rack 1	Conct*	LL	PremADD	No	Tubing
607	Load Rack 1	Conct*	LL	PremADD	Yes	Screw
608	Load Rack 1	Conct*	LL	PremADD	Yes	Screw
609	Load Rack 1	Conct*	LL	PremADD	Yes	Screw

Radian ID	Size	Screening Value	Comments
588		0	Screw
589		0	Screw
590		0	Screw
591		0	Screw
592		0	Screw
593	3/8"	0	3/8" Ball
594	3/8"	0	3/8" Ball
595	3/8"	0	3/8" Ball
596		0	Union
597		0	Screw
598		0	Screw
599		0	Tube
600		0	Tube
601		0	Screw
602	3/8"	0	3/8" Ball
603	3/8"	0	3/8" Ball
604	3/8"	0	3/8" Ball
605		0	Screw
606		0	Tube
607		0	Screw
608		0	Screw
609		0	Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype
610	Load Rack 1	Conct*	LL	PremADD	Yes	Tubing
611	Load Rack 1	Conct*	LL	PremADD	Yes	Tubing
612	Load Rack 1	Valve	LL	PremADD	Yes	Ball
613	Load Rack 1	Valve	LL	PremADD	Yes	Ball
614	Load Rack 1	Valve	LL	PremADD	Yes	Ball
615	Load Rack 1	LA	Gas		Yes	
616	Load Rack 1	Conct*	Gas		Yes	Hose
617	Load Rack 1	Conct*	LL	Clear UL	Yes	Tubing
618	Load Rack 1	Other	Gas	VRU	Yes	Post
619	Load Rack 1	LA	Gas	VRU	Yes	Hose
620	Load Rack 1	LA	Gas	VRU	No	
621	Load Rack 1	LA	LL	Premium	No	Hose
622	Load Rack 1	LA	LL		No	Hose
623	Load Rack 1	LA	LL	UL	No	Hose
624	Load Rack 1	Conct*	LL	UL	No	Flange
625	Load Rack 1	Conct*	LL	UL	No	Hose
626	Load Rack 1	Conct*	LL	UL	No	Hose
627	Load Rack 1	Conct*	LL	UL	No	Flange
628	Load Rack 1	Conct*	LL		No	Flange
629	Load Rack 1	Conct*	LL	Premium	Yes	Screw
630	Load Rack 1	Conct*	LL		No	Hose
631	Load Rack 1	Conct*	LL	Clear	Yes	Screw

Radian ID	Size	Screening Value	Comments
610		0	Tube
611		4	Tube
612	3/8"	0	3/8" Ball
613	3/8"	0	3/8" Ball
614	3/8"	0	3/8" Ball
615		4000	C
616		0	Hose
617		290	Tube
618		470	Hose -VRU conn to manifold
619		110	Hose -VR conn. to truck-reconnected
620		50	B618
621		15	Hose -Prem. fill line
622		60	Hose -ECI fill hose
623		110	Hose -UL fill hose -wet seal
624		0	Flange
625		0	Hose
626		0	Hose
627		0	Flange
628		0	Flange -not w/in lcm
629		0	Screw -Prem. fill line
630		0	Hose -ECI fill line
631		0	Screw

Radian ID	Location	Type	Phase	Product	Load
632	Load Rack 1	Conct*	LL	Clear	Yes
633	Load Rack 1	Valve	LL	Clear	Yes
634	Load Rack 1	Valve	LL	Clear	Yes
635	Load Rack 1	Valve	LL	Clear	Yes
636	Load Rack 1	Valve	LL	Clear	Yes
637	Load Rack 1	Conct*	LL	Reg.	No
638	Load Rack 1	Conct*	LL	Reg.	No
639	Load Rack 1	Valve	LL	Reg.	No
640	Load Rack 1	Valve	LL	Reg.	No
641	Load Rack 1	Valve	LL	Reg.	No
642	Load Rack 1	Valve	LL	Reg.	No
643	Load Rack 1	Conct*	LL	Premium	No
644	Load Rack 1	Conct*	LL	Premium	No
645	Load Rack 1	Valve	LL	Premium	No
646	Load Rack 1	Conct	LL	Premium	No
647	Load Rack 1	Valve	LL	Premium	No
648	Load Rack 1	Valve	LL	Premium	No
649	Load Rack 1	Conct*	LL	Premium	No
650	Load Rack 1	Valve	LL	Premium	No
651	Load Rack 1	Valve	LL	Premium	No
652	Load Rack 1	Conct*	LL	UL Add.	No
653	Load Rack 1	Conct*	LL	UL Add.	No

Radian ID	Subtype	Size	Screening Value	Comments
632	Screw	3/8"	0	Screw
633	Ball	4"	0	Ball 3/8"
634	Meter	3"	0	Meter 4"
635	Butterfly	3/8"	0	Butterfly 3"
636	Ball	3/8"	0	Ball 3/8"
637	Flange		0	Flange
638	Tubing		0	Tubing
639	Ball	3/8"	0	Ball 3/8"
640	Meter	4"	0	Meter 4"
641	Butterfly	3"	0	Butterfly 3"
642	Ball	3/8"	0	Ball 3/8"
643	Flange		0	Flange
644	Screw		0	Screw
645	Ball	3/8"	0	Ball 3/8"
646	Screw		1200	Screw
647	Ball	3/8"	0	Ball 3/8"
648	Ball	3/8"	0	Ball 3/8"
649	Screw		0	Screw
650	Butterfly	3"	0	Butterfly 3"
651	Meter	4"	0	Meter 4"
652	Screw		0	Screw
653	Tubing		0	Tubing

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Radian ID	Location	Type	Phase	Product	Load	Subtype
654	Load Rack 1	Conct*	LL	UL Add.	No	Screwed
655	Load Rack 1	Conct*	LL	UL Add.	No	Tubing
656	Load Rack 1	Conct*	LL	UL Add.	No	Screwed
657	Load Rack 1	Valve	LL	UL Add.	No	Ball
658	Load Rack 1	Valve	LL	UL Add.	No	Ball
659	Load Rack 1	Valve	LL	UL Add.	No	Ball
660	Load Rack 1	Conct*	LL	UL Add.	No	Screwed
661	Load Rack 1	Conct*	LL	UL Add.	No	Screwed
662	Load Rack 1	Conct*	LL	UL Add.	No	Tubing
663	Load Rack 1	Conct*	LL	UL Add.	No	Screwed
664	Load Rack 1	Conct*	LL	UL Add.	No	Screwed
665	Load Rack 1	Conct*	LL	UL Add.	No	Screwed
666	Load Rack 1	Valve	LL	UL Add.	No	Ball
667	Load Rack 1	Valve	LL	UL Add.	No	Ball
668	Load Rack 1	Valve	LL	UL Add.	No	Ball
669	Load Rack 1	Conct*	LL	Prem. Add	Yes	Union
670	Load Rack 1	Conct*	LL	Prem. Add	Yes	Tubing
671	Load Rack 1	Conct*	LL	Prem. Add	Yes	Tubing
672	Load Rack 1	Conct*	LL	Prem. Add	Yes	Screwed
673	Load Rack 1	Conct*	LL	Prem. Add	Yes	Screwed
674	Load Rack 1	Conct*	LL	Prem. Add	Yes	Union
675	Load Rack 1	Conct*	LL	Prem. Add	Yes	Union

Radian ID	Size	Screening Value	Comments
654		0	Screw
655		0	Tubing
656		0	Screw
657	3/8"	0	Ball 3/8"
658	3/8"	0	Ball 3/8"
659	3/8"	0	Ball 3/8"
660		0	Screw
661		0	Screw
662		0	Tubing
663		0	Screw
664		0	Screw
665		0	Screw
666		0	Screw
667	3/8"	0	Ball 3/8"
668	3/8"	0	Ball 3/8"
669	3/8"	0	Ball 3/8"
670		0	Union
671		0	Tubing
672		0	Tubing
673		0	Screw
674		0	Screw
675		0	Union

Radian ID	Location	Type	Phase	Product	Load	Subtype
676	Load Rack 1	Valve	LL	Prem. Add	Yes	Ball
677	Load Rack 1	Valve	LL	Prem. Add	Yes	Ball
678	Load Rack 1	Valve	LL	Prem. Add	Yes	Ball
679	Load Rack 2	Conct*	LL	Clear	No	Flange
680	Load Rack 2	Conct*	LL	Clear	No	Screwed
681	Load Rack 2	Conct*	LL	Clear	Yes	Screwed
682	Load Rack 2	Conct*	LL	Clear	Yes	Screwed
683	Load Rack 2	Valve	LL	Clear	Yes	Butterfly
684	Load Rack 2	Valve	LL	Clear	Yes	Ball
685	Load Rack 2	Valve	LL	Clear	Yes	Ball
686	Load Rack 2	Valve	LL	Clear	Yes	Ball
687	Load Rack 2	Valve	LL	Clear	No	Meter
688	Load Rack 2	Other	Gas	VRU	Yes	Post
689	Load Rack 2	Other	Gas	VRU	Yes	Post
690	Load Rack 2	LA	Gas	VRU	Yes	Hose
691	Load Rack 2	Conct*	LL	Reg.	No	Screwed
692	Load Rack 2	Conct*	LL	Reg.	No	Tubing
693	Load Rack 2	Conct*	LL	Reg.	No	Screwed
694	Load Rack 2	Conct*	LL	Reg.	No	Screwed
695	Load Rack 2	Valve	LL	Reg.	No	Ball
696	Load Rack 2	Valve	LL	Reg.	No	Ball
697	Load Rack 2	Valve	LL	Reg.	No	Ball

Radian ID	Size	Screening Value	Comments
676	3/8"	0	Ball 3/8"
677	3/8"	0	Ball 3/8"
678	3/8"	0	Ball 3/8"
679		0	Flange
680		0	Screw
681		0	Screw
682		0	Screw
683	3"	0	Butterfly 3"
684	3/8"	0	Ball 3/8"
685	3/8"	0	Ball 3/8"
686	3/8"	0	Ball 3/8"
687	4"	0	Meter 4"
688		2500	Hose -open conn. to VR manifold
689		900	Hose -open conn. to VR manifold
690		0	Hose -VR conn. at truck
691		0	Screw
692		0	Tubing
693		0	Screw
694		0	Screw
695	3/8"	0	Ball 3/8"
696	3/8"	0	Ball 3/8"
697	3/8"	0	Ball 3/8"

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Radian ID	Location	Type	Phase	Product	Load	Subtype
698	Load Rack 2	Valve	LL	Reg.	No	Meter	720	Load Rack 2	Conct*	LL	Add.	No	Screw
699	Load Rack 2	Valve	LL	Reg.	No	Butterfly	721	Load Rack 2	Conct*	LL	Add.	No	Screw
700	Load Rack 2	Conct*	LL	Premium	No	Flange	722	Load Rack 2	Conct*	LL	Add.	No	Screw
701	Load Rack 2	Conct*	LL	Premium	No	Screw	723	Load Rack 2	Conct*	LL	Add.	No	Screw
702	Load Rack 2	Conct*	LL	Premium	No	Screw	724	Load Rack 2	Valve	LL	Add.	No	Ball
703	Load Rack 2	Conct*	LL	Premium	No	Screw	725	Load Rack 2	Valve	LL	Add.	No	Ball
704	Load Rack 2	Valve	LL	Premium	No	Ball	726	Load Rack 2	Valve	LL	Add.	No	Ball
705	Load Rack 2	Valve	LL	Premium	No	Ball	727	Load Rack 2	Conct*	LL	Prem. Add	No	Screw
706	Load Rack 2	Valve	LL	Premium	No	Ball	728	Load Rack 2	Conct*	LL	Prem. Add	No	Screw
707	Load Rack 2	Conct*	LL	UL Add.	No	Screw	729	Load Rack 2	Conct*	LL	Prem. Add	No	Screw
708	Load Rack 2	Conct*	LL	UL Add.	No	Tubing	730	Load Rack 2	Conct*	LL	Prem. Add	No	Screw
709	Load Rack 2	Conct*	LL	UL Add.	No	Tubing	731	Load Rack 2	Conct*	LL	Prem. Add	No	Screw
710	Load Rack 2	Conct*	LL	UL Add.	No	Screw	732	Load Rack 2	Conct*	LL	Prem. Add	No	Screw
711	Load Rack 2	Conct*	LL	UL Add.	No	Tubing	733	Load Rack 2	Conct*	LL	Prem. Add	No	Tubing
712	Load Rack 2	Conct*	LL	UL Add.	No	Screw	734	Load Rack 2	Valve	LL	Prem. Add	No	Ball
713	Load Rack 2	Conct*	LL	UL Add.	No	Screw	735	Load Rack 2	Valve	LL	Prem. Add	No	Ball
714	Load Rack 2	Valve	LL	UL Add.	No	Ball	736	Load Rack 2	Valve	LL	Prem. Add	No	Ball
715	Load Rack 2	Valve	LL	UL Add.	No	Ball	737	Load Rack 2	Conct*	LL	UL	No	Hose
716	Load Rack 2	Valve	LL	UL Add.	No	Ball	738	Load Rack 2	Conct*	LL	EC1	No	Flange
717	Load Rack 2	Conct*	LL	Add.	No	Screw	739	Load Rack 2	Conct*	LL	Premium	No	Flange
718	Load Rack 2	Conct*	LL	Add.	No	Screw	740	Load Rack 2	LA	LL	Premium	No	Check
719	Load Rack 2	Conct*	LL	Add.	No	Screw	741	Load Rack 2	LA	LL	Premium	No	Check

Radian ID	Size	Screening Value	Comments	Radian ID	Size	Screening Value	Comments
698	4"	0	Meter 4"	720		0	Screw
699	3"	0	Butterfly 3"	721		1	Screw
700		4	Flange	722		0	Screw
701		0	Screw	723		0	Screw
702		0	Screw	724	3/8"	0	Ball 3/8"
703		0	Screw	725	3/8"	0	Ball 3/8"
704	3/8"	19	Ball 3/8"	726	3/8"	0	Ball 3/8"
705	3/8"	0	Ball 3/8"	727		0	Screw
706	3/8"	0	Ball 3/8"	728		0	Screw
707		0	Screw	729		0	Screw
708		0	Tubing	730		0	Screw
709		0	Tubing	731		0	Screw
710		0	Screw	732		0	Screw
711		0	Tubing	733		0	Tubing
712		0	Screw -wet	734	3/8"	0	Ball 3/8"
713		0	Screw	735	3/8"	0	Ball 3/8"
714	3/8"	0	Ball 3/8"	736	3/8"	0	Ball 3/8"
715	3/8"	0	Ball 3/8"	737		3	Hose
716	3/8"	0	Ball 3/8"	738		6	Flange
717		0	Screw	739		0	Flange
718		0	Screw	740	4"	44	Check 4"
719		0	Screw	741	4"	0	Check 4"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
742	Load Rack 2	LA	LL	UL	No	Check
743	Load Rack 2	LA	Gas	VRU	No	Hose
744	Load Rack 2	LA	Gas	VRU	No	Hose
748	Load Rack 2	Conct*	LL		No	Tubing
749	Load Rack 2	Conct*	LL		No	Flange
750	Load Rack 2	Conct*	LL		No	Meter
751	Load Rack 2	Valve	LL		No	Ball
752	Load Rack 2	Valve	LL		No	Ball
753	Load Rack 2	Valve	LL		No	Ball
754	Load Rack 2	Valve	LL		No	Butterfly
755	Load Rack 2	Conct*	LL		No	Tubing
756	Load Rack 2	Conct*	LL	Reg.	No	Screw
757	Load Rack 2	Conct*	LL	Reg.	No	Screw
758	Load Rack 2	Conct*	LL	Reg.	No	Screw
759	Load Rack 2	Valve	LL	Reg.	No	
760	Load Rack 2	Valve	LL	Reg.	No	
761	Load Rack 2	Valve	LL	Reg.	No	Meter
762	Load Rack 2	Valve	LL	Reg.	No	Butterfly
763	Load Rack 2	Valve	LL	Reg.	No	Screw
764	Load Rack 2	Conct*	LL	Premium	No	Tubing
765	Load Rack 2	Conct*	LL	Premium	No	Flange
766	Load Rack 2	Conct*	LL	Premium	No	

Radian ID	Size	Screening Value	Comments
742	4"	190	Check 4"
743		2000	Hose -VR conn. very loose
744		73	Hose -VR conn. closed (repeat)
748		3	Tubing
749		0	Tubing
750		0	Flange
751	4"	29	Meter 4"
752	3/8"	0	Ball 3/8"
753	3/8"	4	Ball 3/8"
754	3/8"	0	Ball 3/8"
755	3"	0	Butterfly 3"
756		0	Tubing
757		0	Screw
758		0	Screw
759	3/8"	2	3/8"
760	3/8"	3	3/8"
761	3/8"	0	3/8"
762	4"	3	Meter 4"
763	3"	0	Butterfly 3"
764		0	Screw
765		0	Tubing
766		6	Flange

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Radian ID	Location	Type	Phase	Product	Load	Subtype
767	Load Rack 2	Valve	LL	Premium	No	Meter
768	Load Rack 2	Valve	LL	Premium	No	Butterfly
769	Load Rack 2	Valve	LL	Premium	No	Ball
770	Load Rack 2	Valve	LL	Premium	No	Ball
771	Load Rack 2	Valve	LL	Premium	No	Ball
772	Load Rack 2	Valve	LL	Premium	No	Ball
773	Load Rack 2	Conct*	LL	Premium	No	Flange
774	Load Rack 2	LA	LL	Reg.	No	Check
775	Load Rack 2	LA	LL		No	Check
776	Load Rack 2	LA	LL	Premium	No	Check
777	Load Rack 2	Conct*	LL	Reg. Add	No	Tubing
778	Load Rack 2	Conct*	LL	Reg. Add	No	Screw
779	Load Rack 2	Conct*	LL	Reg. Add	No	Tubing
780	Load Rack 2	Conct*	LL	Reg. Add	No	Screw
781	Load Rack 2	Conct*	LL	Reg. Add	No	Union
782	Load Rack 2	Conct*	LL	Reg. Add	No	Tubing
783	Load Rack 2	Valve	LL	Reg. Add	No	Ball
784	Load Rack 2	Valve	LL	Reg. Add	No	Ball
785	Load Rack 2	Valve	LL	Reg. Add	No	Ball
786	Load Rack 2	Conct*	LL	Reg. Add	No	Screw
787	Load Rack 2	Conct*	LL	Add.	No	Screw
788	Load Rack 2	Conct*	LL	Add.	No	Tubing

Radian ID	Size	Screening Value	Comments
767	4"	74	Meter 4"
768	3"	0	Butterfly 3"
769	3/8"	0	Ball 3/8"
770	3/8"	0	Ball 3/8"
771	3/8"	0	Ball 3/8"
772	1/2"	0	Ball .5"
773		0	Flange -not w/in 1cm
774	4"	4	Check 4"
775	4"	2	Check 4"
776	4"	2	Check 4"
777		0	Tubing
778		0	Screw
779		0	Tubing
780		0	Screw
781		0	Union
782		0	Tubing
783	3/8"	0	Ball 3/8"
784	3/8"	0	Ball 3/8"
785	3/8"	0	Ball 3/8"
786		0	Screw
787		0	Screw
788		0	Tubing

Radian ID	Location	Type	Phase	Product	Load	Subtype	Radian ID	Location	Type	Phase	Product	Load	Subtype	Size
789	Load Rack 2	Conct*	LL	Add.	No	Tubing	811	Load Rack 3	Conct*	LL		No	Screw	
790	Load Rack 2	Conct*	LL	Add.	No	Screw	812	Load Rack 3	Conct*	LL		No	Screw	
791	Load Rack 2	Conct*	LL	Add.	No	Screw	813	Load Rack 3	Conct*	LL		No	Screw	
792	Load Rack 2	Valve	LL	Add.	No	Ball	814	Load Rack 3	Valve	LL		No	Meter	4"
793	Load Rack 2	Valve	LL	Add.	No	Ball	815	Load Rack 3	Valve	LL		No	Butterfly	3"
794	Load Rack 2	Valve	LL	Add.	No	Ball	816	Load Rack 3	Valve	LL		No	Ball	3/8"
795	Load Rack 2	Conct*	LL	Prem. Add	No	Screw	817	Load Rack 3	Valve	LL		No	Ball	3/8"
796	Load Rack 2	Conct*	LL	Prem. Add	No	Screw	818	Load Rack 3	Valve	LL		No	Ball	3/8"
797	Load Rack 2	Conct*	LL	Prem. Add	No	Screw	819	Load Rack 3	Conct*	LL	Premium	No	Flange	
798	Load Rack 2	Conct*	LL	Prem. Add	No	Screw	820	Load Rack 3	Conct*	LL	Premium	No	Screw	
799	Load Rack 2	Conct*	LL	Prem. Add	No	Screw	821	Load Rack 3	Conct*	LL	Premium	No	Tubing	
800	Load Rack 2	Valve	LL	Prem. Add	No	Ball	822	Load Rack 3	LA	LL	Premium	No	Meter	4"
801	Load Rack 2	Valve	LL	Prem. Add	No	Ball	823	Load Rack 3	Valve	LL	Premium	No	Butterfly	3"
802	Load Rack 3	Valve	LL	Reg.	No	Check	824	Load Rack 3	Valve	LL	Premium	No	Ball	3/8"
803	Load Rack 3	Conct*	LL	Clear	No	Screw	825	Load Rack 3	Valve	LL	Premium	No	Ball	3/8"
804	Load Rack 3	Conct*	LL	Clear	No	Screw	826	Load Rack 3	Valve	LL	Premium	No	Ball	3/8"
805	Load Rack 3	Conct*	LL	Clear	No	Screw	827	Load Rack 3	Valve	Gas	VRU	No	Post	
806	Load Rack 3	Valve	LL	Clear	No	Meter	828	Load Rack 3	LA	Gas	VRU	No	Hose	4"
807	Load Rack 3	Valve	LL	Clear	No	Ball	829	Load Rack 3	LA	LL		No	Check	
808	Load Rack 3	Valve	LL	Clear	No	Ball	830	Load Rack 3	Conct*	LL	Premium	No	Hose	4"
809	Load Rack 3	Valve	LL	Clear	No	Ball	831	Load Rack 3	LA	LL	Premium	No	Check	
810	Load Rack 3	Valve	LL	Clear	No	Butterfly	832	Load Rack 3	Conct*	LL	Clear Add	No	Screw	

Radian ID	Size	Screening Value	Comments
789		0	Tubing
790		0	Screw
791		0	Screw
792	3/8"	0	Ball 3/8"
793	3/8"	0	Ball 3/8"
794	3/8"	0	Ball 3/8"
795		0	Screw
796		0	Screw
797		0	Screw
798		0	Screw
799	3/8"	0	Ball 3/8"
800	3/8"	0	Ball 3/8"
801	3/8"	0	Ball 3/8"
802	4"	95	Check 4"
803		0	Screw
804		0	Screw
805		4	Screw
806	4"	12	Meter 4"
807	3/8"	4	Ball 3/8"
808	3/8"	5	Ball 3/8"
809	3/8"	1	Ball 3/8"
810	3"	0	Butterfly 3"

Radian ID	Screening Value	Comments
811	0.0	Screw
812	0.0	Screw
813	0.0	Screw
814	50.0	Meter 4"
815	0.0	Butterfly 3"
816	4.0	Ball 3/8"
817	8.0	Ball 3/8"
818	0.0	Ball 3/8"
819	0.0	Flange -not w/in 1cm
820	0.0	Screw
821	0.0	Tubing
822	0.0	Meter 4"
823	0.0	Butterfly 3"
824	0.0	Ball 3/8"
825	0.0	Ball 3/8"
826	0.0	Ball 3/8"
827	93.0	Hose -unfastened
828	50000.0	Hose -VR conn. unfastened
829	100.0	Check 4"
830	0.0	Hose 4"
831	88.0	Check 4"
832	0.0	Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size
833	Load Rack 3	Conct*	LL	Clear Add	No	Screwed	
834	Load Rack 3	Conct*	LL	Clear Add	No	Screwed	
835	Load Rack 3	Conct*	LL	Clear Add	No	Tubing	
836	Load Rack 3	Conct*	LL	Clear Add	No	Tubing	
837	Load Rack 3	Conct*	LL	Clear Add	No	Screwed	
838	Load Rack 3	Valve	LL	Clear Add	No	Ball	3/8"
839	Load Rack 3	Valve	LL	Clear Add	No	Ball	3/8"
840	Load Rack 3	Valve	LL	Clear Add	No	Ball	3/8"
841	Load Rack 3	Conct*	LL	Add	No	Screwed	
842	Load Rack 3	Conct*	LL	Add	No	Screwed	
843	Load Rack 3	Conct*	LL	Add	No	Tubing	
844	Load Rack 3	Conct*	LL	Add	No	Screwed	
845	Load Rack 3	Conct*	LL	Add	No	Screwed	
846	Load Rack 3	Conct*	LL	Add	No	Screwed	
847	Load Rack 3	Valve	LL	Add	No	Ball	3/8"
848	Load Rack 3	Valve	LL	Add	No	Ball	3/8"
849	Load Rack 3	Valve	LL	Add	No	Screwed	
850	Load Rack 3	Conct*	LL	Prem. Add	No	Screwed	
851	Load Rack 3	Conct*	LL	Prem. Add	No	Screwed	
852	Load Rack 3	Conct*	LL	Prem. Add	No	Screwed	
853	Load Rack 3	Conct*	LL	Prem. Add	No	Screwed	
854	Load Rack 3	Conct*	LL	Prem. Add	No	Screwed	

Radian ID	Screening Value	Comments
833	0.0	Screw
834	0.0	Screw
835	0.0	Tubing
836	0.0	Tubing
837	0.0	Screw
838	0.0	Ball 3/8"
839	0.0	Ball 3/8"
840	0.0	Ball 3/8"
841	0.0	Screw
842	0.0	Screw
843	0.0	Tubing
844	0.0	Screw
845	0.0	Screw
846	0.0	Screw
847	0.0	Ball 3/8"
848	0.5	Ball 3/8"
849	0.0	Ball 3/8"
850	0.0	Screw
851	0.0	Screw
852	0.0	Screw
853	0.0	Screw
854	0.0	Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size
855	Load Rack 3	Conct*	LL	Prem. Add	No	Screwed	
856	Load Rack 3	Valve	LL	Prem. Add	No	Ball	3/8"
857	Load Rack 3	Valve	Gas	Prem. Add	No	Ball	3/8"
858	Load Rack 3	Valve	LL	Prem. Add	No	Ball	3/8"
859	Load Rack 3	LA	Gas	VRU	No	Hose	
860	Load Rack 3	LA	Gas	VRU	No	Hose	
861	Load Rack 3	Conct*	LL	Clear	No	Screwed	
862	Load Rack 3	Conct*	LL	Clear	No	Screwed	
863	Load Rack 3	Conct*	LL	Clear	No	Screwed	
864	Load Rack 3	Valve	LL	Clear	No	Meter	4"
865	Load Rack 3	Valve	LL	Clear	No	Ball	3/8"
866	Load Rack 3	Valve	LL	Clear	No	Ball	3/8"
867	Load Rack 3	Valve	LL	Clear	No	Ball	3/8"
868	Load Rack 3	Valve	LL	Clear	No	Butterfly	3"
869	Load Rack 3	Conct*	LL	Reg.	No	Flange	
870	Load Rack 3	Conct*	LL	Reg.	No	Screwed	
871	Load Rack 3	Conct*	LL	Reg.	No	Tubing	
872	Load Rack 3	Conct*	LL	Reg.	No	Screwed	
873	Load Rack 3	Valve	LL	Reg.	No	Ball	3/8"
874	Load Rack 3	Valve	LL	Reg.	No	Ball	3/8"
875	Load Rack 3	Valve	LL	Reg.	No	Ball	3/8"
876	Load Rack 3	Valve	LL	Reg.	No	Meter	4"

Radian ID	Screening Value	Comments
855	0	Screw
856	0	Ball 3/8"
857	0	Ball 3/8"
858	0	Ball 3/8"
859	60000	Hose -VR conn. loose on post
860	29	Hose -VR conn fastened on post (repe
861	0	Screw
862	0	Screw
863	0	Screw
864	2	Meter 4"
865	0	Ball 3/8"
866	0	Ball 3/8"
867	0	Butterfly 3"
868	0	Flange -not w/in lcm
869	0	Screw
870	0	Tubing
871	0	Screw
872	0	Ball 3/8"
873	0	Ball 3/8"
874	0	Ball 3/8"
875	0	Ball 3/8"
876	0	Meter 4"

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Radian ID	Location	Type	Phase	Product	Load	Subtype
877	Load Rack 3	Valve	LL	EC1 Reg.	No	Butterfly	899	Load Rack 3	Conct*	LL	Clear Add	No	Screw
878	Load Rack 3	Conct*	LL	Premium	No	Screw	900	Load Rack 3	Conct*	LL	Clear Add	No	Tubing
879	Load Rack 3	Conct*	LL	Premium	No	Screw	901	Load Rack 3	Valve	LL	Clear Add	No	Ball
880	Load Rack 3	Conct*	LL	Premium	No	Screw	902	Load Rack 3	Valve	LL	Clear Add	No	Ball
881	Load Rack 3	Valve	LL	Premium	No	Ball	903	Load Rack 3	Valve	LL	Clear Add	No	Ball
882	Load Rack 3	Valve	LL	Premium	No	Ball	904	Load Rack 3	Conct*	LL	Add	No	Screw
883	Load Rack 3	Valve	LL	Premium	No	Ball	905	Load Rack 3	Conct*	LL	Add	No	Screw
884	Load Rack 3	Valve	LL	Premium	No	Meter	906	Load Rack 3	Conct*	LL	Add	No	Screw
885	Load Rack 3	Valve	LL	Premium	No	Butterfly	907	Load Rack 3	Conct*	LL	Add	No	Screw
886	Load Rack 3	Conct*	LL	Clear	No	Screw	908	Load Rack 3	Conct*	LL	Add	No	Screw
887	Load Rack 3	LA	LL	Clear	No	Check	909	Load Rack 3	Valve	LL	Add	No	Ball
888	Load Rack 3	LA	LL	Premium	No	Check	910	Load Rack 3	Valve	LL	Add	No	Ball
889	Load Rack 3	Conct*	LL	Premium	No	Hose	911	Load Rack 3	Valve	LL	Add	No	Ball
890	Load Rack 3	LA	LL	Premium	No	Check	912	Load Rack 3	Conct*	LL	Add	No	Screw
891	Load Rack 3	Conct*	LL	Clear Add	No	Screw	913	Load Rack 3	Conct*	LL	Add	No	Tubing
892	Load Rack 3	Conct*	LL	Clear Add	No	Screw	914	Load Rack 3	Conct*	LL	Add	No	Screw
893	Load Rack 3	Conct*	LL	Clear Add	No	Screw	915	Load Rack 3	Conct*	LL	Add	No	Tubing
894	Load Rack 3	Conct*	LL	Clear Add	No	Screw	916	Load Rack 3	Conct*	LL	Add	No	Tubing
895	Load Rack 3	Valve	LL	Clear Add	No	Ball	917	Load Rack 3	Conct*	LL	Add	No	Screw
896	Load Rack 3	Valve	LL	Clear Add	No	Ball	918	Load Rack 3	Conct*	LL	Add	No	Tubing
897	Load Rack 3	Valve	LL	Clear Add	No	Ball	919	Load Rack 4	LA	Gas	VRU	Yes	Hose
898	Load Rack 3	Conct*	LL	Clear Add	No	Tubing	920	Load Rack 4	LA	LL		Yes	Check

Radian ID	Size	Screening Value	Comments	Radian ID	Size	Screening Value	Comments
877	3"	1	Butterfly 3"	899		0	Screw
878		0	Screw	900		0	Tubing
879		0	Screw	901	3/8"	0	Ball 3/8"
880		0	Screw	902	3/8"	0	Ball 3/8"
881	3/8"	0	Ball 3/8"	903	3/8"	0	Ball 3/8"
882	3/8"	0	Ball 3/8"	904		9	Screw
883	3/8"	0	Ball 3/8"	905		0	Screw
884	4"	45	Meter 4"	906		0	Screw
885	3"	0	Butterfly 3"	907		5	Screw
886		0	Screw	908		0	Screw
887	4"	7	Check 4"	909	3/8"	0	Ball 3/8"
888	4"	0	Check 4"	910	3/8"	0	Ball 3/8"
889		0	Hose	911	3/8"	1	Ball 3/8"
890	4"	0	Check 4"	912		0	Screw
891		0	Screw	913		1	Tubing
892		0	Screw	914		0	Screw
893		0	Screw	915		0	Tubing
894		0	Screw	916		0	Tubing
895	1/2"	0	Ball .5"	917		0	Screw
896	1/2"	0	Ball .5"	918		0	Tubing
897	1/2"	0	Ball .5"	919		5	Hose -VR conn. to truck
898		0	Tubing	920	4"	0	Check 4"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
921	Load Rack 4	LA	LL	Clear	Yes	Check
922	Load Rack 4	Other	Gas	VRU	Yes	
923	Load Rack 4	Other	Gas	VRU	Yes	
924	Load Rack 4	LA	LL	Clear	Yes	Check
925	Load Rack 4	Conct*	LL	Clear	Yes	Tubing
926	Load Rack 4	Conct*	LL	Clear	Yes	Screw
927	Load Rack 4	Conct*	LL	Clear	No	Screw
928	Load Rack 4	Valve	LL	Clear	No	Ball
929	Load Rack 4	Valve	LL	Clear	No	Ball
930	Load Rack 4	Valve	LL	Clear	No	Ball
931	Load Rack 4	Valve	LL	Clear	No	Butterfly
932	Load Rack 4	Valve	LL	Clear	No	Meter
933	Load Rack 4	Conct*	LL	Clear	No	Screw
934	Load Rack 4	Conct*	LL	Clear	No	Screw
935	Load Rack 4	Conct*	LL	Clear	No	Tubing
936	Load Rack 4	LA	LL	Clear	No	Ball
937	Load Rack 4	LA	LL	Clear	No	Ball
938	Load Rack 4	Valve	LL	Clear	No	Ball
939	Load Rack 4	Valve	LL	Clear	No	Butterfly
940	Load Rack 4	Valve	LL	Clear	No	Meter
941	Load Rack 4	Conct*	LL	Premium	No	Screw
942	Load Rack 4	Conct*	LL	Premium	No	Screw

Radian ID	Size	Screening Value	Comments
921	4"	0	Check 4"
922		390	Hose -uncovered while loading
923		390	Hose -uncovered while loading
924	4"	0	Check 4"
925		0	Tubing
926		0	Screw
927		0	Screw
928	3/8"	0	Ball 3/8"
929	3/8"	6	Ball 3/8"
930	3/8"	4	Ball 3/8"
931	3"	0	Butterfly 3"
932	4"	8	Meter 4"
933		2	Screw
934		2	Screw
935		0	Tubing
936	3/8"	0	Ball 3/8"
937	3/8"	0	Ball 3/8"
938	3/8"	0	Ball 3/8"
939	3"	0	Butterfly 3"
940	4"	4	Meter 4"
941		2	Screw
942		0	Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype
943	Load Rack 4	Conct*	LL	Premium	No	Screw
944	Load Rack 4	Conct*	LL	Premium	No	Screw
945	Load Rack 4	LA	LL	Premium	No	Ball
946	Load Rack 4	Valve	LL	Premium	No	Ball
947	Load Rack 4	Valve	LL	Premium	No	
948	Load Rack 4	Valve	LL	Premium	No	Meter
949	Load Rack 4	Valve	LL	Premium	No	Butterfly
950	Load Rack 4	LA	Gas	VRU	No	Hose
951	Load Rack 4	LA	LL	Clear	No	Check
952	Load Rack 4	Conct*	LL	Clear	No	Hose
953	Load Rack 4	LA	LL	Clear	No	Check
954	Load Rack 4	Conct*	LL	Premium	No	Screw
955	Load Rack 4	LA	LL	Premium	No	Screw
956	Load Rack 4	Conct*	LL	Clear Add	No	Screw
957	Load Rack 4	Conct*	LL	Clear Add	No	Screw
958	Load Rack 4	Conct*	LL	Clear Add	No	Tubing
959	Load Rack 4	Conct*	LL	Clear Add	No	Tubing
960	Load Rack 4	Conct*	LL	Clear Add	No	Screw
961	Load Rack 4	Conct*	LL	Clear Add	No	Screw
962	Load Rack 4	Conct*	LL	Clear Add	No	Screw
963	Load Rack 4	Valve	LL	Clear Add	No	Ball
964	Load Rack 4	Valve	LL	Clear Add	No	Ball

Radian ID	Size	Screening Value	Comments
943		0.0	Screw
944		0.0	Screw
945	3/8"	5.0	Ball 3/8"
946	3/8"	0.0	Ball 3/8"
947		0.0	
948	4"	0.0	Meter 4"
949	3"	2.0	Butterfly 3"
950		30.0	Hose -VR conn. to post
951	4"	130.0	Check 4"
952		0.0	Hose
953	4"	25.0	Check 4"
954		0.0	Screw
955	4"	130.0	Check 4"
956		0.0	Screw
957		0.0	Screw
958		1.0	Tubing
959		0.0	Tubing
960		0.0	Screw
961		0.0	Screw
962		0.0	Screw
963	3/8"	0.0	Ball 3/8"
964	3/8"	0.0	Ball 3/8"

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Radian ID	Location	Type	Phase	Product	Load
965	Load Rack 4	Valve	LL	Clear Add	No	Ball	987	Load Rack 4	Conct*	LL	Clear	No
966	Load Rack 4	Conct*	LL	Add	No	Screw	988	Load Rack 4	Conct*	LL	Clear	No
967	Load Rack 4	Conct*	LL	Add	No	Screw	989	Load Rack 4	Valve	LL	Clear	No
968	Load Rack 4	Conct*	LL	Add	No	Screw	990	Load Rack 4	Valve	LL	Clear	No
969	Load Rack 4	Conct*	LL	Add	No	Screw	991	Load Rack 4	Valve	LL	Clear	No
970	Load Rack 4	Conct*	LL	Add	No	Screw	992	Load Rack 4	Valve	LL	Clear	No
971	Load Rack 4	Valve	LL	Add	No	Ball	993	Load Rack 4	Valve	LL	Clear	No
972	Load Rack 4	Valve	LL	Add	No	Ball	994	Load Rack 4	Conct*	LL	Clear	No
973	Load Rack 4	Valve	Gas	Add	No	Ball	995	Load Rack 4	Conct*	LL	Clear	No
974	Load Rack 4	Conct*	LL	Prem. Add	No	Tubing	996	Load Rack 4	Conct*	LL	Clear	No
975	Load Rack 4	Conct*	LL	Prem. Add	No	Screw	997	Load Rack 4	Valve	LL	Clear	No
976	Load Rack 4	Conct*	LL	Prem. Add	No	Screw	998	Load Rack 4	Valve	LL	Clear	No
977	Load Rack 4	Conct*	LL	Prem. Add	No	Screw	999	Load Rack 4	Valve	LL	Clear	No
978	Load Rack 4	Conct*	LL	Prem. Add	No	Screw	1000	Load Rack 4	Valve	LL	Clear	No
979	Load Rack 4	Conct*	LL	Prem. Add	No	Screw	1001	Load Rack 4	Valve	LL	Clear	No
980	Load Rack 4	Conct*	LL	Prem. Add	No	Screw	1002	Load Rack 4	Conct*	LL	Premium	No
981	Load Rack 4	Valve	LL	Prem. Add	No	Ball	1003	Load Rack 4	Conct*	LL	Premium	No
982	Load Rack 4	Valve	LL	Prem. Add	No	Ball	1004	Load Rack 4	Conct*	LL	Premium	No
983	Load Rack 4	Valve	LL	Prem. Add	No	Ball	1005	Load Rack 4	Conct*	LL	Premium	No
984	Load Rack 4	Conct*	Gas	VRU	No	Hose	1006	Load Rack 4	Valve	LL	Premium	No
985	Load Rack 4	Conct*	Gas	VRU	No	Flange	1007	Load Rack 4	Valve	LL	Premium	No
986	Load Rack 4	Conct*	LL	Clear	No	Flange	1008	Load Rack 4	Valve	LL	Premium	No

Radian ID	Size	Screening Value	Comments	Radian ID	Subtype	Size	Screening Value	Comments
965	3/8"	0.0	Ball 3/8"	987	Screw		0	Screw
966		0.0	Screw	988	Screw		0	Screw
967		0.0	Screw	989	Ball	3/8"	0	Ball 3/8"
968		0.0	Screw	990	Ball	3/8"	0	Ball 3/8"
969		0.0	Screw	991	Ball	3/8"	0	Ball 3/8"
970		0.0	Screw	992	Meter	4"	25	Meter 4"
971	3/8"	0.0	Ball 3/8"	993	Butterfly	3"	0	Butterfly 3"
972	3/8"	0.0	Ball 3/8"	994	Flange		55	Flange
973	3/8"	0.0	Ball 3/8"	995	Screw		0	Screw
974		0.0	Tubing	996	Screw		0	Screw
975		0.0	Screw	997	Ball	3/8"	0	Ball 3/8"
976		0.0	Screw	998	Ball	3/8"	0	Ball 3/8"
977		0.0	Screw	999	Ball	3/8"	0	Ball 3/8"
978		0.0	Screw	1000	Meter	4"	30	Meter 4"
979		0.0	Screw	1001	Butterfly	3"	0	Butterfly 3"
980		2.5	Screw	1002	Flange		64	Flange
981	3/8"	0.0	Ball 3/8"	1003	Screw		0	Screw
982	3/8"	0.0	Ball 3/8"	1004	Screw		0	Screw
983	3/8"	0.0	Ball 3/8"	1005	Tubing		0	Tubing
984		1.0	Hose -VR conn. to post	1006	Ball	3/8"	0	Ball 3/8"
985			Flange -inaccessible	1007	Ball	3/8"	0	Ball 3/8"
986		0.0	Flange -not w/in lcm	1008	Ball	3/8"	0	Ball 3/8"

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Load Rack 4	Valve	LL	Premium	No
Load Rack 4	Valve	LL	Premium	No
Load Rack 4	Conct*	LL	Clear	No
Load Rack 4	LA	LL	Clear	No
Load Rack 4	Conct*	LL		No
Load Rack 4	LA	LL		No
Load Rack 4	LA	LL	Premium	No
Load Rack 4	Conct*	LL	Clear Add	No
Load Rack 4	Conct*	LL	Clear Add	No
Load Rack 4	Conct*	LL	Clear Add	No
Load Rack 4	Conct*	LL	Clear Add	No
Load Rack 4	Conct*	LL	Clear Add	No
Load Rack 4	Valve	LL	Clear Add	No
Load Rack 4	Valve	LL	Clear Add	No
Load Rack 4	Valve	LL	Clear Add	No
Load Rack 4	Conct*	LL	Add	No
Load Rack 4	Conct*	LL	Add	No
Load Rack 4	Conct*	LL	Add	No
Load Rack 4	Conct*	LL	Add	No
Load Rack 4	Conct*	LL	Add	No
Load Rack 4	Conct*	LL	Add	No
Load Rack 4	Valve	LL	Add	No

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Subtype	Size	Screening Value	Comments
Meter	4"	0	Meter 4"
Butterfly	3"	0	Butterfly 3"
Screwed		0	Screw
Check	4"	20	Check 4"
Screwed		0	Screw
Check	4"	7	Check 4"
Check	4"	2	Check 4"
Tubing		0	Tubing
Screwed		0	Screw
Screwed		0	Screw
Tubing		0	Tubing
Screwed		0	Screw
Ball	3/8"	0	Ball 3/8"
Ball	3/8"	0	Ball 3/8"
Ball	3/8"	1	Ball 3/8"
Screwed		0	Screw
Screwed		0	Screw
Screwed		0	Screw
Screwed		0	Screw
Screwed		0	Screw
Screwed		0	Screw
Screwed		0	Screw
Ball	3/8"	0	Ball 3/8"

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Location	Type	Phase	Product	Load
Load Rack 4	Valve	LL	Add	No
Load Rack 4	Valve	LL	Add	No
Load Rack 4	Conct*	LL	Prem. Add	No
Load Rack 4	Conct*	LL	Prem. Add	No
Load Rack 4	Conct*	LL	Prem. Add	No
Load Rack 4	Conct*	LL	Prem. Add	No
Load Rack 4	Conct*	LL	Prem. Add	No
Load Rack 4	Conct*	LL	Prem. Add	No
Load Rack 4	Conct*	LL	Prem. Add	No
Load Rack 4	Valve	LL	Prem. Add	No
Load Rack 4	Valve	LL	Prem. Add	No
Load Rack 4	Valve	LL	Prem. Add	No
Load Rack 4	Other	Gas	VRU	No
Load Rack 4	Other	Gas	VRU	No

Radian
ID

Subtype	Size	Screening Value	Comments
Ball	3/8"	0	Ball 3/8"
Ball	3/8"	0	Ball 3/8"
Screwed		0	Screw
Screwed		0	Screw
Tubing		0	Tubing
Tubing		0	Tubing
Tubing		0	Tubing
Screwed		0	Screw
Ball	3/8"	0	Ball 3/8"
Ball	3/8"	0	Ball 3/8"
Ball	3/8"	0	Ball 3/8"
Post		1500	Added 10/5/92
Post		2500	Added 10/5/92

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size
1044	Load Rack 5	LA	Gas		Yes	Hose	
1045	Load Rack 5	LA	LL		No	Hose	
1046	Load Rack 5	Conct*	LL	Clear	No	Union	
1047	Load Rack 5	Conct*	LL	Clear	No	Tubing	
1048	Load Rack 5	Conct*	LL	Clear	No	Screw	
1049	Load Rack 5	Conct*	LL	Clear	No	Screw	
1050	Load Rack 5	Valve	LL	Clear	No	Ball	3/8"
1051	Load Rack 5	Valve	LL	Clear	No	Ball	3/8"
1052	Load Rack 5	Valve	LL	Clear	No	Ball	3/8"
1053	Load Rack 5	Valve	LL	Clear	No	Meter	4"
1054	Load Rack 5	Valve	LL	Clear	No	Butterfly	3"
1055	Load Rack 5	Conct*	LL	Reg.	No	Screw	
1056	Load Rack 5	Conct*	LL	Reg.	No	Screw	
1057	Load Rack 5	Conct*	LL	Reg.	No	Screw	
1058	Load Rack 5	Conct*	LL	Reg.	No	Screw	
1059	Load Rack 5	Conct*	LL	Reg.	No	Screw	
1060	Load Rack 5	Valve	LL	Reg.	No	Ball	3/8"
1061	Load Rack 5	Valve	LL	Reg.	No	Ball	3/8"
1062	Load Rack 5	Valve	LL	Reg.	No	Meter	4"
1063	Load Rack 5	Valve	LL	Reg.	No	Butterfly	3"
1064	Load Rack 5	Conct*	LL	Prem.	No	Screw	
1065	Load Rack 5	Conct*	LL	Prem.	No	Screw	

Radian ID	Screening Value	Comments
1044	35	Hose -VPR conn. to truck
1045	200	Hose -VPR conn. to truck
1046	0	Union
1047	0	Tubing
1048	0	Screw
1049	0	Screw
1050	0	Ball 3/8"
1051	0	Ball 3/8"
1052	0	Ball 3/8"
1053	10	Meter 4"
1054	0	Butterfly 3"
1055	0	Screw
1056	0	Screw
1057	0	Screw
1058	0	Screw
1059	0	Screw
1060	0	Ball 3/8"
1061	0	Ball 3/8"
1062	0	Ball 3/8"
1063	7	Meter 4"
1064	0	Butterfly 3"
1065	0	Screw

(continued)

Radian ID	Location	Type	Phase	Product	Load	Subtype	Size
1066	Load Rack 5	Conct*	LL	Prem.	No	Flange	
1067	Load Rack 5	Conct*	LL	Prem.	No	Tubing	
1068	Load Rack 5	Conct*	LL	Prem.	No	Screw	
1069	Load Rack 5	Conct*	LL	Prem.	No	Screw	
1070	Load Rack 5	Valve	LL	Prem.	No	Ball	3/8"
1071	Load Rack 5	Valve	LL	Prem.	No	Ball	3/8"
1072	Load Rack 5	Valve	LL	Prem.	No	Ball	3/8"
1073	Load Rack 5	Conct	LL	Prem.	No	Flange	
1074	Load Rack 5	Valve	LL	Prem.	No	Solenoid	3/8"
1075	Load Rack 5	Valve	LL	Prem.	No	Solenoid	3/8"
1076	Load Rack 5	Valve	LL	Prem.	No	Meter	4"
1077	Load Rack 5	Valve	LL	Prem.	No	Butterfly	3"
1078	Load Rack 5	Valve	LL	Prem.	No	Ball	3/8"
1079	Load Rack 5	LA	Gas		No	Hose	
1080	Load Rack 5	LA	Gas		Yes	Hose	
1081	Load Rack 5	Conct*	Gas		Yes	Screw	
1082	Load Rack 5	Conct*	Gas		No	Flange	
1083	Load Rack 5	Conct*	Gas		No	Flange	
1084	Load Rack 5	LA	Gas		No	Check	4"
1085	Load Rack 5	LA	Gas		No	Check	4"
1086	Load Rack 5	LA	Gas		No	Check	4"
1087	Load Rack 5	Conct*	LL		Yes	Tubing	
Radian ID	Screening Value	Comments					
1066	62	Flange					
1067	130	Tubing -interference from adj. leak in					
1068	10	Screw					
1069	0	Screw					
1070	0	Ball 3/8"					
1071	0	Ball 3/8"					
1072	0	Ball 3/8"					
1073	2000	Flange -leaking					
1074	0	Solenoid 3/8"					
1075	0	Solenoid 3/8"					
1076	0	Meter 4"					
1077	0	Butterfly 3"					
1078	0	Ball 3/8"					
1079	3500	Hose -VPR conn. to post (loose)					
1080	480	Hose -VPR conn. to truck partially cla					
1081	5	Screw -UL fill line					
1082	0	Flange -EC1 fill arm					
1083	8000	Premium fill arm -wet					
1084	680	Check 4" -UL fill arm					
1085	280	Check 4" -EC1 load arm					
1086	20	Check 4" -Prem. load arm					
1087	0	Tubing					

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1088	Load Rack 5	Conct*	LL	UL Add.	Yes	Tubing
1089	Load Rack 5	Conct*	LL	UL Add.	Yes	Screw
1090	Load Rack 5	Conct*	LL	UL Add.	Yes	Screw
1091	Load Rack 5	Conct*	LL	UL Add.	Yes	Screw
1092	Load Rack 5	Valve	LL	UL Add.	Yes	Ball
1093	Load Rack 5	Valve	LL	UL Add.	Yes	Ball
1094	Load Rack 5	Valve	LL	UL Add.	Yes	Ball
1095	Load Rack 5	Valve	LL	UL Add.	Yes	Ball
1096	Load Rack 5	Valve	LL	UL Add.	Yes	Ball
1097	Load Rack 5	Conct*	LL	Add.	Yes	Screw
1098	Load Rack 5	Conct*	LL	Add.	Yes	Screw
1099	Load Rack 5	Conct*	LL	Add.	Yes	Screw
1100	Load Rack 5	Conct*	LL	Add.	Yes	Tubing
1101	Load Rack 5	Conct*	LL	Add.	Yes	Tubing
1102	Load Rack 5	Conct*	LL	Add.	Yes	Screw
1103	Load Rack 5	Conct*	LL	Add.	Yes	Screw
1104	Load Rack 5	Valve	LL	Add.	No	Ball
1105	Load Rack 5	Valve	LL	Add.	No	Ball
1106	Load Rack 5	Valve	LL	Add.	No	Ball
1107	Load Rack 5	Valve	LL	Add.	No	Ball
1108	Load Rack 5	Valve	LL	Add.	No	
1109	Load Rack 5	Conct*	LL	Prem. Add	No	Screw

Radian ID	Size	Screening Value	Comments
1088		0	Tubing
1089		0	Screw
1090		0	Screw
1091		0	Screw
1092	1/2"	0	Ball .5"
1093	3/8"	0	Ball 3/8"
1094	3/8"	0	Ball 3/8"
1095	3/8"	0	Ball 3/8"
1096	1/4"	0	SV 1/4"
1097		0	Screw
1098		0	Screw
1099		0	Screw
1100		0	Tubing
1101		0	Tubing
1102		0	Screw
1103		0	Screw
1104	1/2"	0	Ball .5"
1105	3/8"	0	Ball 3/8"
1106	3/8"	0	Ball 3/8"
1107	3/8"	0	Ball 3/8"
1108	1/4"	0	SV 1/4"
1109		0	Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1110	Load Rack 5	Conct*	LL	Prem. Add	No	Screw
1111	Load Rack 5	Conct*	LL	Prem. Add	No	Tubing
1112	Load Rack 5	Conct*	LL	Prem. Add	No	Tubing
1113	Load Rack 5	Conct*	LL	Prem. Add	No	Screw
1114	Load Rack 5	Conct*	LL	Prem. Add	No	Screw
1115	Load Rack 5	Valve	LL	Prem. Add	No	Ball
1116	Load Rack 5	Valve	LL	Prem. Add	No	Ball
1117	Load Rack 5	Valve	LL	Prem. Add	No	Ball
1118	Load Rack 5	Valve	LL	Prem. Add	No	Ball
1119	Load Rack 5	Valve	LL	Prem. Add	No	Ball
1120	Load Rack 5	LA	Gas		No	Hose
1121	Load Rack 5	Conct*	LL	Clear	No	Union
1122	Load Rack 5	Conct*	LL	Clear	No	Flange
1123	Load Rack 5	Conct*	LL	Clear	No	Screw
1124	Load Rack 5	Conct*	LL	Clear	No	Screw
1125	Load Rack 5	Valve	LL	Clear	No	Ball
1126	Load Rack 5	Valve	LL	Clear	No	Ball
1127	Load Rack 5	Valve	LL	Clear	No	Ball
1128	Load Rack 5	Valve	LL	Clear	No	Ball
1129	Load Rack 5	Valve	LL	Clear	No	Ball
1130	Load Rack 5	Valve	LL	Clear	No	Control
1131	Load Rack 5	Valve	LL	Clear	No	Butterfly

Radian ID	Size	Screening Value	Comments
1110		0	Screw
1111		0	Tubing
1112		0	Tubing
1113		0	Screw
1114		0	Screw
1115	1/2"	0	Ball .5"
1116	3/8"	0	Ball 3/8"
1117	3/8"	0	Ball 3/8"
1118	3/8"	0	Ball 3/8"
1119	1/4"	0	SV 1/4"
1120		110	Hose -VPR conn. to post
1121		0	Union
1122		190	Flange -not w/in 1cm
1123		0	Screw
1124		0	Screw
1125	3/8"	0	Ball 3/8"
1126	3/8"	0	Ball 3/8"
1127	3/8"	0	Ball 3/8"
1128	1/4"	0	SV 1/4"
1129	1/4"	0	SV 1/4"
1130	4"	42	4" Meter Contr.
1131	3"	0	Butterfly 3"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1132	Load Rack 5	Valve	LL	Clear	No	Ball
1133	Load Rack 5	Conct*	LL	Reg.	No	Screw
1134	Load Rack 5	Conct*	LL	Reg.	No	Flange
1135	Load Rack 5	Conct*	LL	Reg.	No	Screw
1136	Load Rack 5	Conct*	LL	Reg.	No	Tubing
1137	Load Rack 5	Valve	LL	Reg.	No	Ball
1138	Load Rack 5	Valve	LL	Reg.	No	Ball
1139	Load Rack 5	Valve	LL	Reg.	No	Ball
1140	Load Rack 5	Valve	LL	Reg.	No	Ball
1141	Load Rack 5	Valve	LL	Reg.	No	Ball
1142	Load Rack 5	Valve	LL	Reg.	No	Meter
1143	Load Rack 5	Valve	LL	Reg.	No	Butterfly
1144	Load Rack 5	Conct*	LL	Prem	No	Screw
1145	Load Rack 5	Conct*	LL	Prem	No	Screw
1146	Load Rack 5	Conct*	LL	Prem	No	Screw
1147	Load Rack 5	Conct*	LL	Prem	No	Screw
1148	Load Rack 5	Conct*	LL	Prem	No	Tubing
1149	Load Rack 5	Valve	LL	Prem	No	Ball
1150	Load Rack 5	Valve	LL	Prem	No	Ball
1151	Load Rack 5	Valve	LL	Prem	No	Ball
1152	Load Rack 5	Valve	LL	Prem	No	Ball
1153	Load Rack 5	Valve	LL	Prem	No	Ball

Radian ID	Size	Screening Value	Comments
1132	1/2"	0	Ball .5"
1133		0	Screw
1134		0	Flange -not w/in lcm
1135		0	Screw
1136		2	Tubing
1137	3/8"	0	Ball 3/8"
1138	3/8"	0	Ball 3/8"
1139	3/8"	0	Ball 3/8"
1140	1/4"	0	SV 1/4"
1141	1/4"	0	SV 1/4"
1142	4"	10	Meter 4"
1143	3"	4	Butterfly 3"
1144		0	Screw
1145		0	Screw
1146		0	Screw
1147		0	Screw
1148		0	Tubing
1149	3/8"	0	Ball 3/8"
1150	3/8"	0	Ball 3/8"
1151	3/8"	0	Ball 3/8"
1152	1/4"	0	SV 1/4"
1153	1/4"	0	SV 1/4"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1154	Load Rack 5	Valve	LL	Prem	No	Meter
1155	Load Rack 5	Valve	LL	Prem	No	Butterfly
1156	Load Rack 5	LA	LL	Prem	No	Ball
1157	Load Rack 5	Conct*	LL		No	Screw
1158	Load Rack 5	LA	LL		No	Check
1159	Load Rack 5	Conct*	LL		No	Swivel
1160	Load Rack 5	LA	LL		No	Check
1161	Load Rack 5	Conct*	LL		No	Flange
1162	Load Rack 5	Conct*	LL		No	Flange
1163	Load Rack 5	LA	LL		No	Check
1164	Load Rack 5	Conct*	LL	UL Add.	No	Screw
1165	Load Rack 5	Conct*	LL	UL Add.	No	Screw
1166	Load Rack 5	Conct*	LL	UL Add.	No	Tubing
1167	Load Rack 5	Conct*	LL	UL Add.	No	Tubing
1168	Load Rack 5	Conct*	LL	UL Add.	No	Tubing
1169	Load Rack 5	Conct*	LL	UL Add.	No	Union
1170	Load Rack 5	Valve	LL	UL Add.	No	Ball
1171	Load Rack 5	Valve	LL	UL Add.	No	Ball
1172	Load Rack 5	Valve	LL	UL Add.	No	Ball
1173	Load Rack 5	Valve	LL	UL Add.	No	Ball
1174	Load Rack 5	Valve	LL	UL Add.	No	Ball
1175	Load Rack 5	Conct*	LL	UL Add.	No	Screw

Radian ID	Size	Screening Value	Comments
1154	4"	22	Meter 4"
1155	3"	0	Butterfly 3"
1156	1/2"	0	Ball .5"
1157		2	Screw -UL load arm
1158	4"	92	Check 4" -UL load arm
1159		0	Swivel -ECI load arm
1160	4"	32	Check 4" -EC 1 load arm
1161		0	Flange -Prem. load arm
1162		0	Flange -Prem. load arm
1163	4"	43	Check 4" Prem. load arm
1164		0	Screw
1165		0	Screw
1166		0	Tubing
1167		0	Tubing
1168		0	Tubing
1169		2	Union
1170	1/2"	2	Ball .5"
1171	3/8"	0	Ball 3/8"
1172	3/8"	0	Ball 3/8"
1173	3/8"	0	Ball 3/8"
1174	1/4"	0	SV 1/4"
1175		0	Screw

Radian ID	Location	Type	Phase	Product	Load	Subtype	Size
1176	Load Rack 5	Conct*	LL	Add.	No	Screw	
1177	Load Rack 5	Conct*	LL	Add.	No	Screw	
1178	Load Rack 5	Conct*	LL	Add.	No	Screw	
1179	Load Rack 5	Conct*	LL	Add.	No	Screw	
1180	Load Rack 5	Conct*	LL	Add.	No	Union	
1181	Load Rack 5	Valve	LL	Add.	No	Ball	1/2"
1182	Load Rack 5	Valve	LL	Add.	No	Ball	3/8"
1183	Load Rack 5	Valve	LL	Add.	No	Ball	3/8"
1184	Load Rack 5	Valve	LL	Add.	No	Ball	3/8"
1185	Load Rack 5	Valve	LL	Add.	No	Ball	1/4"
1186	Load Rack 5	Conct*	LL	Prem. Add	No	Union	
1187	Load Rack 5	Conct*	LL	Prem. Add	No	Tubing	
1188	Load Rack 5	Conct*	LL	Prem. Add	No	Tubing	
1189	Load Rack 5	Conct*	LL	Prem. Add	Yes	Tubing	
1190	Load Rack 5	Conct*	LL	Prem. Add	Yes	Screw	
1191	Load Rack 5	Valve	LL	Prem. Add	Yes	Ball	1/2"
1192	Load Rack 5	Valve	LL	Prem. Add	Yes	Ball	3/8"
1193	Load Rack 5	Valve	LL	Prem. Add	No	Ball	3/8"
1194	Load Rack 5	Valve	LL	Prem. Add	No	Ball	3/8"
1195	Load Rack 5	Valve	LL	Prem. Add	No	Ball	1/4"
1196	Load Rack 6	Conct*	LL	Clear	No	Screw	
1197	Load Rack 6	Conct*	LL	Clear	No	Flange	

Radian ID	Screening Value	Comments
1176	0	Screw
1177	0	Screw
1178	0	Screw
1179	0	Screw
1180	4	Union
1181	0	Ball .5"
1182	0	Ball 3/8"
1183	0	Ball 3/8"
1184	0	Ball 3/8"
1185	2	SV 1/4"
1186	0	Union
1187	0	Tubing
1188	0	Tubing
1189	4	Tubing
1190	0	Screw -wet
1191	0	Ball .5"
1192	0	Ball 3/8"
1193	0	Ball 3/8"
1194	0	Ball 3/8"
1195	0	SV 1/4"
1196	0	Screw
1197	0	Flange -not w/in lcm

Radian ID	Location	Type	Phase	Product	Load	Subtype	Size
1198	Load Rack 6	Conct*	LL	Clear	No	Screw	
1199	Load Rack 6	Conct*	LL	Clear	No	Screw	
1200	Load Rack 6	Conct*	LL	Clear	No	Screw	
1201	Load Rack 6	Valve	LL	Clear	Yes	Ball	3/8"
1202	Load Rack 6	Valve	LL	Clear	Yes	Ball	3/8"
1203	Load Rack 6	Valve	LL	Clear	Yes	Ball	3/8"
1204	Load Rack 6	Valve	LL	Clear	Yes	Ball	3/8"
1205	Load Rack 6	Valve	LL	Clear	Yes	Meter	4"
1206	Load Rack 6	Valve	LL	Clear	Yes	Butterfly	3"
1207	Load Rack 6	Valve	LL	Clear	Yes	Ball	1/2"
1208	Load Rack 6	Valve	LL	Clear	Yes	Ball	1/4"
1209	Load Rack 6	Valve	LL	Clear	Yes	Ball	1/4"
1210	Load Rack 6	Valve	LL	Reg.	No	Flange	
1211	Load Rack 6	Conct*	LL	Reg.	No	Tubing	
1212	Load Rack 6	Conct*	LL	Reg.	No	Screw	
1213	Load Rack 6	Conct*	LL	Reg.	No	Screw	
1214	Load Rack 6	Valve	LL	Reg.	No	Ball	3/8"
1215	Load Rack 6	Valve	LL	Reg.	No	Ball	3/8"
1216	Load Rack 6	Valve	LL	Reg.	No	Ball	3/8"
1217	Load Rack 6	Valve	LL	Reg.	No	Ball	1/4"
1218	Load Rack 6	Valve	LL	Reg.	No	Ball	1/4"
1219	Load Rack 6	Valve	LL	Reg.	No	Meter	4"

Radian ID	Screening Value	Comments
1198	0	Screw
1199	0	Screw
1200	0	Screw
1201	0	Ball 3/8"
1202	0	Ball 3/8"
1203	0	Ball 3/8"
1204	4	Meter 4"
1205	0	Butterfly 3"
1206	0	Ball .5"
1207	0	SV 1/4"
1208	0	SV 1/4"
1209	0	Screw -not w/in lcm
1210	2	Flange
1211	0	Tubing
1212	0	Screw
1213	0	Screw
1214	0	Ball 3/8"
1215	0	Ball 3/8"
1216	0	Ball 3/8"
1217	0	SV 1/4"
1218	0	SV 1/4"
1219	3	Meter 4"

Radian ID	Location	Type	Phase	Product	Load	Subtype	Size
1198	Load Rack 6	Conct*	LL	Clear	No	Screw	
1199	Load Rack 6	Conct*	LL	Clear	No	Screw	
1200	Load Rack 6	Conct*	LL	Clear	No	Screw	
1201	Load Rack 6	Valve	LL	Clear	Yes	Ball	3/8"
1202	Load Rack 6	Valve	LL	Clear	Yes	Ball	3/8"
1203	Load Rack 6	Valve	LL	Clear	Yes	Ball	4"
1204	Load Rack 6	Valve	LL	Clear	Yes	Meter	3"
1205	Load Rack 6	Valve	LL	Clear	Yes	Butterfly	3"
1206	Load Rack 6	Valve	LL	Clear	Yes	Ball	1/2"
1207	Load Rack 6	Valve	LL	Clear	Yes	Ball	1/4"
1208	Load Rack 6	Valve	LL	Clear	Yes	Ball	1/4"
1209	Load Rack 6	Valve	LL	Reg.	No		
1210	Load Rack 6	Conct*	LL	Reg.	No	Flange	
1211	Load Rack 6	Conct*	LL	Reg.	No	Tubing	
1212	Load Rack 6	Conct*	LL	Reg.	No	Screw	
1213	Load Rack 6	Conct*	LL	Reg.	No	Screw	
1214	Load Rack 6	Valve	LL	Reg.	No	Ball	3/8"
1215	Load Rack 6	Valve	LL	Reg.	No	Ball	3/8"
1216	Load Rack 6	Valve	LL	Reg.	No	Ball	3/8"
1217	Load Rack 6	Valve	LL	Reg.	No	Ball	1/4"
1218	Load Rack 6	Valve	LL	Reg.	No	Ball	1/4"
1219	Load Rack 6	Valve	LL	Reg.	No	Meter	4"

Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
1242	Load Rack 6	Conct*	LL	Clear	No	Flange		0	flange -not w/in lcm
1243	Load Rack 6	Conct*	LL	Clear	No	Screw		0	Screw
1244	Load Rack 6	Conct*	LL	Clear	No	Screw		0	Screw
1245	Load Rack 6	Conct*	LL	Clear	No	Screw		0	Screw
1246	Load Rack 6	Valve	LL	Clear	No	Ball 3/8"	3/8"	0	Ball 3/8"
1247	Load Rack 6	Valve	LL	Clear	No	Ball 3/8"	3/8"	0	Ball 3/8"
1248	Load Rack 6	Valve	LL	Clear	No	Ball 3/8"	3/8"	0	Ball 3/8"
1249	Load Rack 6	Conct*	LL	Clear	No	Screw		110	Screw
1250	Load Rack 6	Valve	LL	Clear	No	SV 1/4"	1/4"	0	SV 1/4"
1251	Load Rack 6	Valve	LL	Clear	No	SV 1/4"	1/4"	0	SV 1/4"
1252	Load Rack 6	Valve	LL	Clear	No	Meter 4"	4"	42	Meter 4"
1253	Load Rack 6	Valve	LL	Clear	No	Butterfly 3"	3"	0	Butterfly 3"
1254	Load Rack 6	Valve	LL	Clear	No	Ball .5"	1/2"	0	Ball .5"
1255	Load Rack 6	Conct*	LL	Clear	No	Flange		0	Flange
1256	Load Rack 6	Conct*	LL	Clear	No	Screw		0	Screw
1257	Load Rack 6	Conct*	LL	Clear	No	Screw		0	Screw
1258	Load Rack 6	Conct*	LL	Clear	No	Screw		0	Screw
1259	Load Rack 6	Conct*	LL	Clear	No	Screw		0	Screw
1260	Load Rack 6	Valve	LL	Clear	No	Tubing		0	Tubing
1261	Load Rack 6	Valve	LL	Clear	No	Ball 3/8"	3/8"	0	Ball 3/8"
1262	Load Rack 6	Valve	LL	Clear	No	Ball 3/8"	3/8"	0	Ball 3/8"
1263	Load Rack 6	Valve	LL	Clear	No	SV 1/4"	1/4"	0	SV 1/4"

Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
1220	Load Rack 6	Valve	LL	EC1 Reg.	No	Butterfly	3"	0	Butterfly 3"
1221	Load Rack 6	Valve	LL	EC1 Reg.	No	Ball	1/2"	0	Ball .5"
1222	Load Rack 6	Conct*	LL	Premium	No	Screw		0	Screw
1223	Load Rack 6	Conct*	LL	Premium	No	Flange		8	Flange -not w/in lcm
1224	Load Rack 6	Conct*	LL	Premium	No	Screw		110	Screw -interference from nearby leak
1225	Load Rack 6	Conct*	LL	Premium	No	Screw		1200	Screw -visible leak
1226	Load Rack 6	Conct*	LL	Premium	No	Screw		0	Screw
1227	Load Rack 6	Conct*	LL	Premium	No	Screw		0	Screw
1228	Load Rack 6	Conct*	LL	Premium	No	Ball 3/8"		0	Ball 3/8"
1229	Load Rack 6	Conct*	LL	Premium	No	Ball 3/8"		4	Ball 3/8"
1230	Load Rack 6	Conct*	LL	Premium	No	Ball 3/8"		0	Ball 3/8"
1231	Load Rack 6	Conct*	LL	Premium	No	SV 1/4"		0	SV 1/4"
1232	Load Rack 6	Conct*	LL	Premium	No	SV 1/4"		0	SV 1/4"
1233	Load Rack 6	Conct*	LL	Premium	No	Meter 4"		0	Meter 4"
1234	Load Rack 6	Conct*	LL	Premium	No	Butterfly 3"		0	Butterfly 3"
1235	Load Rack 6	Conct*	LL	Premium	No	Ball .5"		0	Ball .5"
1236	Load Rack 6	Conct*	LL	Premium	No	Hose -VPR conn. to post		4000	Hose -VPR conn. to post
1237	Load Rack 6	Conct*	LL	Premium	No	Hose -VPR conn. to truck		0	Hose -VPR conn. to truck
1238	Load Rack 6	Conct*	LL	Premium	No	Hose -VPR conn. to post		1600	Hose -VPR conn. to post
1239	Load Rack 6	Conct*	LL	Premium	No	Hose -VPR conn. to post (loose)		100000	Hose -VPR conn. to post (loose)
1240	Load Rack 6	Conct*	LL	Premium	No	Hose -VPR conn. to post		24	Hose -VPR conn. to post
1241	Load Rack 6	Conct*	LL	Premium	No	Union		0	Union

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1264	Load Rack 6	Valve	LL	Reg.	Yes	Meter
1265	Load Rack 6	Valve	LL	Reg.	Yes	Butterfly
1266	Load Rack 6	Valve	LL	Reg.	No	Ball
1267	Load Rack 6	Valve	LL	Reg.	No	Ball
1268	Load Rack 6	Conct*	LL	Premium	No	Screw
1269	Load Rack 6	Conct*	LL	Premium	No	Flange
1270	Load Rack 6	Conct*	LL	Premium	No	Tubing
1271	Load Rack 6	Conct*	LL	Premium	No	Screw
1272	Load Rack 6	Conct	LL	Premium	No	Screw
1273	Load Rack 6	Valve	LL	Premium	No	Ball
1274	Load Rack 6	Valve	LL	Premium	No	Ball
1275	Load Rack 6	Valve	LL	Premium	No	Ball
1276	Load Rack 6	Valve	LL	Premium	No	
1277	Load Rack 6	Valve	LL	Premium	No	
1278	Load Rack 6	Valve	LL	Premium	No	Meter
1279	Load Rack 6	Valve	LL	Premium	No	Butterfly
1280	Load Rack 6	Valve	LL	Premium	No	Ball
1281	Load Rack 6	Conct*	LL	Premium	No	Flange
1282	Load Rack 6	LA	LL		No	Check
1283	Load Rack 6	Conct*	LL		No	Flange
1284	Load Rack 6	LA	LL		No	Check
1285	Load Rack 6	Conct*	LL		No	Flange

Radian ID	Size	Screening Value	Comments
1264	1/4"	0	SV 1/4"
1265	4"	3	Meter 4"
1266	3"	0	Butterfly 3"
1267	1/2"	0	Ball .5"
1268		0	Screw
1269		0	Flange
1270		0	Tubing
1271		0	Screw
1272		94	Screw
1273	3/8"	0	Ball 3/8"
1274	3/8"	0	Ball 3/8"
1275	3/8"	0	Ball 3/8"
1276	1/4"	0	SV 1/4"
1277	1/4"	0	SV 1/4"
1278	4"	15	Meter 4"
1279	3"	0	Butterfly 3"
1280	1/2"	0	Ball .5"
1281		0	Flange -clear UL load arm
1282	4"	190	Check 4" -UL load arm
1283			Flange -EC1 load arm -inaccessible
1284	4"	60	check 4" -EC1 load arm
1285		0	Flange -Prem. load arm

Radian ID	Location	Type	Phase	Product	Load	Subtype
1286	Load Rack 6	LA	LL		No	Check
1287	Load Rack 6	Conct*	LL	UL Add.	No	Screw
1288	Load Rack 6	Conct*	LL	UL Add.	No	Screw
1289	Load Rack 6	Conct*	LL	UL Add.	No	Screw
1290	Load Rack 6	Conct*	LL	UL Add.	No	Screw
1291	Load Rack 6	Conct*	LL	UL Add.	No	Tubing
1292	Load Rack 6	Conct*	LL	UL Add.	No	Screw
1293	Load Rack 6	Conct*	LL	UL Add.	No	Screw
1294	Load Rack 6	Valve	LL	UL Add.	No	Ball
1295	Load Rack 6	Valve	LL	UL Add.	No	Ball
1296	Load Rack 6	Valve	LL	UL Add.	No	Ball
1297	Load Rack 6	Valve	LL	UL Add.	No	Ball
1298	Load Rack 6	Valve	LL	UL Add.	No	
1299	Load Rack 6	Conct*	LL	Add.	No	Union
1300	Load Rack 6	Conct*	LL	Add.	No	Screw
1301	Load Rack 6	Conct*	LL	Add.	No	Screw
1302	Load Rack 6	Conct*	LL	Add.	No	Screw
1303	Load Rack 6	Conct*	LL	Add.	No	Tubing
1304	Load Rack 6	Conct*	LL	Add.	No	Union
1305	Load Rack 6	Valve	LL	Add.	No	Ball
1306	Load Rack 6	Valve	LL	Add.	No	Ball
1307	Load Rack 6	Valve	LL	Add.	No	Ball

Radian ID	Size	Screening Value	Comments
1286	4"	240	Check 4" -Prem. load arm
1287		0	Screw
1288		0	Screw
1289		0	Screw
1290		0	Screw
1291		0	Tubing
1292		0	Screw
1293		0	Screw
1294	1/2"	0	Ball .5"
1295	3/8"	0	Ball 3/8"
1296	3/8"	0	Ball 3/8"
1297	3/8"	0	Ball 3/8"
1298	1/4"	0	SV 1/4"
1299		0	Union
1300		0	Screw
1301		0	Screw
1302		0	Screw
1303		0	Tubing
1304		0	Union
1305	1/2"	0	Ball .5"
1306	3/8"	0	Ball 3/8"
1307	3/8"	0	Ball 3/8"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1308	Load Rack 6	Valve	LL		No	Ball
1309	Load Rack 6	Valve	LL	Add.	No	
1310	Load Rack 6	Conc*	LL	Prem. Add	No	Screw
1311	Load Rack 6	Conc*	LL	Prem. Add	No	Screw
1312	Load Rack 6	Conc*	LL	Prem. Add	No	Screw
1313	Load Rack 6	Conc*	LL	Prem. Add	No	Screw
1314	Load Rack 6	Conc*	LL	Prem. Add	No	Screw
1315	Load Rack 6	Conc*	LL	Prem. Add	No	Screw
1316	Load Rack 6	Valve	LL	Prem. Add	No	Ball
1317	Load Rack 6	LA	LL	Prem. Add	No	Ball
1318	Load Rack 6	Valve	LL	Prem. Add	No	Ball
1319	Load Rack 6	Valve	LL	Prem. Add	No	Ball
1320	Load Rack 6	Valve	LL	Prem. Add	No	
1321	Load Rack 6	Other	LL		No	Manhole
1322	Load Rack 6	Other	LL		No	Manhole
1323	Load Rack 6	Other	LL		No	Manhole
1324	Load Rack 6	Other	LL		No	Manhole
1325	Load Rack 6	Other	LL		No	Manhole
1326	Load Rack 6	Other	LL		No	Manhole
1327	Slop Tank 918	Valve	LL		No	Gate
1328	Slop Tank 918	Conc*	LL		No	Screw
1329	Slop Tank 918	Valve	LL		No	Butterfly

Radian ID	Size	Screening Value	Comments
1308	3/8"	0	Ball 3/8"
1309	1/4"	1	SV 1/4"
1310		0	Screw
1311		0	Screw
1312		0	Screw
1313		0	Screw
1314		0	Screw
1315		0	Screw
1316	1/2"	0	Ball .5"
1317	3/8"	0	Ball 3/8"
1318	3/8"	0	Ball 3/8"
1319	3/8"	0	Ball 3/8"
1320	1/4"	0	SV 1/4"
1321		490	Manhole 18" -Rack 6 -surface
1322		4000	Manhole 18" -Rack 5 -surface
1323		490	Manhole 18" -Rack 4
1324		590	Manhole 18" -Rack 3
1325		20000	Manhole 18" -Rack 2
1326		2000	Manhole 18" -Rack 1
1327	1/2"	0	Gate .5"
1328	4"	0	Screw 4"
1329		0	Butterfly 4"

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size
1330	Slop Tank 918	Other	LL		No	Manhole	
1331	Slop Tank 918	Other	LL		No	Manhole	
1332	Slop Tank 918	Other	LL		No	Manhole	
1333	Slop Tank 918	Other	LL		No	Manhole	
1334	Slop Tank 918	Other	LL		No	Manhole	
1335	Slop Tank 918	Other	LL		No	Manhole	
1336	Slop Tank 918	Valve	LL		No	Gate	1"
1337	Slop Tank 918	Valve	LL		No	Control	1"
1338	Slop Tank 918	Valve	LL		No	Gate	1-1/2"
1339	Slop Tank 918	OEL	LL		No		
1340	Slop Tank 918	Conc*	LL		No	Screw	
1341	Slop Tank 918	Valve	LL		No	Gate	1"
1342	Slop Tank 918	Valve	LL		No	Gate	4"
1343	Slop Tank 918	Other	LL		No	PRV	1"
1344	Slop Tank 918	Valve	LL		No	Gate	1/2"
1345	Slop Tank 918	Valve	LL		No	Gate	1/2"
1346	Slop Tank 918	Conc*	LL		No	Screw	
1347	Slop Tank 918	Conc*	LL		No	Screw	
1348	Slop Tank 918	Valve	LL		No	Gate	1-1/2"
1349	Slop Tank 918	Valve	LL		No	Gate	4"
1350	Slop Tank 918	Conc*	LL		No	Flange	
1351	Slop Tank 918	Valve	LL		No	Ball	1"

Radian ID	Screening Value	Comments
1330	2500	Manhole 24" -surface
1331	190	Manhole sq. 2' -surface
1332	93	Manhole sq. 2' -surface
1333	83	Manhole sq. 2' -surface
1334	83	Manhole sq. 2' -surface
1335	0	Manhole sq. 4' -piping hatch
1336	0	Gate 1"
1337	0	1" Contr. Gate
1338	0	Gate 1.5"
1339	140	Dripping liquid 2" from end -H2O
1340	0	Screw
1341	0	Gate 1"
1342	6	Gate 4"
1343	1	PRV 1"
1344	0	Gate .5"
1345	0	Gate .5"
1346	0	Screw
1347	0	Screw
1348	5	Gate 1.5"
1349	0	Gate 4"
1350	0	Flange -half under H2O
1351	0	Ball 1"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1352	Slop Tank 918	Valve	LL		No	Ball
1353	Slop Tank 918	Conct*	LL		No	Screwed
1354	Slop Tank 918	Valve	LL		No	Gate
1355	Slop Tank 918	Valve	LL		No	Gate
1356	Slop Tank 918	Valve	LL		No	Ball
1357	Slop Tank 918	Valve	LL		No	Ball
1358	Slop Tank 918	Valve	LL		No	Gate
1359	Slop Tank 918	Other	LL		No	PRV
1360	Slop Tank 918	Valve	LL		No	Gate
1361	Slop Tank 918	Valve	LL		No	Ball
1362	Slop Tank 918	Valve	LL		No	Gate
1363	Slop Tank 918	Valve	LL		No	Ball
1364	Slop Tank 918	Conct*	LL		No	Flange
1365	Slop Tank 918	Pump	LL		No	
1366	Slop Tank 918	Conct*	LL		No	Screwed
1367	Slop Tank 918	Conct*	LL		No	Flange
1368	Slop Tank 918	Valve	LL		No	Gate
1369	Slop Tank 918	Valve	LL		No	Gate
1370	Slop Tank 918	Valve	LL		No	Gate
1371	Slop Tank 918	Valve	LL		No	Ball
1372	Slop Tank 918	Valve	LL		No	Ball
1373	Slop Tank 918	OEL	LL		No	

Radian ID	Size	Screening Value	Comments
1352	1"	0	Ball 1"
1353		0	Screw
1354	1/2"	0	Gate .5"
1355	1/2"	0	Gate .5"
1356	1/2"	0	Ball .5"
1357	1/2"	0	Ball .5"
1358	6"	0	Gate 6"
1359	1"	0	PRV 1"
1360	2"	0	Gate 2"
1361	1-1/2"	0	Ball 1.5"
1362	1-1/2"	0	Gate 1.5"
1363	1-1/2"	0	Ball 1.5"
1364		0	Flange -not w/in lcm
1365		0	Centr.
1366		0	Screw
1367		0	Flange
1368	4"	1	Gate 4"
1369	4"	0	Gate 4"
1370	4"	12	Gate 4"
1371	3/8"	0	Ball 3/8"
1372	3/8"	0	Ball 3/8"
1373		0	

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1374	Slop Tank 918	Valve	Gas		No	Gate
1375	Slop Tank 918	Valve	Gas		No	Gate
1376	Slop Tank 918	Conct*	Gas		No	Flange
1377	VRU 1	Valve	Gas		Yes	Gate
1378	VRU 1	Valve	Gas		Yes	Gate
1379	VRU 1	Valve	Gas		Yes	Gate
1380	VRU 1	Conct*	Gas		Yes	Screwed
1381	VRU 1	Conct*	Gas		Yes	Union
1382	VRU 1	Conct*	Gas		Yes	Screwed
1383	VRU 1	Valve	Gas		Yes	Gate
1384	VRU 1	Valve	Gas		Yes	Gate
1385	VRU 1	Valve	LL		Yes	Gate
1386	VRU 1	OEL	LL		Yes	
1387	VRU 1	Valve	LL		Yes	Gate
1388	VRU 1	Conct*	LL		Yes	Screwed
1389	VRU 1	Valve	LL		Yes	Gate
1390	VRU 1	Valve	LL		Yes	Gate
1391	VRU 1	Pump	LL		Yes	
1392	VRU 1	Valve	LL		Yes	Gate
1393	VRU 1	OEL	LL		Yes	
1394	VRU 1	Valve	LL		Yes	Gate
1395	VRU 1	Valve	LL		Yes	Ball

Radian ID	Size	Screening Value	Comments
1374	2"	3	Gate 2"
1375	2"	140	Gate 2"
1376		0	Flange -not w/in lcm
1377	2"	0	2" Gate - VRU 1
1378	1/2"	0	Gate .5"
1379	3/4"	0	Gate 3/4"
1380		0	Screw
1381		0	Union
1382		0	Screw
1383	2"	0	Gate 2"
1384	3/4"	0	Gate 3/4"
1385	1/4"	0	Gate 1/4"
1386		0	
1387	1/2"	0	Gate .5"
1388		0	Screw
1389	2"	0	Gate 2"
1390	2"	0	Gate 2"
1391	1"	0	Centr.
1392		0	Gate 1"
1393		0	1"
1394	1/2"	0	Gate .5"
1395	1/8"	0	Ball 1/8"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1396	VRU 1	OEL	LL		Yes	
1397	VRU 1	Conct*	LL		Yes	Screw
1398	VRU 1	Valve	LL		Yes	Gate
1399	VRU 1	Valve	LL		Yes	Gate
1400	VRU 1	Valve	LL		Yes	Gate
1401	VRU 1	Valve	LL		Yes	Ball
1402	VRU 1	OEL	LL		No	
1403	VRU 1	Valve	LL		No	
1404	VRU 1	Conct*	LL		No	Screw
1405	VRU 1	Conct*	LL		No	Screw
1406	VRU 2	Valve	LL		Yes	Gate
1407	VRU 2	Valve	LL		Yes	Gate
1408	VRU 2	Pump	LL		Yes	
1409	VRU 2	Valve	LL		Yes	Gate
1410	VRU 2	Valve	LL		Yes	Gate
1411	VRU 2	Valve	LL		Yes	Gate
1412	VRU 2	Valve	LL		Yes	Gate
1413	VRU 2	OEL	LL		Yes	
1414	VRU 2	Valve	LL		Yes	Gate
1415	VRU 2	Valve	LL		Yes	Gate
1416	VRU 2	Valve	LL		Yes	Gate
1417	VRU 2	Valve	LL		Yes	Gate

Radian ID	Size	Screening Value	Comments
1396		3	1/4"
1397		0	Screw
1398	1-1/2"	0	Gate 1.5"
1399	1/2"	0	Gate .5"
1400	1/2"	38	Gate .5"
1401	1/8"	0	Ball 1/8"
1402		0	Inaccessible
1403		0	Screw
1404		0	Screw
1405		0	Screw
1406	2"	0	2" Gate - VRU 2
1407	2"	60	Gate 2"
1408		0	Centr.
1409	1"	0	Gate 1"
1410	1/2"	0	Gate .5"
1411	1/2"	0	Gate .5"
1412	1/4"	0	Gate 1/4"
1413		0	Gate 1/4" -inaccessible
1414	1/4"	0	Gate .5"
1415	1/2"	0	Gate 2"
1416	2"	0	Gate 2"
1417	2"	0	Gate 2"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1418	VRU 2	Conct*	LL		Yes	Screw
1419	VRU 2	Conct*	LL		Yes	Screw
1420	VRU 2	Valve	LL		No	Gate
1421	VRU 2	Valve	LL		Yes	Gate
1422	VRU 2	Pump	LL		Yes	
1423	VRU 2	Valve	Gas		Yes	Gate
1424	VRU 2	Valve	Gas		Yes	
1425	VRU 2	Valve	Gas		Yes	Ball
1426	VRU 2	Valve	Gas		Yes	Gate
1427	VRU 2	Valve	Gas		Yes	Gate
1428	VRU 2	Valve	Gas		Yes	Gate
1429	VRU 2	Valve	Gas		Yes	Gate
1430	VRU 2	Valve	Gas		Yes	Gate
1431	VRU 2	Valve	Gas		Yes	Gate
1432	VRU 2	Valve	Gas		Yes	Gate
1433	VRU 2	Valve	Gas		Yes	Ball
1434	VRU 2	Conct*	Gas		Yes	Screw
1435	VRU 2	Conct*	Gas		Yes	Screw
1436	VRU 2	Conct*	Gas		Yes	Union
1437	VRU 2	Valve	Gas		Yes	Ball
1438	VRU 2	Conct*	Gas		Yes	Screw
1439	VRU 2	Conct*	Gas		Yes	Screw

Radian ID	Size	Screening Value	Comments
1418		0	Screw
1419		0	Screw
1420	2"	3	Gate 2"
1421	1/2"	0	Gate .5"
1422		20	Centr.
1423	2"	0	Gate 2"
1424		5	Ball .5"
1425	1/2"	0	Gate 2"
1426	2"	0	Gate 1"
1427	1"	0	Gate 1"
1428	1"	0	Gate 1"
1429	1"	0	Gate 1"
1430	3/8"	690	Gate 3/8"
1431	3/8"	290	Gate 3/8"
1432	3/8"	190	Gate 3/8"
1433	3/8"	0	Ball 3/8"
1434		0	Screw
1435		0	Screw
1436		28	Union
1437	1/2"	0	Ball .5"
1438		0	Screw
1439		0	Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1440	VRU 2	Conct*	Gas		Yes	Screwed
1441	VRU 2	Valve	Gas		Yes	Control
1442	VRU 2	Other	Gas		Yes	Hatch
1443	VRU 2	Other	Gas		Yes	Hatch
1444	VRU 2	Other	Gas		Yes	Hatch
1445	VRU 2	Valve	LL		Yes	Ball
1446	VRU 2	Conct*	LL		Yes	Screwed
1447	VRU 2	Valve	LL		Yes	Gate
1448	VRU 2	Conct*	LL		Yes	Screwed
1449	VRU 2	Valve	LL		Yes	Gate
1450	VRU 2	Valve	LL		Yes	Ball
1451	VRU 2	Valve	LL		Yes	Gate
1452	VRU 2	Valve	LL		Yes	
1453	VRU 2	Valve	LL		Yes	Gate
1454	VRU 2	Conct*	LL		Yes	Screwed
1455	VRU 2	Conct*	LL		Yes	Screwed
1456	VRU 2	Valve	LL		Yes	Control
1457	VRU 2	Conct*	LL		Yes	Screwed
1458	VRU 2	Valve	LL		Yes	Gate
1459	VRU 2	Valve	LL		Yes	Gate
1460	VRU 2	Valve	LL		Yes	Gate
1461	VRU 2	OEL	LL		Yes	

Radian ID	Size	Screening Value	Comments
1440		0	Screw
1441	2"	0	2" Contr. Gate
1442		490	Hatch cover
1443		10000	Hatch cover
1444		290	Hatch cover
1445	1-1/2"	0	Ball 1.5"
1446		0	Screw
1447	2"	0	Gate 2"
1448		0	Screw
1449	2"	60	Gate 2"
1450	1/4"	0	Ball 1/4"
1451	1/2"	10	Gate .5"
1452		0	
1453	1/2"	0	Gate .5"
1454		0	Screw
1455		0	Screw
1456	2"	0	Contr. 2"
1457	1"	0	Screw
1458	1/4"	5	Gate 1"
1459	1/4"	0	Gate 1/4"
1460	1/2"	6	Gate .5"
1461		0	

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size
1462	VRU 2	Valve	LL		Yes	Gate	1-1/2"
1463	VRU 2	Pump	LL		Yes		
1464	VRU 2	Conct*	LL		Yes	Union	
1465	VRU 2	Conct*	LL		Yes	Screwed	
1466	VRU 2	Valve	LL		Yes	Gate	1/4"
1467	VRU 2	Valve	LL		Yes	Gate	1/4"
1468	VRU 3	Valve	LL		Yes	Gate	3/8"
1469	VRU 3	Valve	LL		Yes	Gate	3/8"
1470	VRU 3	Valve	LL		Yes	Ball	1/8"
1471	VRU 3	OEL	LL		Yes		
1472	VRU 3	Valve	LL		Yes	Gate	1/2"
1473	VRU 3	OEL	LL		Yes		
1474	VRU 3	Valve	LL		Yes	Gate	2-1/2"
1475	VRU 3	Valve	LL		Yes	Gate	2-1/2"
1476	VRU 3	Valve	LL		Yes	Gate	1/2"
1477	VRU 3	Pump	LL		Yes		
1478	VRU 3	Valve	LL		Yes	Gate	2-1/2"
1479	VRU 3	Valve	LL		Yes	Gate	2-1/2"
1480	VRU 3	Valve	LL		Yes	Gate	1/2"
1481	VRU 3	Valve	LL		Yes	Ball	1/4"
1482	VRU 3	OEL	LL		Yes		
1483	VRU 3	Valve	LL		Yes	Gate	3/8"

Radian ID	Screening Value	Comments
1462	0	Gate 1.5"
1463	0	Contr.
1464	0	Union
1465	0	Screw
1466	0	Gate 1/4"
1467	0	Gate 1/4"
1468	0	Gate 3/8"
1469	0	Gate 3/8"
1470	0	Ball 1/8"
1471	0	1/4"
1472	0	Gate .5"
1473	0	1"
1474	0	Gate 2.5"
1475	0	Gate 2.5"
1476	0	Gate .5"
1477	20	Contr. -pearless
1478	0	Gate 2.5"
1479	0	Gate 2.5"
1480	0	Gate .5"
1481	0	Ball 1/4"
1482	0	
1483	0	Gate 3/8"

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size
1484	VRU 3	Valve	LL		Yes	Gate	2-1/2"
1485	VRU 3	Valve	LL		Yes	Gate	2-1/2"
1486	VRU 3	Conct*	LL		Yes	Screw	
1487	VRU 3	Conct	LL		Yes	Screw	
1488	VRU 3	Valve	LL		Yes	Ball	3/8"
1489	VRU 3	Valve	Gas		Yes	Gate	2-1/2"
1490	VRU 3	Valve	Gas		Yes	Check	1"
1491	VRU 3	Valve	Gas		Yes	Gate	1"
1492	VRU 3	Valve	Gas		Yes	Gate	1"
1493	VRU 3	Valve	Gas		Yes	Gate	1"
1494	VRU 3	Valve	Gas		Yes	Gate	1/2"
1495	VRU 3	Valve	Gas		Yes	Gate	1/2"
1496	VRU 3	Valve	Gas		Yes	Gate	1/4"
1497	VRU 3	Valve	Gas		Yes	Ball	3/8"
1498	VRU 3	Conct*	Gas		Yes	Screw	
1499	VRU 3	Conct*	Gas		Yes	Screw	
1500	VRU 3	Conct*	Gas		Yes	Union	
1501	VRU 3	Conct*	Gas		Yes	Screw	
1502	VRU 3	Conct*	Gas		Yes	Screw	
1503	VRU 3	Conct*	Gas		Yes	Screw	
1504	VRU 3	Conct*	Gas		Yes	Union	
1505	VRU 3	Conct*	Gas		Yes	Screw	

Radian ID	Screening Value	Comments
1484	0	Gate 2.5"
1485	0	Gate 2.5"
1486	0	Screw
1487	190	Screw
1488	0	Ball 3/8"
1489	11	Gate 2.5"
1490	0	Check 1" -mostly covered
1491	5	Gate 1"
1492	5	Gate 1"
1493	0	Gate 1"
1494	0	Gate .5"
1495	0	Gate .5"
1496	0	Gate 1/4"
1497	0	Ball 3/8"
1498	0	Screw
1499	0	Screw
1500	0	Union -interference by nearby hatch co
1501	0	Screw -interference by nearby hatch co
1502	0	Screw
1503	0	Screw
1504	0	Union -wet
1505	0	Screw

Radian ID	Location	Type	Phase	Product	Load	Subtype
1506	VRU 3	Other	Gas		Yes	Hatch
1507	VRU 3	Other	Gas		Yes	Hatch
1508	VRU 3	Other	Gas		Yes	Hatch
1509	VRU 3	Conct*	Gas		Yes	Tubing
1510	VRU 3	OEL	Gas		Yes	
1511	VRU 3	Conct*	Gas		Yes	Screw
1512	VRU 3	Valve	LL		Yes	Gate
1513	VRU 3	Valve	LL		Yes	Gate
1514	VRU 3	Valve	LL		Yes	Gate
1515	VRU 3	Valve	LL		Yes	Solenoid
1516	VRU 3	Valve	LL		Yes	Solenoid
1517	VRU 3	Valve	LL		Yes	Gate
1518	VRU 3	Valve	LL		Yes	Gate
1519	VRU 3	OEL	LL		Yes	
1520	VRU 3	Valve	LL		Yes	Gate
1521	VRU 3	Valve	LL		Yes	Gate
1522	VRU 3	Valve	LL		Yes	Gate
1523	VRU 3	Valve	LL		Yes	Gate
1524	VRU 3	Pump	LL		No	
1525	VRU 3	OEL	LL		Yes	
1526	VRU 3	Conct*	LL		Yes	Screw
1527	VRU 3	Conct*	LL		Yes	Screw

Radian ID	Screening Value	Comments
1506	100000.0	Hatch -missing cover
1507	990.0	Hatch cover
1508	790.0	Hatch cover
1509	0.0	Tubing
1510	0.0	
1511	0.0	Screw
1512	0.0	Gate .5"
1513	0.0	Gate .5"
1514	2.0	Gate .5"
1515	0.0	Solenoid 3/4"
1516	6.0	Solenoid 2"
1517	0.0	Gate 2"
1518	0.0	Gate 3/4"
1519	6.0	
1520	0.0	Gate 3/4"
1521	0.0	Gate 1/4"
1522	0.0	Gate 2"
1523	0.0	Gate 2"
1524	0.0	Centr.
1525	60.0	
1526	0.0	Screw
1527	20.0	Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1528	VRU 3	Conct*	LL		Yes	Union
1529	VRU 3	Conct*	LL		Yes	Screwed
1530	VRU 3	Conct*	LL		Yes	Union
1531	VRU 3	Conct*	LL		Yes	Screwed
1532	VRU 3	Conct*	LL		Yes	Screwed
1533	VRU 3	Valve	LL		Yes	Gate
1534	VRU 3	Valve	LL		Yes	Gate
1535	VRU 3	Valve	Gas		Yes	Butterfly
1536	VRU 3	Valve	Gas		Yes	Butterfly
1537	VRU 3	Valve	Gas		Yes	Butterfly
1541	Stop Tank 918	Valve	LL		No	Gate

Radian ID	Size	Screening Value	Comments
1528		20.0	Union
1529		0.0	Screw
1530		8.0	Union
1531		0.0	Screw
1532		0.0	Screw
1533	2-1/2"	0.0	Gate 2.5"
1534	2-1/2"	0.0	Gate 2.5"
1535	12"	0.0	Butterfly 12"
1536	12"	.	Butterfly 12"
1537	12"	.	Butterfly 12"
1541	2"	4.5	Gate 2"

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Radian ID	Location	Type	Phase	Product	Load	Subtype
3	Tank 7549	Conct*	LL	Plus	No	Screw	25	Tank 7548	Conct*	HL	F.O. #2	No	Screw
4	Tank 7549	Conct*	LL	Plus	No	Screw	26	Tank 7548	Valve	HL	F.O. #2	No	Gate
5	Tank 7549	Valve	LL	Plus	No	Ball	27	Tank 7547	Pump	HL	F.O. #2	No	
6	Tank 7549	Valve	LL	Plus	No	Gate	28	Tank 7547	Conct*	HL	F.O. #2	No	Flange
7	Tank 7549	Valve	LL	Plus	No	Gate	29	Tank 7547	Conct*	HL	F.O. #2	No	Screw
8	Tank 7549	Valve	LL	Plus	No	Gate	30	Tank 7547	Conct*	HL	F.O. #2	No	Flange
9	Tank 7549	Conct*	LL	Plus	No	Flange	31	Tank 7547	Conct*	HL	F.O. #2	No	Flange
10	Tank 7549	Valve	LL	Plus	No	Gate	32	Tank 7547	Conct*	HL	F.O. #2	No	Flange
11	Tank 7549	Conct*	LL	Plus	No	Screw	33	Tank 7547	Conct*	HL	F.O. #2	No	Screw
12	Tank 7549	Valve	LL	Plus	No	Ball	34	Tank 7547	Conct*	HL	F.O. #2	No	Screw
13	Tank 7549	Valve	LL	Plus	No	Butterfly	35	Tank 7547	Pump	HL	F.O. #2	No	
14	Tank 7549	Valve	LL	Plus	No	Plug	36	Tank 7547	Valve	HL	F.O. #2	No	Ball
15	Tank 7549	Conct*	LL	Plus	No		37	Tank 7547	Valve	HL	F.O. #2	No	Gate
16	Tank 7548	Conct*	HL	F.O. #2	No	Screw	38	Tank 7547	Valve	HL	F.O. #2	No	Ball
17	Tank 7548	Conct*	HL	F.O. #2	No	Flange	39	Tank 7547	Valve	HL	F.O. #2	No	Gate
18	Tank 7548	Valve	HL	F.O. #2	No	Gate	40	Tank 7547	Valve	HL	F.O. #2	No	Gate
19	Tank 7548	Valve	HL	F.O. #2	No	Butterfly	41	Tank 7547	Valve	HL	F.O. #2	No	Gate
20	Tank 7548	Valve	HL	F.O. #2	No	Plug	42	Tank 7547	Valve	HL	F.O. #2	No	Gate
21	Tank 7548	Valve	HL	F.O. #2	No	Gate	43	Tank 7547	Valve	HL	F.O. #2	No	Gate
22	Tank 7548	Other	HL	F.O. #2	No	PRV	44	Tank 7547	Valve	HL	F.O. #2	No	Gate
23	Tank 7548	Valve	HL	F.O. #2	No	Gate	45	Tank 7547	Valve	HL	F.O. #2	No	Gate
24	Tank 7548	Valve	HL	F.O. #2	No	Gate	46	Tank 7547	Valve	HL	F.O. #2	No	Gate

Radian ID	Size	Screening Value	Comments
3		0.0	Screw
4		0.0	Screw
5	1/2"	0.0	Ball .5"
6	12"	68.0	Gate 12"
7	3"	0.0	Gate 3"
8	3"	0.0	Gate 3"
9		0.0	Flange
10	1/2"	2.5	Gate .5"
11		0.0	Screw
12	1/2"	0.0	Ball .5"
13	8"	2500.0	Butterfly 8"
14	8"	47.0	Plug 8"
15		4.0	8"
16		0.0	Screw
17		0.0	Flange -not w/in lcm
18	1/2"	0.0	Gate .5"
19	8"	0.0	Butterfly 8"
20	8"	0.0	Plug 8"
21	1/2"	0.0	Gate .5"
22	1"	0.0	PRV 1"
23	3"	0.0	Gate 3"
24	3"	0.0	Gate 3"

Radian ID	Size	Screening Value	Comments
25		0.0	Screw
26	3"	0.0	Gate 3"
27		0.0	
28		0.0	Flange
29		0.0	Screw
30		0.0	Flange -not w/in lcm
31		0.0	Flange -not w/in lcm
32		0.0	Screw
33		0.0	Screw
34		0.0	Screw
35		13.0	
36	1/2"	0.0	Ball .5"
37	8"	0.0	Gate 8"
38	1/2"	0.0	Ball .5"
39	8"	0.0	Gate 8"
40	1"	0.0	Gate 1"
41	8"	0.0	Gate 8"
42	8"	0.0	Gate 8"
43	8"	0.0	Gate 8"
44	1"	0.0	Gate 1"
45	1"	0.0	Gate 1"
46	8"	0.0	Gate 8"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
47	Tank 7547	Conct*	HL	F.O. #2	No	Screw
48	Tank 7547	Conct*	HL	F.O. #2	No	Screw
49	Tank 7547	Valve	HL	F.O. #2	No	Gate
50	Tank 7547	Valve	HL	F.O. #2	No	Butterfly
51	Tank 7547	Valve	HL	F.O. #2	No	Plug
52	Tank 7547	Other	HL	F.O. #2	No	PRV
53	Tank 7547	Valve	HL	F.O. #2	No	Gate
54	Tank 7547	OEL	HL	F.O. #2	No	Gate
55	Tank 7547	Valve	HL	F.O. #2	No	Gate
56	Tank 7547	Conct*	HL	F.O. #2	No	Flange
57	Tank 7547	Valve	HL	F.O. #2	No	Gate
58	Tank 7547	Valve	HL	F.O. #2	No	Gate
59	Tank 7547	Valve	HL	F.O. #2	No	Gate
60	Tank 3344	Valve	HL	F.O. #2	No	Gate
61	Tank 3344	Valve	HL	F.O. #2	No	Butterfly
62	Tank 3344	Valve	HL	F.O. #2	No	Butterfly
63	Tank 3344	Valve	HL	F.O. #2	No	Gate
64	Tank 3344	Valve	HL	F.O. #2	No	Gate
65	Tank 3344	Pump	HL	F.O. #2	No	Gate
66	Tank 3344	Conct*	HL	F.O. #2	No	Flange
67	Tank 3344	Valve	HL	F.O. #2	No	Gate
68	Tank 3344	Valve	HL	F.O. #2	No	Gate

Radian ID	Size	Screening Value	Comments
47		0.0	Screw
48		0.0	Screw
49	1/2"	0.0	Gate .5"
50	8"	0.0	Butterfly 8"
51	8"	0.0	Plug 8"
52	1"	0.0	PRV 1"
53	1"	0.0	Gate 1"
54		0.0	
55	3/8"	0.0	Gate 3/8"
56		0.0	Flange
57	3"	0.0	Gate 3"
58	3"	0.0	Gate 3"
59	3"	0.0	Gate 3"
60	4"	0.0	Gate 4"
61	4"	0.5	Butterfly 4"
62	6"	0.0	Butterfly 6"
63	8"	0.0	Gate 8"
64	4"	0.0	Gate 4"
65		0.0	Feed Pump
66		0.0	Flange-not w/in lcm
67	1/2"	0.0	Gate .5"
68	8"	0.0	Gate 8"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
69	Tank 3344	Conct*	HL	F.O. #2	No	Flange
70	Tank 3344	Conct*	HL	F.O. #2	No	Screw
71	Tank 3344	Valve	HL	F.O. #2	No	Ball
72	Tank 3344	Valve	HL	F.O. #2	No	Gate
73	Tank 3344	Conct*	HL	F.O. #2	No	Screw
74	Tank 3344	Valve	HL	F.O. #2	No	Gate
75	Pump St.	Pump	HL	F.O. #2	No	Gate
76	Pump St.	Valve	HL	F.O. #2	No	Gate
77	Pump St.	Conct*	HL	F.O. #2	No	Flange
78	Pump St.	Conct*	HL	F.O. #2	No	Flange
79	Pump St.	Conct*	HL	F.O. #2	No	Flange
80	Pump St.	Conct*	HL	F.O. #2	No	Screw
81	Pump St.	Valve	HL	F.O. #2	No	Gate
82	Pump St.	Valve	HL	F.O. #2	No	Gate
83	Pump St.	Valve	HL	F.O. #2	No	Gate
84	Pump St.	Valve	HL	F.O. #2	No	Gate
85	Pump St.	Valve	HL	F.O. #2	No	Gate
86	Pump St.	Valve	HL	F.O. #2	No	Gate
87	Pump St.	Valve	HL	F.O. #2	No	Gate
88	Pump St.	Valve	HL	F.O. #2	No	Gate
89	Pump St.	Valve	HL	F.O. #2	No	Gate
90	Pump St.	Valve	HL	F.O. #2	No	Gate

Radian ID	Size	Screening Value	Comments
69		0.0	Flange-not w/in lcm
70		0.0	Screw
71	3/8"	0.0	Ball 3/8"
72	3"	0.0	Gate 3"
73		0.0	Screw
74	3"	0.0	Gate 3"
75		0.0	Centr. Pump
76	1/4"	0.5	Gate .25"
77		0.0	Flange-not w/in lcm
78		0.0	Flange
79		0.0	Flange
80		0.5	Screw
81	3"	2.5	Gate 3"
82	10"	0.0	Gate 10"
83	10"	3.0	Gate 10"
84	10"	0.0	Gate 10"
85	8"	0.0	Gear 8"
86	10"	0.0	Gate 10"
87	8"	0.0	Gear 8"
88	10"	0.0	Gate 10"
89	6"	1.5	Gate 6"
90	6"	0.0	Gate 6"

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Radian ID	Location	Type	Phase	Product	Load	Subtype
91	Pump St.	Valve	HL	F.O. #2	No	Gate	113	Tank 31641	Valve	LL	Plus	No	Gate
92	Pump St.	Other	HL	F.O. #2	No	PRV	114	Tank 31641	LA	LL	Plus	No	Gate
93	Pump St.	Valve	HL	F.O. #2	No	Gate	115	Tank 31641	LA	LL	Plus	No	Butterfly
94	Tank 7494	Conct*	HL	F.O. #2	No	Flange	116	Tank 31641	LA	LL	Plus	No	Butterfly
95	Tank 7494	Valve	HL	F.O. #2	No	Gate	117	Tank 31641	Valve	LL	Plus	No	Gate
96	Tank 7494	Valve	HL	F.O. #2	No	Butterfly	118	Tank 31641	Valve	LL	Plus	No	Gate
97	Tank 7494	Valve	HL	F.O. #2	No	Butterfly	119	Tank 31641	Conct*	LL	Plus	No	Flange
98	Tank 7494	Valve	HL	F.O. #2	No	Control	120	Tank 31641	Conct*	LL	Plus	No	Screw
99	Tank 7494	Valve	HL	F.O. #2	No	Gate	121	Tank 31641	Conct*	LL	Plus	No	Screw
100	Tank 7494	Conct*	HL	F.O. #2	No	Screw	122	Tank 31641	Valve	LL	Plus	No	Gate
101	Tank 7494	Valve	HL	F.O. #2	No	Gate	123	Tank 31641	Other	LL	Plus	No	PRV
102	Tank 7494	Valve	HL	F.O. #2	No	Gate	124	Tank 31641	Valve	LL	Plus	No	Gate
103	Tank 3620	Valve	HL	F.O. #2	No	Butterfly	125	Tank 31641	Valve	LL	Plus	No	Gate
104	Tank 3620	Valve	HL	F.O. #2	No	Gate	126	Tank 31641	Valve	LL	Plus	No	Plug
105	Tank 3620	Valve	HL	F.O. #2	No	Butterfly	127	Tank 31641	Valve	LL	Plus	No	Butterfly
106	Tank 3620	Valve	HL	F.O. #2	No	Control	128	Tank 31641	Valve	LL	Plus	No	Gate
107	Tank 3620	Valve	HL	F.O. #2	No	Ball	129	Pump St.	Valve	LL	Plus	No	Gate
108	Tank 3620	Valve	HL	F.O. #2	No	Gate	130	Pump St.	Valve	LL	Plus	No	Plug
109	Tank 3620	Valve	HL	F.O. #2	No	Gate	131	Pump St.	Conct*	LL	Plus	No	Screw
110	Tank 3620	Valve	HL	F.O. #2	No	Gate	132	Pump St.	Valve	LL	Plus	No	Ball
111	Tank 3620	Valve	HL	F.O. #2	No	Gate	133	Pump St.	Conct*	LL	Plus	No	Screw
112	Tank 3620	Valve	HL	F.O. #2	No	Gate	134	Pump St.	Valve	LL	Plus	No	Ball

Radian ID	Size	Screening Value	Comments	Radian ID	Size	Screening Value	Comments
91	1/2"	0.0	Gate 5"	113	3"	0.0	Gate 3"
92	1/2"	0.0	PRV 5"	114	3"	0.0	Gate 3"
93	3"	0.0	Gate 3"	115	14"	23.0	Butterfly 14"
94		0.0	Flange	116	14"	18.0	Butterfly 14"
95	6"	0.0	Gate 6"	117	4"	0.0	Gate 4"
96	6"	0.0	Butterfly 6"	118	3"	0.0	Gate 3"
97	6"	0.0	Butterfly 6"	119		0.0	Flange -2' Manhole
98	6"	1.0	6" Contr. Gate	120		0.0	Screw
99	3"	0.0	Gate 3"	121		0.0	Screw
100		0.0	Screw	122	1"	0.0	Gate 1"
101	3"	0.0	Gate 3"	123	1"	0.0	PRV 1"
102	4"	0.0	Gate 4"	124	1/2"	0.0	Gate 5"
103	8"	3.0	Butterfly 8"	125	3"	39.0	Gate 3"
104	8"	1.5	Gate 8"-visible oil	126	16"	5.0	Plug 16"
105	6"	2.0	Butterfly 6"	127	14"	800.0	Butterfly 14"
106	6"	0.0	6" Contr. Gate	128	3"	0.0	Gate 3"
107	1"	0.0	Ball 1"	129	1"	0.0	Gate 1"
108	4"	0.0	Gate 4"	130	12"	58.0	Plug 12"
109	4"	0.0	Gate 4"	131		0.0	Screw
110	3"	0.0	Gate 3"	132	1/2"	0.0	Ball 5"
111	3"	0.0	Gate 3"	133		0.0	Screw
112	3"	0.0	Gate 3"	134	1/2"	0.0	Ball 5"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
135	Pump St.	Valve	LL	Plus	No	Plug
136	Pump St.	Valve	LL	Plus	No	Control
137	Pump St.	Conct*	LL	Plus	No	Union
138	Pump St.	Valve	LL	Plus	No	Ball
139	Pump St.	Valve	LL	Plus	No	Ball
140	Pump St.	Valve	LL	Plus	No	Ball
141	Pump St.	Valve	LL	Plus	No	Ball
142	Pump St.	Valve	LL	Plus	No	Plug
143	Pump St.	Conct*	LL	Plus	No	Gate
144	Pump St.	Valve	LL	Plus	No	Screw
145	Pump St.	Pump	LL	Plus	No	Gate
146	Pump St.	Valve	LL	Plus	No	Check
147	Pump St.	Valve	LL	Plus	No	Ball
148	Pump St.	Valve	LL	Plus	No	Ball
149	Pump St.	Valve	LL	Plus	No	Ball
150	Pump St.	Conct*	LL	Plus	No	Flange
151	Pump St.	Valve	LL	Plus	No	Plug
152	Pump St.	Valve	LL	Plus	No	Plug
153	Pump St.	Valve	LL	Plus	No	Check
154	Pump St.	Conct*	LL	Plus	No	Screw
155	Pump St.	Valve	LL	Plus	No	Ball
156	Pump St.	Valve	LL	Plus	No	Ball

Radian ID	Size	Screening Value	Comments
135	12"	150.0	Plug 12"
136	12"	5.5	Contr 12"
137		0.0	Union
138	1/2"	0.0	Ball .5"
139	1/2"	0.0	Ball .5"
140	1/2"	0.0	Ball .5"
141	12"	78.0	Plug 12"
142	10"	250.0	Gate 10"
143		6.0	Screw -visibly wet
144	3/8"	0.0	Gate 3/8"
145		1000.0	Pump on
146	8"	0.0	Check 8"
147	1/2"	0.0	Ball .5"
148	1/2"	0.0	Ball .5"
149	1/2"	0.0	Ball .5"
150		0.0	Flange
151	8"	2500.0	Plug 8"
152	8"	3.0	Plug 8"
153	8"	0.0	Check 8"
154		0.0	Screw
155	3"	0.0	Ball 3"
156	1/2"	17.0	Ball .5"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
157	Pump St.	Valve	LL	Plus	No	Ball
158	Pump St.	Pump	LL	Plus	No	
159	Pump St.	Valve	LL	Plus	No	Plug
160	Pump St.	Valve	LL	Plus	No	Plug
161	Pump St.	Conct*	LL	Plus	No	
162	Pump St.	Valve	LL	Plus	No	Control
163	Pump St.	Conct*	LL	Plus	No	Union
164	Pump St.	Valve	LL	Plus	No	Ball
165	Pump St.	Valve	LL	Plus	No	
166	Pump St.	Valve	LL	Super	No	Gate
167	Pump St.	Valve	LL	Super	No	Ball
168	Pump St.	Valve	LL	Super	No	Plug

Radian ID	Size	Screening Value	Comments
157	1/2"	0.0	Ball .5"
158		180.0	Centr.
159	10"	250.0	Plug 10"
160	12"	1500.0	Plug 12"
161		1500.0	Fluctuating
162	12"	990.0	Contr 12"
163		10.0	Union
164	1/2"	0.0	Ball .5"
165		0.0	
166	3"	14.0	Gate 3"
167	1/2"	0.0	Ball .5"
168	10"	0.0	Plug 10"

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Radian ID	Location	Type	Phase	Product	Load	Subtype
171	Pump St. 7132	Conct*	LL	Super	Yes	Screwed	193	Pump St. 7132	Conct*	LL	Super	No	Flange
172	Pump St. 7132	Conct*	LL	Super	Yes	Screwed	194	Pump St. 7132	Valve	LL	Super	No	Globe
173	Pump St. 7132	Conct*	LL	Super	Yes	Screwed	195	Pump St. 7132	Valve	LL	Super	No	Ball
174	Pump St. 7132	Valve	LL	Super	Yes	Gate	196	Pump St. 7132	Valve	LL	Super	No	Control
175	Pump St. 7132	Valve	LL	Super	Yes	Gate	197	Pump St. 7132	Valve	LL	Super	No	Ball
176	Pump St. 7132	Valve	LL	Super	No	Globe	198	Pump St. 7132	Valve	LL	Super	No	Ball
177	Pump St. 7132	Valve	LL	Super	No	Gate	199	Pump St. 7132	Valve	LL	Super	No	Globe
178	Pump St. 7132	Valve	LL	Super	No	Globe	200	Pump St. 7132	Valve	LL	Super	No	Globe
179	Pump St. 7132	Valve	LL	Super	No	Globe	201	Pump St. 7132	Conct*	LL	Super	No	Flange
180	Pump St. 7132	Valve	LL	Super	No	Check	202	Pump St. 7132	Valve	LL	Super	No	Globe
181	Pump St. 7132	Conct*	LL	Super	No	Flange	203	Tank 7132	Other	LL	Super	No	PRV
182	Pump St. 7132	Pump	LL	Super	No		204	Tank 7132	Valve	LL	Super	No	Gate
183	Pump St. 7132	Pump	LL	Super	No		205	Tank 7132	Conct*	LL	Super	No	Screwed
184	Pump St. 7132	Conct*	LL	Super	No	Flange	206	Tank 7132	Valve	LL	Super	No	Gate
185	Pump St. 7132	Valve	LL	Super	No	Check	207	Tank 7132	Valve	LL	Super	No	Flange
186	Pump St. 7132	Valve	LL	Super	No	Globe	208	Tank 7132	Conct*	LL	Super	No	Globe
187	Pump St. 7132	Valve	LL	Super	Yes	Gate	209	Tank 7132	Valve	LL	Super	No	Gate
188	Pump St. 7132	Valve	LL	Super	Yes	Ball	210	Tank 7132	LA	LL	Super	No	Screwed
189	Pump St. 7132	Valve	LL	Super	Yes	Ball	211	Tank 7132	Valve	LL	Super	No	Globe
190	Pump St. 7132	Conct*	LL	Super	Yes	Screwed	212	Tank 7132	Valve	LL	Super	No	Globe
191	Pump St. 7132	Valve	LL	Super	Yes	Ball	213	Tank 7132	Conct*	LL	Super	No	Flange
192	Pump St. 7132	Valve	LL	Super	No	Control	214	Tank 7132	Conct*	LL	Super	No	Screwed

Radian ID	Size	Screening Value	Comments
171		0.0	Screw
172		0.0	Screw
173		0.0	Screw
174	1"	0.0	Gate 1"
175	1"	79.0	Gate 1"
176	10"	0.0	Globe 10"
177	1"	0.0	Gate 1"
178	10"	250.0	Globe 10"
179	8"	1200.0	Globe 8"
180	6"	0.0	Check 6"
181		0.0	Flange -not w/in lcm
182		0.0	Horz. centr.
183		0.0	Horz. centr.
184		2.5	Flange
185	10"	0.0	Check 10"
186	10"	1200.0	globe 10"
187	1/2"	120.0	Gate .5"
188	1/2"	5.0	Ball .5"
189	1/2"	0.0	Ball .5"
190		0.0	Screw
191	1/2"	0.0	Ball .5"
192	10"	400.0	Contr. 10"

Radian ID	Size	Screening Value	Comments
193		0.0	Flange -not w/in lcm
194	10"	2.0	Globe 10"
195	1/2"	0.0	Ball .5"
196	10"	0.0	Contr. 10"
197	1/2"	0.0	Ball .5"
198	1/2"	0.0	Ball .5"
199	8"	48.0	Globe 8"
200	10"	98.0	globe 10"
201		0.0	Flange
202	10"	23.0	Globe 10"
203	1/2"	3.5	PRV .5" wet
204	1"	0.0	Gate 1"
205		0.0	Screw
206	1"	0.0	Gate 1"
207		0.0	Flange -not w/in lcm
208	12"	1400.0	12" Motor contr globe
209	1"	0.0	Gate 1"
210		0.0	Screw
211	3"	4.5	Globe 3"
212	12"	0.0	Globe 12"
213		0.0	Flange
214		0.0	Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype
215	Tank 7132	Valve	LL	Super	No	Gate
216	Tank 7132	Valve	LL	Super	No	Gate
217	Tank 7132	Conct*	LL	Super	No	Screwed
218	Tank 7132	Valve	LL	Super	No	Gate
219	Tank 31726	Valve	LL	Plus	No	Gate
220	Tank 31726	Valve	LL	Plus	No	Gate
221	Tank 31726	Valve	LL	Plus	No	Gate
222	Tank 31726	Conct*	LL	Plus	No	Screwed
223	Tank 31726	Conct*	LL	Plus	No	Screwed
224	Tank 31726	Valve	LL	Plus	No	Gate
225	Tank 31726	Valve	LL	Plus	No	Globe
226	Tank 31726	Valve	LL	Plus	No	Gate
227	Tank 31726	Other	LL	Plus	No	PRV
228	Tank 31726	LA	LL	Plus	No	Globe
229	Tank 31726	Conct*	LL	Plus	No	Flange
230	Tank 31726	Valve	LL	Plus	No	Globe
231	Tank 31726	Valve	LL	Plus	No	Globe
232	Tank 31726	Valve	LL	Plus	No	Globe
233	Tank 31726	Conct*	LL	Plus	No	Screwed
234	Tank 31726	LA	LL	Plus	No	Gate
235	Tank 31726	Conct*	LL	Plus	No	Screwed
236	Tank 31726	Valve	LL	Plus	No	Gate

Radian ID	Size	Screening Value	Comments
215	3"	0.0	Gate 3"
216	3"	0.0	Gate 3"
217		0.0	Screw
218	3"	0.0	Gate 3"
219	3"	0.0	Gate 3"
220	1"	0.0	Gate 1"
221		0.0	Screw
222		0.0	Screw
223	1"	0.0	Gate 1"
224	14"	34.0	Globe 14"
225	1"	0.0	Gate 1"
226	1"	1.0	PRV 1"
227	10"	1.0	Globe 10"
228		1200.0	Flange
229	10"	0.0	Globe 10"
230	10"	110.0	Globe 10"
231	3"	0.0	Globe 3"
232	16"	120.0	Globe 16"
233		0.0	Screw
234	1"	12.0	Gate 1"
235		0.0	Screw
236	1/2"	2.5	Gate .5"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
237	Tank 31726	Valve	LL	Plus	No	Globe
238	Tank 31726	Valve	LL	Plus	No	Gate
239	Tank 31726	Conct*	LL	Plus	No	Flange
240	Tank 31726	Valve	LL	Plus	No	Globe
241	Tank 31726	Valve	LL	Plus	No	Globe
242	Tank 31726	Valve	LL	Plus	No	Gate
243	Tank 31726	Other	LL	Plus	No	PRV
244	Tank 31726	Conct*	LL	Plus	No	Screwed
245	Tank 31726	Conct*	LL	Plus	No	Screwed
246	Tank 31726	Valve	LL	Plus	No	Butterfly
247	Tank 31726	Valve	LL	Plus	No	Gate
248	Tank 31726	Valve	LL	Plus	No	Globe
249	Tank 31726	Valve	LL	Plus	No	Gate
250	Tank 31726	Other	LL	Plus	No	PRV
251	Tank 31726	Valve	LL	Plus	No	Gate
252	Tank 31726	Conct*	LL	Plus	No	Union
253	Tank 31726	Valve	LL	Plus	No	Gate
254	Tank 31726	Conct*	LL	Plus	No	Screwed
255	Tank 31726	Valve	LL	Plus	No	Gate
256	Tank 7049	Valve	LL	Super	No	Gate
257	Tank 7049	Conct*	LL	Super	No	Screwed
258	Tank 7049	Valve	LL	Super	No	Gate

Radian ID	Size	Screening Value	Comments
237	10"	78	globe 10"
238	3"	0	Gate 3"
239		0	Flange -not w/in lcm
240	8"	23	Globe 8"
241	16"	68	16" Motor contr globe
242	1"	0	Gate 1"
243	1"	0	PRV 1"
244		0	Screw
245		0	Screw
246	16"	29	Butterfly 16"
247	1"	1	Gate 1"
248	16"	3000	Globe 16"
249	1"	0	Gate 1"
250	1"	4	PRV 1"
251	1"	0	Gate 1"
252		0	Union
253	3"	0	Gate 3"
254		0	Screw
255	3"	0	Gate 3"
256	3"	0	Gate 3"
257		0	Screw
258	3"	0	Gate 3"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
259	Tank 7049	Valve	LL	Super	No	Globe
260	Tank 7049	Valve	LL	Super	No	Gate
261	Tank 7049	Valve	LL	Super	No	Butterfly
262	Tank 7049	Valve	LL	Super	No	Globe
263	Tank 7049	Conct*	LL	Super	No	Flange
264	Tank 7049	Valve	LL	Super	No	Globe
265	Tank 7049	Valve	LL	Super	No	Globe
266	Tank 7049	Conct*	LL	Super	No	Screw
267	Tank 7049	Valve	LL	Super	No	Gate
268	Tank 7049	Valve	LL	Super	No	Gate
269	Pump St. 7652	Valve	LL	AVGAS100	No	Globe
270	Pump St. 7652	Valve	LL	AVGAS100	No	Globe
271	Pump St. 7652	Valve	LL	AVGAS100	No	Globe
272	Pump St. 7652	Valve	LL	AVGAS100	No	Check
273	Pump St. 7652	Valve	LL	AVGAS100	No	Ball
274	Pump St. 7652	Valve	LL	AVGAS100	No	Gate
275	Pump St. 7652	Pump	LL	AVGAS100	No	Globe
276	Pump St. 7652	Valve	LL	AVGAS100	No	Screw
277	Pump St. 7652	Conct*	LL	AVGAS100	No	Ball
278	Pump St. 7652	Valve	LL	AVGAS100	No	Control
279	Pump St. 7652	Valve	LL	AVGAS100	No	Ball
280	Pump St. 7652	Valve	LL	AVGAS100	No	Ball

Radian ID	Size	Screening Value	Comments
259	16"	2500	Globe 16"
260	3"	0	Gate 3"
261	12"	0	Butterfly 12"
262	12"	23	12" Motor contr globe
263	3"	0	Flange -not w/in lcm
264	3"	130	Globe 3"
265	3"	1500	Globe 3"
266	1"	0	Screw
267	3"	7	Gate 1"
268	3"	13	Gate 3"
269	6"	80000	Globe 6"
270	6"	2500	Globe 6"
271	6"	0	check 6"
272	6"	0	Ball 3/4"
273	3/8"	5	Gate 3/8"
274	6"	20000	Centr.
275	6"	30000	globe 6"
276	3/4"	0	Screw
277	6"	0	Ball 3/4"
278	6"	0	Contr. 6"
279	3/4"	0	Ball 3/4"
280	3/4"	0	Ball 3/4"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
281	Pump St. 7652	Valve	LL	AVGAS100	No	Ball
282	Tank 7652	Valve	LL	AVGAS100	No	Butterfly
283	Tank 7652	Valve	LL	AVGAS100	No	Globe
284	Tank 7652	Valve	LL	AVGAS100	No	Gate
285	Tank 7652	Valve	LL	AVGAS100	No	Globe
286	Tank 7652	Valve	LL	AVGAS100	No	Butterfly
287	Tank 7652	Valve	LL	AVGAS100	No	Globe
288	Tank 7652	Conct*	LL	AVGAS100	No	Flange
289	Tank 7652	Valve	LL	AVGAS100	No	Gate
290	Tank 7652	Valve	LL	AVGAS100	No	Gate
291	Tank 7652	Valve	LL	AVGAS100	No	Globe
292	Tank 7651	Valve	LL	AVGAS100	No	Globe
293	Tank 7651	Valve	LL	AVGAS100	No	Globe
294	Tank 7651	Valve	LL	AVGAS100	No	Globe
295	Tank 7651	Conct*	LL	AVGAS100	No	Flange
296	Tank 7651	Valve	LL	AVGAS100	No	Check
297	Tank 7651	Pump	LL	AVGAS100	No	Globe
298	Tank 7651	Valve	LL	AVGAS100	No	Ball
299	Tank 7651	Valve	LL	AVGAS100	No	Ball
300	Tank 7651	Valve	LL	AVGAS100	No	Ball
301	Tank 7651	Valve	LL	AVGAS100	No	Screw
302	Tank 7651	Conct*	LL	AVGAS100	No	Screw

Radian ID	Size	Screening Value	Comments
281	3/4"	0	Ball 3/4"
282	6"	2000	Butterfly 6"
283	6"	80000	Globe 6"
284	1"	0	Gate 1"
285	3"	0	Gate 3"
286	3"	1300	Globe 3"
287	8"	130	Butterfly 8"
288	8"	100000	8" Motor contr globe
289	3"	2	Flange
290	3"	0	Gate 3"
291	3"	0	Gate 3"
292	6"	3000	Globe 6"
293	6"	34000	Globe 6"
294	6"	70000	Globe 6"
295	6"	0	Flange -not w/in lcm
296	6"	0	Check 6"
297	6"	15	Horz. centr.
298	6"	300	Globe 6"
299	3/4"	1	Ball 3/4"
300	3/4"	0	Ball 3/4"
301	3/4"	3	Ball 3/4"
302	3/4"	1	Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype
303	Tank 7651	Valve	LL	AVGAS100	No	Control
304	Tank 7651	Valve	LL	AVGAS100	No	Schrader
305	Tank 7651	Valve	LL	AVGAS100	No	Globe
306	Tank 7651	Valve	LL	AVGAS100	No	Butterfly
307	Tank 7651	Valve	LL	AVGAS100	No	Gate
308	Tank 7651	Valve	LL	AVGAS100	No	Butterfly
309	Tank 7651	Valve	LL	AVGAS100	No	Globe
310	Tank 7651	Conct*	LL	AVGAS100	No	Screw
311	Tank 7651	Valve	LL	AVGAS100	No	Gate
312	Tank 7651	Valve	LL	AVGAS100	No	Globe
313	Tank 7651	Valve	LL	AVGAS100	No	Gate
314	Pipeline	Conct*	LL	AVGAS100	No	Flange
315	Pipeline	Valve	LL	AVGAS100	No	Ball
316	Pipeline	Valve	LL	AVGAS100	No	Globe
317	Pipeline	Valve	LL	AVGAS100	No	Globe
318	Pipeline	Conct*	LL	AVGAS100	No	Screw
319	Pipeline	Valve	LL	AVGAS100	No	Globe
320	Pipeline	Valve	LL	AVGAS100	No	Globe
321	Pipeline	Valve	LL	AVGAS100	No	Ball
322	Tank 7498	Valve	LL	Plus	No	Globe
323	Tank 7498	Valve	LL	Plus	No	Globe
324	Tank 7498	Valve	LL	Plus	No	Gate

Radian ID	Size	Screening Value	Comments
303	6"	0	Contr. 6"
304	3/8"	0	Schrader 3/8"
305	8"	1600	Globe 8"
306	8"	24	Butterfly 8"
307	3"	0	Gate 3"
308	8"	0	Butterfly 8"
309	8"	20000	8" Motor contr globe
310		0	Screw
311	3"	0	Gate 3"
312	4"	13000	Globe 4"
313	3"	0	Gate 3"
314		0	Flange -not w/in 1cm
315	1/2"	0	Ball .5"
316	6"	1500	Globe 6"
317	6"	1500	Globe 6"
318		0	Screw
319	6"	32	Globe 6"
320	6"	27	Globe 6"
321	1/2"	0	Ball .5"
322	3"	300	Globe 3"
323	10"	4	10" Motor contr globe
324	3"	0	Gate 3"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
325	Tank 7498	Conct*	LL	Plus	No	Screw
326	Tank 7498	Valve	LL	Plus	No	Gate
327	Tank 7498	Valve	LL	Plus	No	Butterfly
328	Tank 7498	Valve	LL	Plus	No	Globe
329	Tank 7498	Conct*	LL	Plus	No	Screw
330	Tank 7498	Valve	LL	Plus	No	Gate
331	Tank 7498	Valve	LL	Plus	No	Globe
332	Tank 7498	Valve	LL	Plus	No	Butterfly
333	Tank 7498	Valve	LL	Plus	No	Globe
334	Tank 7498	Valve	LL	Plus	No	Gate
335	Tank 7498	Other	LL	Plus	No	PRV
336	Tank 7498	Valve	LL	Plus	No	Gate
337	Tank 7498	Conct*	LL	Plus	No	Screw
338	Tank 7498	Valve	LL	Plus	No	Gate
339	Tank 7498	Valve	LL	Plus	No	Gate
340	Tank 7498	Conct*	LL	Plus	No	Screw
341	Tank 7498	Valve	LL	Plus	No	Gate
342	Tank 7498	OEL	LL	Plus	No	Gate
343	Tank 7498	Valve	LL	Plus	No	Gate
344	Tank 7498	Conct*	LL	Plus	No	Screw
345	Tank 7498	Valve	LL	Plus	No	Globe
346	Tank 7488	Conct*	LL	AVGAS100	No	Flange

Radian ID	Size	Screening Value	Comments
325		0	Screw
326	3"	0	Gate 3"
327	3"	200	Butterfly 3"
328	3"	67	Globe 3"
329		0	Screw
330	1"	0	Gate 1"
331	10"	7000	Globe 10" wet
332	4"	0	Butterfly 4"
333	4"	580	Globe 4"
334	1"	0	Gate 1"
335	1"	0	PRV 1"
336	1"	0	Gate 1"
337		0	Screw
338	3"	0	Gate 3"
339	3"	0	Gate 3"
340		4	Screw
341	1"	0	Gate 1"
342		0	.5"
343	1/2"	0	Gate .5"
344		0	Screw
345	4"	0	Globe 4"
346		0	Flange

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Radian ID	Location	Type	Phase	Product	Load	Subtype
347	Tank 7488	Valve	LL	AVGAS100	No	Ball
348	Tank 7488	Valve	LL	AVGAS100	No	Globe
349	Tank 7488	Valve	LL	Super	No	Globe
350	Tank 7488	Conct*	LL	Plus	No	Flange
351	Tank 7488	Valve	LL	Plus	No	Globe
352	Tank 7488	Valve	LL	Plus	No	Globe
353	Tank 7488	Valve	LL	Plus	No	Globe
354	Tank 7488	Valve	LL	Plus	No	Globe
355	Tank 7488	Conct*	LL	Plus	No	Flange
356	Tank 7488	Valve	LL	Plus	Yes	Globe
357	Tank 7488	Valve	LL	Plus	Yes	Globe
358	Tank 7488	Valve	LL	Plus	Yes	Globe
359	Tank 7488	Valve	LL	Plus	Yes	Globe
360	Tank 7488	Valve	LL	Plus	Yes	Gate
361	Tank 7488	Pump	LL	Plus	Yes	Check
362	Tank 7488	Valve	LL	Plus	Yes	Gate
363	Tank 7488	Conct*	LL	Plus	Yes	Flange
364	Tank 7488	Valve	LL	Plus	Yes	Butterfly
365	Tank 7488	Valve	LL	Plus	Yes	Globe
366	Tank 7488	Valve	LL	Plus	Yes	Butterfly
367	Tank 7488	Conct*	LL	Plus	Yes	Flange
368	Tank 7488	Valve	LL	Plus	No	Globe

Radian ID	Size	Screening Value	Comments
347	1/2"	1	Ball .5"
348	6"	9000	Globe 6"
349	3"	700	Globe 3"
350	3"	4	Flange -not w/in lcm
351	3"	3000	Globe 3"
352	3"	700	Globe 3"
353	6"	5000	Globe 6"
354	6"	400	Globe 6"
355	3"	0	Flange 3"
356	3"	490	Globe 3"
357	3"	1500	Globe 3"
358	3"	5000	Globe 3"
359	3/4"	100000	Gate 3/4" -liquid leak
360	4"	43	Check 4"
361	3"	63	Centr.
362	3"	0	Gate 3"
363	3"	2	Flange
364	3"	250	Butterfly 3"
365	4"	70000	Globe 4"
366	8"	1500	Butterfly 8"
367	8"	0	Flange -not w/in lcm
368	8"	55	Globe 8"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
369	Tank 7488	Valve	LL	Plus	No	Globe
370	Tank 7488	Conct*	LL	Plus	No	Flange
371	Tank 7488	Valve	LL	Plus	No	Control
372	Tank 7488	Conct*	LL	Plus	No	Tubing
373	Tank 7488	Valve	LL	Plus	No	Schrader
374	Tank 7488	Valve	LL	Plus	No	Ball
375	Tank 7488	Valve	LL	Plus	No	Ball
376	Tank 7488	Valve	LL	Plus	No	Ball
377	Tank 7488	Valve	LL	Plus	No	Globe
378	Tank 7488	Conct*	LL	Plus	No	Flange
379	Tank 7488	Valve	LL	Plus	No	Ball
380	Tank 7488	Pump	LL	Plus	No	Globe
381	Tank 7488	Valve	LL	Plus	No	Gate
382	Tank 7488	Valve	LL	Plus	No	Globe
383	Tank 7488	Valve	LL	Plus	No	Globe
384	Tank 7488	OEL	LL	Plus	No	Gate
385	Tank 7488	Valve	LL	Plus	No	Gate
386	Tank 7488	Pump	LL	Plus	No	Check
387	Tank 7488	Valve	LL	Plus	No	Globe
388	Tank 7488	Valve	LL	Plus	No	Globe
389	Tank 7488	Conct*	LL	Plus	Yes	Screw
390	Tank 7488	Valve	LL	Plus	Yes	Globe

Radian ID	Size	Screening Value	Comments
369	8"	590	Globe 8"
370	8"	0	Flange
371	8"	13	Contr. 8"
372	1/4"	0	Tubing
373	3/8"	2	Schrader 1/4"
374	3/8"	2	Ball 3/8"
375	1/2"	1	Ball .5"
376	1/2"	1	Ball .5"
377	8"	290	Globe 8"
378	3/8"	23	Flange
379	3/8"	0	Ball 3/8"
380	8"	100000	Centr. -visible leak
381	1"	240	Globe 8"
382	8"	30	Gate 1"
383	8"	390	Globe 8"
384	3/8"	82	Gate 3/8"
385	8"	0	Pump
386	8"	4	check 8"
387	8"	10	Globe 8"
388	8"	3	Screw
390	8"	2000	Globe 8"

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(continued)

Radian ID	Location	Type	Phase	Product	Load	Subtype
391	Tank 7488	Valve	LL	Plus	Yes	Check
392	Tank 7488	Valve	LL	Plus	Yes	Globe
393	Tank 7488	Valve	LL	Plus	Yes	Globe
394	Tank 7488	Conct*	LL	Plus	Yes	Gate
395	Tank 7488	Valve	LL	Plus	Yes	Screw
396	Tank 7488	Valve	LL	Plus	Yes	Gate
397	Tank 7488	Valve	LL	Plus	Yes	Gate
398	Tank 7488	Conct*	LL	Plus	No	Screw
399	Tank 7488	Other	LL	Plus	No	PRV
400	Tank 7488	Valve	LL	Plus	No	Gate
401	Tank 7488	Valve	LL	Plus	No	Screw
402	Tank 7488	Valve	LL	Plus	No	Globe
403	Tank 7488	Valve	LL	Plus	No	Globe
404	Tank 7488	Valve	LL	Plus	No	Control
405	Tank 7488	Valve	LL	Plus	No	Butterfly
406	Tank 7488	Valve	LL	Plus	No	Globe
407	Tank 7488	Valve	LL	Plus	No	Globe
408	Tank 7488	Conct*	LL	Plus	No	Ball
409	Tank 7488	Valve	LL	Plus	No	Screw
410	Tank 7488	Valve	LL	Super	No	Globe
411	Tank 7488	Valve	LL	Super	No	Globe
412	Tank 7488	Valve	LL	Super	No	Globe

Radian ID	Size	Screening Value	Comments
391	8"	0.0	Check 8"
392	3"	24.0	Globe 3"
393	1"	0.0	Gate 1"
394		0.0	Screw
395	3"	36.0	Gate 3"
396		1.0	
397		1.0	Screw
398	1"	0.0	PRV 1"
399	1"	21.0	Gate 1"
400		4.0	Screw
401	3"	4.0	Globe 3"
402	8"	75000.0	Globe 8"
403	8"	300.0	8" Contr. Globe
404	8"	1500.0	Butterfly 8"
405	8"	250.0	Globe 8"
406	8"	500.0	Globe 8"
407	1/2"	0.0	Ball .5"
408		43.0	Screw
409	6"	1500.0	Globe 6"
410	10"	9000.0	Globe 10"
411	10"	0.0	Globe 10"
412	6"	790.0	Globe 6"

Radian ID	Location	Type	Phase	Product	Load	Subtype
413	Tank 8	Valve	LL	Plus	No	Gate
414	Tank 8	Conct*	LL	Plus	No	Screw
415	Tank 8	Valve	LL	Plus	No	Globe
416	Tank 8	Other	LL	Plus	No	PRV
417	Tank 8	Valve	LL	Plus	No	Gate
418	Tank 8	Valve	LL	Plus	No	Gate
419	Tank 8	Conct*	LL	Plus	No	Screw
420	Tank 8	Conct*	LL	Plus	No	Flange
421	Tank 8	Conct*	LL	Plus	No	Screw
422	Tank 8	Conct*	LL	Supreme	No	Screw
423	Tank 8	Conct*	LL	Supreme	No	Screw
424	Tank 8	Valve	LL	Plus	No	Ball
425	Tank 8	Valve	LL	Plus	No	Gate
426	Tank 8	Valve	LL	Plus	No	Ball
427	Tank 8	Valve	LL	Plus	No	Butterfly
428	Tank 8	Valve	LL	Plus	No	Butterfly
429	Tank 8	Valve	LL	Plus	No	Control
430	Tank 8	Conct*	LL	Plus	No	Screw
431	Tank 8	Valve	LL	Plus	No	Ball
432	Tank 8	Valve	LL	Plus	No	Butterfly
433	Tank 8	Valve	LL	Plus	No	Ball
434	Tank 8	Pump	LL	Supreme	No	

Radian ID	Size	Screening Value	Comments
413	1"	47.0	Gate 1"
414		15.0	Screw
415	8"	76.0	Globe 8"
416	1"	0.0	PRV 1"
417	1/2"	16.0	Gate .5"
418	1/2"	26.0	Gate .5"
419		0.0	Screw
420		0.0	Flange
421		0.0	Screw
422		0.0	Screw - wet
423		0.0	Screw
424	1/2"	0.0	Ball .5"
425	3"	0.0	Gate 3"
426	1/2"	0.0	Ball .5"
427	3"	9.0	Butterfly 3"
428	3"	1.0	Butterfly 3"
429	3"	0.0	Contr. 3"
430		0.0	Screw
431	1/2"	0.5	Ball .5"
432	4"	0.0	Butterfly 4"
433	1/2"	0.0	Ball .5"
434		0.0	Pump

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Radian ID	Location	Type	Phase	Product	Load	Subtype
435	Tank 8	Valve	LL	Supreme	No	Gate
436	Tank 8	Other	LL	Supreme	No	PRV
437	Tank 8	Valve	LL	Supreme	No	Globe
438	Tank 8	Valve	LL	Supreme	No	Gate
439	Tank 8	Valve	LL	Supreme	No	Globe
440	Tank 8	Valve	LL	Supreme	No	PRV
441	Tank 8	Other	LL	Supreme	No	Flange
442	Tank 8	Valve	LL	Supreme	No	Tubing
443	Tank 8	Conct*	LL	Plus	No	Tubing
444	Tank 8	Conct*	LL	Plus	No	Screw
445	Tank 8	Conct*	LL	Plus	No	Screw
446	Tank 8	Conct*	LL	Plus	No	Tubing
447	Tank 8	Conct*	LL	Plus	No	Screw
448	Tank 8	Conct*	LL	Plus	No	Screw
449	Tank 8	Conct*	LL	Plus	No	Screw
450	Tank 8	Conct*	LL	Plus	No	Screw
451	Tank 8	Conct*	LL	Plus	No	Screw
452	Tank 8	Conct*	LL	Plus	No	Screw
453	Tank 8	Conct*	LL	Plus	No	Screw
454	Tank 8	Conct*	LL	Plus	No	Screw
455	Tank 8	Conct*	LL	Plus	No	Screw
456	Tank 8	Valve	LL	Plus	No	Ball

Radian ID	Size	Screening Value	Comments
435	3/8"	37.0	Gate 3/8"
436	1"	2000.0	PRV 1"
437	4"	20.0	Globe 4"
438	3/8"	18.0	Gate 3/8"
439	1/2"	40.0	Gate .5"
440	12"	0.0	Globe 12"
441	1"	140.0	PRV 1"
442		0.5	Screw
443		0.0	Flange
444		0.0	Tubing
445		0.0	Tubing
446		0.0	Screw
447		0.0	Screw
448		0.0	Tubing
449		0.0	Screw
450		0.0	Screw
451		0.0	Screw
452		0.0	Screw
453		0.0	Flange
454		0.0	Screw
455		0.0	Screw
456	1/2"	0.0	Ball .5"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
457	Tank 8	Valve	LL	Plus	No	Butterfly
458	Tank 8	Valve	LL	Plus	No	Ball
459	Tank 8	Valve	LL	Plus	No	Gate
460	Tank 8	Valve	LL	Plus	No	Butterfly
461	Tank 8	Valve	LL	Plus	No	Control
462	Tank 8	Valve	LL	Plus	No	Solenoid
463	Tank 8	Valve	LL	Plus	No	Ball
464	Tank 8	Valve	LL	Plus	No	Ball
465	Tank 8	Valve	LL	Plus	No	Ball
466	Tank 8	Pump	LL	Plus	No	Ball
467	Tank 8	Valve	LL	Plus	No	Ball
468	Tank 8	Valve	LL	Plus	No	Butterfly
469	Tank 8	Valve	LL	Plus	No	Ball
470	Tank 8	Valve	LL	Plus	No	Ball
471	Tank 8	Pump	LL	Plus	No	Gate
472	Tank 8	Valve	LL	Plus	No	PRV
473	Tank 8	Other	LL	Plus	No	Globe
474	Tank 8	Valve	LL	Plus	No	Gate
475	Tank 8	Valve	LL	Plus	No	Screw
476	Tank 8	Conct*	LL	Plus	No	Screw
477	Tank 8	Conct*	LL	Plus	No	Screw
478	Tank 8	Valve	LL	Plus	No	Globe

Radian ID	Size	Screening Value	Comments
457	4"	0.0	Butterfly 4"
458	3/8"	0.0	Ball 3/8"
459	4"	0.0	Gate 4"
460	4"	0.0	Butterfly 4"
461	4"	0.0	Contr. 4"
462	3/8"	0.0	Solenoid 3/8"
463	1/2"	0.0	Ball .5"
464	1/2"	0.0	Ball .5"
465	1/2"	0.0	Ball .5"
466		0.0	Centr.
467	1/2"	0.0	Ball .5"
468	1/2"	0.0	Ball .5"
469	6"	0.0	Butterfly 6"
470	1/2"	0.0	Ball .5"
471		0.0	Centr.
472	1/2"	18.0	Gate .5"
473	1"	0.0	PRV 1"
474	6"	11.0	Globe 6"
475	1/2"	67.0	Gate .5"
476		18.0	Screw
477		0.0	Screw
478	8"	300.0	Globe 8"

APPENDIX C
MASS EMISSIONS CALCULATIONS

C.1

**COMPARISON OF THE COMPOSITION OF FUGITIVE EMISSIONS
TO THE COMPOSITION OF THE LIQUID STREAMS**

The following pages present the data from gas chromatograph analyses of various pairs of gas and liquid samples. Each pair of corresponding samples was taken from the same process stream on the same day. The mass fraction ratios presented in the text are computed from these data. An example calculation follows:

Example: Ethylbenzene from Terminal "D", gas sample D025 and corresponding liquid sample D026B.

From Table D1, the measured concentrations in the gas sample were:

191 $\mu\text{g/l}$	Ethylbenzene in the gas sample.
14,286 $\mu\text{g/l}$	Total hydrocarbons in the gas sample.

Hence, the ethylbenzene fraction of the fugitive emission from this component was:

$$\frac{191 \text{ ug/l Ethylbenzene}}{14,286 \text{ ug/l THC}} = 1.34\% \text{ Ethylbenzene in fugitive emission}$$

Similarly, from Table D2, the measured concentration in liquid sample D026B was:

12,200 mg/l	Ethylbenzene in the liquid gasoline.
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Gasoline has a specific gravity of approximately 0.75. Therefore the THC concentration in the liquid sample was:

750,000 mg/l	Total hydrocarbons in liquid gasoline.
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Hence, the ethylbenzene fraction of the liquid stream through this component was:

$$\frac{12,200 \text{ ug/l Ethylbenzene}}{750,000 \text{ ug/l THC}} = 1.63\% \text{ Ethylbenzene in liquid stream}$$

Finally, the ratio of the gas stream ethylbenzene fraction over the liquid stream ethylbenzene fraction is given in Table D4 (and in Table 5.23 in the text):

$$\frac{1.34\%_{\text{wt}} \text{ Ethylbenzene in gas}}{1.63\%_{\text{wt}} \text{ Ethylbenzene in liquid}} = 0.82 \text{ Gas/Liquid Ratio}$$

TABLE A1
TERMINAL "A" FUGITIVE GAS GC RESULTS

Bag Sample Number	Product	n-Hexane ug/l	Isoocta /MTBE ug/l	Total Spec. Aliphatic ug/l	Benzene ug/l	Toluene ug/l	Ethyl Benzene ug/l	p- Xylene ug/l	m- Xylene ug/l	Cumene ug/l	o- Xylene ug/l	Total Speciate ug/l	THC From GC ug/l	Percent Speciated
A-007	Supreme	546	94	640	0	0	0	0	0	0	41	0	681	1573
A-015	VRU	0	0	0	0	0	0	0	0	0	0	0	0	43%
A-019	Regular	2351	609	2960	47	138	77	0	12	0	0	48	3282	1141
A-020	Regular	325	164	488	37	145	56	175	122	157	89	89	1759	9665
A-021	Supreme	103	272	375	8	49	447	829	1350	2433	2757	8249	7669	34%
A-059	Supreme	1022	0	1022	0	0	0	0	0	0	0	0	1022	1759
A-060	Regular	1710	0	1710	23	264	0	0	0	0	0	0	1997	72%
AVG		865	163	1028	16	85	83	143	212	376	414	414	2357	108%
STD		817	206	935	18	94	152	286	467	842	957	957	2592	86%
														77%

Notes:

1. C1-C8 Aliphatic compounds all elute in the first 2.0 to 3.5 minutes in this configuration;
2. A "0" refers to MDL (= 40 ug/l)
3. Data points which weren't reduced had poor sensitivity due to malfunction of FID/GC detector.

TABLE A2
TERMINAL "A" LIQUID SAMPLES

Liquid Sample Number	Product	n-Hexane mg/l	Isoocta /MTBE mg/l	Total Spec. Aliphatic mg/l	Benzene mg/l	Toluene mg/l	Ethyl Benzene mg/l	p- Xylene mg/l	m- Xylene mg/l	Cumene mg/l	o- Xylene mg/l	Total Speciate mg/l	Approx. Percent Speciat.
A-001B	Supreme	132868	183525	316393	5683	34193	559	3127	6852	2383	6767	375957	50%
A-002B	VRU	333382	42932	376314	14288	46948	6649	778	17609	599	12691	475876	63%
A-003B	Regular	365938	65874	431812	11842	49510	9096	8925	22092	419	11628	545324	73%
A-004B	Regular	163450	446570	610020	15960	51240	10890	7980	19730	519	11950	728289	97%
A-005B	Supreme	114229	294466	408695	14991	92138	4350	3439	94653	2166	6610	627042	84%
A-008A	Supreme	92617	185231	277848	1971	29315	1368	707	766	284	1474	313733	42%
A-007A	Regular	23410	48770	72180	303	4394	369	168	207	500	140	78261	10%
AVG		175128	181053	356180	9291	43963	4754	3589	23130	981	7323	449212	

Appears to be a flawed injection.

TABLE A3	"A" FUGITIVE/STREAM COMPARISONS	MASS/MASS BASIS	NON-USABLE DATA INCLUDED
TERMINAL			

[illegible]

TABLE A4	"A" FUGITIVE/STREAM COMPARISONS	MASS/MASS BASIS	NON-USABLE DATA DROPPED
TERMINAL			

Bag Sample Number	Liquid Sample Number	Compon. Type	Product	OVA Screen ppmv	n-Hexane	Isocotan /MTBE	Total Spec. Aliph.	Benzene	Toluene	Ethyl Benzene	p-Xylene	m-Xylene	Cumene	o-Xylene
I-007	A-001B	Pump	Supreme	205	1.96	0.24	0.96						8.13	
I-015	A-002B	Pump	VRU	5										
I-019	A-003B	Cnct	Regular	38	0.50	0.72	0.53	0.31	0.22	0.66		0.04		0.32
I-020	A-004B	Valve	Regular	76	0.85	0.16	0.34	1.00	1.21	2.21	9.35	2.63	128.85	3.19
I-021	A-005B	Valve	Supreme	34	0.09	0.09	0.09	0.05	0.05	10.05	23.59	1.40	109.87	40.79
I-059	A-008A	OEL	Supreme	51	6.98		2.33							
I-060	A-007A	Cnct	Regular	146										
MEAN														
SAMPLE STANDARD DEVIATION														
					2.07	0.30	0.85	0.45	0.49	4.31	16.47	1.36	82.28	14.77
					2.83	0.28	0.88	0.49	0.63	5.04	10.07	1.29	64.91	22.58
LOWER 95% CONFID. FOR POP. MEAN														
					-1.44	-0.15	-0.25	-0.76	-1.06	-8.20	-73.96	-1.86	-78.99	-41.34
UPPER 95% CONFID. FOR POP. MEAN														
					5.59	0.75	1.95	1.67	2.04	16.82	106.90	4.57	243.55	70.87
DATA POINTS														
95% STATISTIC USED														
					5	4	5	3	3	3	2	3	3	3
					2.776	3.182	2.776	4.303	4.303	4.303	12.706	4.303	4.303	4.303

TABLE B1
TERMINAL "B" FUGITIVE GAS GC RESULTS

Gas Sample ID	Sample Type	n-Hexane & Isooctane ug/l	MTBE ug/l	Total Speciated Aliphatic ug/l	Benzene ug/l	Toluene ug/l	Ethyl Benzene ug/l	p-Xylene ug/l	m-Xylene ug/l	Cumene ug/l	O-Xylene ug/l	Total Speciated. From GC ug/l	THC ug/l	Percent Speciated
B065	EC-P	6	108	114	18	0	0	0	0	0	19	151	744	20%
B066	Supreme	265	1042	1307	43	0	486	0	0	0	0	1836	13395	14%
B067	Supreme	156	164	320	14	0	0	0	70	0	0	405	5235	8%
B069	VR	3	11	14	22	32	0	182	0	0	0	250	331	75%
B070	VR	19	0	19	0	35	0	0	172	115	137	478	818	58%
B071	VR	0	130	130	17417	1364	0	0	0	0	372	19283	41922	46%
B071DUP	VR	0	116	116	18002	1454	0	0	0	0	456	20029	43129	46%
B072	VR	3	27	30	1450	0	0	0	0	0	121	1601	3791	42%
B073DUP	VR	1	18	20	1077	0	0	0	0	0	165	1261	2818	45%
B074	VR	0	0	0	0	0	0	0	0	0	82	428	924	46%
B084	Regular	3833	168	4001	703	2253	951	973	1811	0	842	11534	67685	17%
B084D	Regular	3722	153	3875	728	2321	981	951	1950	0	912	11718	69628	17%
B085	Regular	1804	78	1882	158	205	198	0	525	0	56	3024	4499	67%
B086	Regular	243	0	243	23	115	83	0	210	0	123	797	4421	18%
B087	Regular	87	90	177	25	154	156	0	301	0	163	976	2327	42%
B088	Regular	46	36	82	26	0	79	0	220	0	112	518	3358	15%
B094	Supreme	115	280	395	24	132	102	0	195	0	62	911	3006	30%
B095	Supreme	5366	1554	6920	658	1711	751	5094	0	0	504	15637	94753	17%
B096	Supreme	7505	2261	9766	885	4145	1155	999	2162	919	107	20138	133329	15%
B097	Supreme	45	185	230	28	283	210	0	556	0	224	1530	4479	34%
B100	VR	53	0	53	8	0	107	0	194	0	0	362	1051	34%
B101	VR	159	0	159	138	114	102	0	119	0	0	632	3526	18%
B102	VR	2888	0	2888	578	0	0	0	0	0	0	3466	37722	9%
B102	VR	47010	0	47010	537	347	162	0	211	0	0	48268	64057	75%
B103	VR	575	606	1181	786	182	192	0	368	0	159	2868	16965	17%
B104	VR	54	0	54	177	67	115	0	233	0	102	748	1697	44%
B105	VR	30	38	68	87	68	0	0	0	0	142	364	1125	32%
B106	Regular	93	0	93	23	54	0	57	0	0	0	227	2139	11%
B107	Regular	471	0	471	54	161	0	0	334	0	193	1213	4025	30%
B108	Regular	27423	2560	29983	1201	3934	460	351	673	0	198	36800	292180	13%
B109	Regular	373	0	373	48	115	0	0	50	194	0	780	7247	11%
B132	Premium	0	0	0	5	56	0	0	0	0	0	61	102	60%
B133	Premium	0	0	0	12	66	0	0	0	0	0	78	98	79%
B135	Premium	2	0	2	5	33	0	0	0	0	0	40	70	57%
B134	Premium	0	0	0	26	23	0	0	20	36	29	134	135	99%
B136	Premium	1	0	1	7	60	0	0	29	0	0	97	221	44%
B137	Premium	1	0	1	0	76	0	0	0	0	0	78	86	91%
B138	Premium	2	0	2	0	98	0	0	0	0	0	100	110	91%
B141	Regular	0	0	0	0	0	0	0	0	0	0	0	12	0%
B142	Regular	0	0	0	0	0	0	0	0	0	0	0	16	0%
AVG		2559	241	2799	1133	491	157	215	260	32	132	5220	23329	37%
STD		6108	6294	6774	2832	767	623	693	400	189	7838	39058	39056	27%

Notes:
1. C1-C8 Aliphatic compounds all elute in the first 2.0 to 3.5 minutes in this configuration;
hence, n-hexane, isooctane, and t-BME are biased high.

2. A 0 refers to MDL (= 2 ug/l)

TABLE B2
TERMINAL "B" LIQUID SAMPLES

Liquid Sample ID	Total		MTBE mg/l	Isooctane mg/l	Total		Toluene mg/l	Ethyl Benzene mg/l	p- Xylene mg/l	m- Xylene mg/l	Cumene mg/l	o- Xylene mg/l	Total		System
	n-Hexane mg/l	Aliphatic mg/l			Speciated mg/l	Aliphatic mg/l							Speciated mg/l	Total mg/l	
8010	59810	8340	13320	81470	11480	41540	5310	31990	3530	280	8380	183980	25%	EC-P	
8010	59810	8340	13320	81470	11480	41540	5310	31990	3530	280	8380	183980	25%	Supreme	
8010	59810	8340	13320	81470	11480	41540	5310	31990	3530	280	8380	183980	25%	Supreme	
8012	10	574	9166	9750	1693	1653	10	10	54	10	10	13190	2%	Vapor Recovery	Not usable f
8012	10	574	9166	9750	1693	1653	10	10	54	10	10	13190	2%	Vapor Recovery	System - Not usable f
8012	10	574	9166	9750	1693	1653	10	10	54	10	10	13190	2%	Vapor Recovery	System - Not usable f
8012	10	574	9166	9750	1693	1653	10	10	54	10	10	13190	2%	Vapor Recovery	System - Not usable f
8012	10	574	9166	9750	1693	1653	10	10	54	10	10	13190	2%	Vapor Recovery	System - Not usable f
8012	10	574	9166	9750	1693	1653	10	10	54	10	10	13190	2%	Vapor Recovery	System - Not usable f
8012	10	574	9166	9750	1693	1653	10	10	54	10	10	13190	2%	Vapor Recovery	System - Not usable f
8022	100	1603	31529	33232	21292	66293	8064	4596	5210	413	11527	150627	20%	Regular	
8022	100	1603	31529	33232	21292	66293	8064	4596	5210	413	11527	150627	20%	Regular	
8022	100	1603	31529	33232	21292	66293	8064	4596	5210	413	11527	150627	20%	Regular	
8022	100	1603	31529	33232	21292	66293	8064	4596	5210	413	11527	150627	20%	Regular	
8022	100	1603	31529	33232	21292	66293	8064	4596	5210	413	11527	150627	20%	Regular	
8020	100	11789	141639	153528	12951	46299	5385	3164	3733	100	8204	233364	31%	Supreme	
8020	100	11789	141639	153528	12951	46299	5385	3164	3733	100	8204	233364	31%	Supreme	
8020	100	11789	141639	153528	12951	46299	5385	3164	3733	100	8204	233364	31%	Supreme	
8018	101046	130	3593	104769	9833	10117	468	178	289	100	503	126257	17%	Vapor Recovery	System - Not usable f
8018	101046	130	3593	104769	9833	10117	468	178	289	100	503	126257	17%	Vapor Recovery	System - Not usable f
8018	101046	130	3593	104769	9833	10117	468	178	289	100	503	126257	17%	Vapor Recovery	System - Not usable f
8018	101046	130	3593	104769	9833	10117	468	178	289	100	503	126257	17%	Vapor Recovery	System - Not usable f
8018	101046	130	3593	104769	9833	10117	468	178	289	100	503	126257	17%	Vapor Recovery	System - Not usable f
8018	101046	130	3593	104769	9833	10117	468	178	289	100	503	126257	17%	Vapor Recovery	System - Not usable f
8024	100	794	15469	16363	25208	81886	9420	5517	6190	587	13957	159128	21%	Regular	
8024	100	794	15469	16363	25208	81886	9420	5517	6190	587	13957	159128	21%	Regular	
8024	100	794	15469	16363	25208	81886	9420	5517	6190	587	13957	159128	21%	Regular	
8016	263810	5868	134886	404564	11587	31737	3761	2055	2573	100	6441	462818	62%	Premium	Default zero, not usable f
8016	263810	5868	134886	404564	11587	31737	3761	2055	2573	100	6441	462818	62%	Premium	Default zero, not usable f
8016	263810	5868	134886	404564	11587	31737	3761	2055	2573	100	6441	462818	62%	Premium	Default zero, not usable f
8016	263810	5868	134886	404564	11587	31737	3761	2055	2573	100	6441	462818	62%	Premium	Default zero, not usable f
8016	263810	5868	134886	404564	11587	31737	3761	2055	2573	100	6441	462818	62%	Premium	Default zero, not usable f
8016	263810	5868	134886	404564	11587	31737	3761	2055	2573	100	6441	462818	62%	Premium	Default zero, not usable f
8014	11	10249	103919	114179	1317	19596	2685	1410	2035	134	5230	146586	20%	Regular	Default zero, not usable f
8014	11	10249	103919	114179	1317	19596	2685	1410	2035	134	5230	146586	20%	Regular	Default zero, not usable f

TABLE 83

Gas Sample	Liquid Sample Type	Cmnt	Product	OVA Screen PPMv	n-Hexane & Isocutane				Total Speciated Aliphatics			Ethyl Benzene			m-Xylene			o-Xylene			
					MTBE	MTBE	MTBE	MTBE	Benzene	Toluene	Benzene	p-Xylene	m-Xylene	Cumene	Xylene	Xylene					
B065	B010	Valve	EC-P	73	0.09	8.15	1.40	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.27	EC-P			
B066	B010	OEL	Supreme	142	0.22	4.38	0.90	0.21	0.00	5.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Supreme			
B067	B010	Valve	Supreme	3243	0.33	1.76	0.56	0.18	0.00	0.00	0.00	2.85	0.00	0.00	0.00	0.00	0.00	Supreme			
B069	B012	Pump	VR	20	12.21	2.67	3.24	28.75	43.92	0.00	41288.33	0.00	0.00	0.00	0.00	0.00	0.00	Vapor Recovery System - Not			
B070	B012	Valve	VR	296	30.31	0.00	1.82	0.00	19.54	0.00	0.00	2919.68	10546.67	12540.15	0.00	0.00	0.00	Vapor Recovery System - Not			
B071	B012	Pump	VR	43	0.00	0.25	0.24	184.05	14.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	664.92	Vapor Recovery System - Not			
B071DUP	B012	Pump	VR	43	0.00	0.22	0.21	184.91	15.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	792.80	Vapor Recovery System - Not			
B072	B012	OEL	VR	176	1.03	0.58	0.60	169.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2387.74	Vapor Recovery System - Not			
B073DUP	B012	OEL	VR	296	0.52	0.53	0.53	169.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4379.68	Vapor Recovery System - Not			
B074	B012	Conct	VR	670	0.00	0.00	0.00	185.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6693.72	Vapor Recovery System - Not			
B084	B022	OEL	Regular	1186	24.94	0.06	1.33	0.37	0.38	1.31	2.35	3.85	0.00	0.00	0.00	0.00	0.81	Regular			
B084D	B022	OEL	Regular	1186	23.54	0.05	1.26	0.37	0.38	1.31	2.23	4.03	0.00	0.00	0.00	0.00	0.85	Regular			
B085	B022	Conct	Regular	96	176.56	0.41	9.44	1.24	0.52	4.08	0.00	16.81	0.00	0.00	0.00	0.00	0.80	Regular			
B086	B022	Conct	Regular	112	24.16	0.00	1.24	0.18	0.30	1.75	0.00	6.84	0.00	0.00	0.00	0.00	1.81	Regular			
B087	B022	Valve	Regular	181	16.49	0.92	1.72	0.38	0.75	6.23	0.00	18.61	0.00	0.00	0.00	0.00	4.55	Regular			
B088	B022	Valve	Regular	29	6.03	0.26	0.55	0.27	0.00	2.18	0.00	9.42	0.00	0.00	0.00	0.00	2.16	Regular			
B089	B020	Valve	Supreme	691	2.42	0.49	0.64	0.47	0.71	4.73	0.00	13.06	0.00	0.00	0.00	0.00	1.87	Supreme			
B095	B020	OEL	Supreme	1039	3.57	0.09	0.36	0.40	0.29	1.10	12.74	0.00	0.00	0.00	0.00	0.00	0.49	Supreme			
B096	B020	OEL	Supreme	990	3.55	0.09	0.36	0.38	0.50	1.21	1.78	3.26	51.71	0.00	0.00	0.00	0.07	Supreme			
B097	B020	Valve	Supreme	132	0.63	0.22	0.25	0.36	1.02	6.52	0.00	24.93	0.00	0.00	0.00	0.00	4.57	Supreme			
B100	B018	Conct	VR	30	0.37	0.00	0.36	0.57	0.00	162.85	0.00	479.23	0.00	0.00	0.00	0.00	0.00	Vapor Recovery System - Not			
B101	B018	Hatch	VR	970	0.33	0.00	0.32	2.99	2.40	46.38	0.00	87.90	0.00	0.00	0.00	0.00	0.00	Vapor Recovery System - Not			
B102	B018	Hatch	VR	>100000	0.57	0.00	0.55	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Vapor Recovery System - Not			
B102	B018	Hatch	VR	>100000	5.44	0.00	5.25	0.64	0.40	4.06	0.00	8.55	0.00	0.00	0.00	0.00	0.00	Vapor Recovery System - Not			
B103	B018	Conct	VR	511	0.25	7.45	0.50	3.53	0.79	18.17	0.00	56.33	0.00	0.00	0.00	0.00	13.97	Vapor Recovery System - Not			
B104	B018	Conct	VR	45	0.23	0.00	0.23	7.97	2.91	108.23	0.00	356.53	0.00	0.00	0.00	0.00	90.02	Vapor Recovery System - Not			
B105	B018	Conct	VR	30	0.20	7.03	0.43	5.89	4.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	187.65	Vapor Recovery System - Not			
B106	B024	Valve	Regular	116	36.41	0.00	1.99	0.32	0.23	0.00	3.64	0.00	0.00	0.00	0.00	0.00	0.00	Regular			
B107	B024	Valve	Regular	61	98.13	0.00	5.36	0.40	0.37	0.00	0.00	10.07	0.00	0.00	0.00	0.00	2.57	Regular			
B108	B024	OEL	Regular	7992	78.74	0.42	4.70	0.12	0.12	0.13	0.16	0.28	0.00	0.00	0.00	0.00	0.04	Regular			
B109	B024	Valve	Regular	497	43.18	0.00	2.36	0.20	0.14	0.00	0.00	0.84	34.14	0.00	0.00	0.00	0.00	Regular			
B132	B016	Valve	Premium	0	0.00	0.00	0.00	3.28	12.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Premium	Default zero, not		
B016	Valve	Valve	Premium	0	0.00	0.00	0.00	8.09	15.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Premium	Default zero, not		
B135	B016	Valve	Premium	0	0.08	0.00	0.05	4.61	11.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Premium	Default zero, not		
B134	B016	Valve	Premium	0	0.00	0.00	0.00	12.24	3.97	0.00	0.00	43.70	2021.38	24.95	0.00	0.00	24.95	Premium	Default zero, not		
B016	Conct	Conct	Premium	0	0.02	0.00	0.01	1.96	6.37	0.00	0.00	38.68	0.00	0.00	0.00	0.00	0.00	Premium	Default zero, not		
B136	B016	Conct	Premium	0	0.04	0.00	0.03	0.00	21.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Premium	Default zero, not		
B137	B016	Conct	Premium	0	0.04	0.00	0.03	0.00	21.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Premium	Default zero, not		
B138	B016	Conct	Premium	0	0.04	0.00	0.03	0.00	21.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Premium	Default zero, not		
B141	B014	Valve	Regular	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Regular	Default zero, not		
B142	B014	Conct	Regular	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Regular	Default zero, not		
MEANS																					
SAMPLE STANDARD DEVIATION					14.77	0.90	1.22	24.05	5.07	9.38	1032.78	102.64	316.35	694.96	273.31						
					33.84	2.09	1.93	57.92	9.14	30.95	6528.17	466.19	1689.48	2313.51	1387.16						
LOWER 95% CONFID. FOR POP. MEAN					4.28	0.25	0.62	6.10	2.23	-0.21	-990.32	-41.84	-207.23	-22.00	-156.58						
UPPER 95% CONFID. FOR POP. MEAN					25.25	1.55	1.82	42.00	7.90	18.98	3055.88	247.11	839.92	1411.92	703.19						
DATA POINTS																					
T STATISTIC USED					40	40	40	40	40	40	40	40	40	40	40	40	40	40			
					1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96				

**DATA POINTS
'T' STATISTIC USED**

TABLE D1
TERMINAL "D" FUGITIVE GAS GC RESULTS

Sample	Sample Type	n-Hexane	Isooctane	Total t-BME	Aliphatic	Benzene	Toluene	Ethyl Benzene	p-Xylene	m-Xylene	Cumene	o-Xylene	Total Speciat.	THC From GC	Percent Speciated
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	%
D012	SUP UNPB ENV	3,084	1,178	4,262	127	2,540	591	0	1,641	0	508	9,668	20127	48%	
D013	SUP UNPB ENV	3,401	1,321	4,722	149	2,996	712	0	1,919	0	677	11,175	26266	43%	
D014	SUP UNPB ENV	2,668	1,387	4,055	169	2,687	577	0	1,594	0	478	9,559	25084	38%	
D018	SUPER REGULAR	663	0	663	0	0	0	0	0	0	0	663	769	86%	
D025	SUPER REGULAR	2,009	2,249	4,259	98	588	191	0	74	0	393	5,602	14286	39%	
D027	REGULAR UNPB	659	577	1,236	0	494	0	0	482	0	0	2,211	4691	47%	
D029	REGULAR UNPB	1,343	1,902	3,245	108	346	0	0	469	0	0	4,167	10311	40%	
D030	REGULAR UNPB	398	454	852	0	0	0	0	0	0	0	852	2303	37%	
D032	REGULAR UNPB	1,237	1,787	3,025	83	361	0	0	612	0	233	4,313	10577	41%	
D047	SUPER REGULAR	114	70	184	0	0	0	0	0	0	0	184	634	29%	
D049	SUPER REGULAR	101	132	233	0	0	0	0	0	0	0	233	564	41%	
D050	SUPER REGULAR	163	68	231	0	0	0	0	0	0	0	231	479	48%	
D052	REGULAR UNPB	33	39	72	0	0	0	0	0	0	0	72	173	42%	
D057	REGULAR UNPB	21	0	21	0	0	0	0	0	0	0	21	98	21%	
D061	SUPER UNPB	0	11	11	0	0	0	0	0	0	0	11	148	7%	
D071	SUPER UNPB	0	24	24	0	0	0	0	0	0	0	24	165	14%	
D073	SUPER UNPB	0	15	15	0	0	0	0	0	0	0	15	179	8%	
D085	SUPR UNPB ENV	874	155	1,030	14	196	36	0	124	0	0	1,399	2708	52%	
D088	SUPR UNPB ENV	168	44	212	0	78	0	0	0	0	0	289	548	53%	
AVERAGES		891.4	600.6	1,492.0	39.3	541.2	110.9	0.0	364.0	0.0	120.4	2,667.9			
MDL		7	4	10	4	6	13	20	14	17	15				

Notes:

1. C1-C8 Aliphatic compounds all elute in the first 2.0 to 3.5 minutes in this configuration; hence, n-hexane, iC8, and t-BME concentrations are biased high & may coelute.
2. The speciated peaks for n-hexane, isooctane, and t-Butyl Methyl Ether are totalled and labelled "Total Speciated Aliphatics" due to migration of the isooctane peak between nC6 & tBME.
3. A "0" value indicates less than MDL.

TABLE D2
TERMINAL "D" LIQUID SAMPLES

Sample	Sample Type	n-Hexane	Isocetane t-BME	Total Aliphatic	Benzene	Toluene	Ethyl Benzene	p-Xylene	m-Xylene	Cumene	o-Xylene	Total	Percent Speciated
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
D015B	Supr UnPb	278,366	55,089	333,455	13,226	106,885	17,165	14,739	29,743	1,005	17,530	533,748	71%
D015C	Supr UnPb	348,260	55,261	404,521	14,480	117,320	18,937	16,196	32,451	1,087	20,279	625,271	83%
D015B	Supr UnPb	278,366	55,089	333,455	13,226	106,885	17,165	14,739	29,743	1,005	17,530	533,748	71%
D015C	Supr UnPb	348,260	55,261	404,521	14,480	117,320	18,937	16,196	32,451	1,087	20,279	625,271	83%
D015B	Supr UnPb	278,366	55,089	333,455	13,226	106,885	17,165	14,739	29,743	1,005	17,530	533,748	71%
D015C	Supr UnPb	348,260	55,261	404,521	14,480	117,320	18,937	16,196	32,451	1,087	20,279	625,271	83%
D019B	Supr Reg	151,457	242,761	394,218	18,600	54,900	12,900	11,600	25,700	839	16,400	535,157	71%
D019C	Supr Reg	267,415	90,408	357,823	14,700	46,200	10,600	9,310	21,300	980	13,300	474,213	63%
D026B	Supr Reg	240,500	74,500	315,000	17,040	50,840	12,200	11,000	24,600	802	15,700	447,182	60%
D026C	Supr Reg	132,600	242,300	374,900	17,600	54,900	12,800	11,500	25,600	888	16,500	514,778	69%
D028B	Reg UnPb	130,000	248,000	378,000	20,100	35,170	8,770	8,090	19,700	98	12,400	482,328	64%
D028C	Reg UnPb	76,100	232,000	308,100	18,400	30,800	6,740	5,740	15,500	98	10,300	395,638	53%
D031B	Reg UnPb	196,000	132,000	328,000	21,700	35,400	8,570	8,250	18,500	116	11,700	432,236	58%
D031C	Reg UnPb	165,200	117,000	282,200	16,040	47,100	11,400	10,600	25,900	98	18,100	411,438	55%
D031B	Reg UnPb	196,000	132,000	328,000	21,700	35,400	8,570	8,250	18,500	116	11,700	432,236	58%
D031C	Reg UnPb	165,200	117,000	282,200	16,040	47,100	11,400	10,600	25,900	98	18,100	411,438	55%
D048B	Supr Reg	101,103	220,627	321,730	19,221	52,743	12,645	11,162	25,868	789	18,174	462,332	62%
D048C	Supr Reg	110,537	238,161	348,698	20,151	55,024	12,925	11,499	26,038	784	18,193	493,312	66%
D048B	Supr Reg	101,103	220,627	321,730	19,221	52,743	12,645	11,162	25,868	789	18,174	462,332	62%
D048C	Supr Reg	110,537	238,161	348,698	20,151	55,024	12,925	11,499	26,038	784	18,193	493,312	66%
D053B	Reg UnPb	121,738	239,270	361,008	24,632	34,940	8,736	9,180	18,095	670	12,950	470,211	63%
D053C	Reg UnPb	104,497	247,510	352,007	17,903	30,704	6,908	6,709	15,403	588	10,314	440,536	59%
D058B	Reg UnPb	116,885	220,914	337,799	17,938	32,195	7,599	8,069	15,188	663	11,876	431,327	58%
D058C	Reg UnPb	136,656	231,596	368,252	23,005	34,934	8,207	8,650	16,846	618	11,957	472,469	63%
D063B	Supr UnPb	110,404	123,097	233,501	15,019	100,821	15,143	14,492	24,495	844	15,351	419,666	56%
D063C	Supr UnPb	141,509	98,365	239,874	9,297	64,453	8,880	8,163	14,408	488	8,884	354,447	47%Low inj vol
D072B	Supr UnPb	283,128	67,315	350,443	15,564	115,348	18,019	17,476	29,058	1,203	18,586	565,697	75%
D072C	Supr UnPb	261,769	70,053	331,822	14,603	113,032	17,680	17,296	28,671	1,162	18,046	542,312	72%
D075B	Supr UnPb	336,726	78,463	415,189	16,517	127,029	19,898	19,269	32,167	1,257	20,362	651,688	87%
D075C	Supr UnPb	305,973	71,256	377,229	16,569	121,681	19,502	18,923	31,588	1,227	20,414	607,133	81%
D086B	Supr UnPb	277,255	62,439	339,694	15,481	112,995	17,858	17,397	29,383	902	18,537	552,247	74%
D086C	Supr UnPb	281,025	51,076	332,101	15,210	113,153	17,745	17,459	28,553	1,148	18,412	543,781	73%
D089B	Supr UnPb	278,168	65,281	343,449	16,579	119,626	19,350	17,222	28,753	1,142	18,145	564,266	75%
D089C	Supr UnPb	247,083	58,737	305,820	15,461	112,102	18,708	16,687	27,860	1,160	17,558	515,356	69%
AVERAGES		199,981	138,757	338,738	17,228	72,351	13,503	12,410	24,957	748	16,261	496,196	66%
MDL		7	7	38	3	3	9	9	3	9	9	83	
D037B	Upper Pha	39,427	124,432	163,859	15,604	46,851	11,536	10,910	25,949	98	16,735	291,542	39%
D037C	1st Stage	37,062	115,338	152,400	13,142	40,376	8,902	8,046	21,044	98	15,057	259,065	35%
D037B	Upper Pha	39,427	124,432	163,859	15,604	46,851	11,536	10,910	25,949	98	16,735	291,542	39%
D037C	1st Stage	37,062	115,338	152,400	13,142	40,376	8,902	8,046	21,044	98	15,057	259,065	35%
D040B	Upper Pha	35,100	117,900	153,000	13,969	43,900	10,800	10,300	24,400	89	18,100	274,558	37%
D040C	2nd Stage	52,513	114,912	167,425	15,613	46,348	11,470	10,922	25,641	98	20,130	297,647	40%

Notes:

1. C1-C8 Aliphatic compounds all elute in the first 2.0 to 3.5 minutes in this configuration; hence, n-hexane, iC8, and t-BME concentrations are biased high & may coelute.
2. The speciated peaks for n-hexane, isooctane, and t-Butyl Methyl Ether are totalled and labelled "Total Speciated Aliphatics" due to migration of the isooctane peak between nC6 & tBME.

TABLE D3
TERMINAL "D" FUGITIVE/STREAM COMPARISONS MASS/MASS BASIS NON-DETECTS INCLUDED AS ZEROS

Sample	Sample Type	Liquid Component	OVA Screen Value	n-Hexane	Isocutane	Total t-BME Speciated	Benzene	Toluene	Ethyl Benzene	p-Xylene	m-Xylene	Cumene	o-Xylene
D012	SUP UNPB ENV	Valve	3389	0.41	0.80	0.48	0.36	0.89	1.28	0.00	2.06	0.00	1.08
D013	SUP UNPB ENV	Valve	3389	0.35	0.68	0.40	0.32	0.80	1.18	0.00	1.84	0.00	1.10
D014	SUP UNPB ENV	Valve	3302	0.29	0.75	0.36	0.38	0.75	1.01	0.00	1.60	0.00	0.81
D018	SUPER REGULAR	Valve	46	4.27	0.00	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D025	SUPER REGULAR	Valve	10981	0.44	1.59	0.71	0.30	0.61	0.82	0.00	0.16	0.00	1.31
D027	REGULAR UNPB	Valve	8091	0.81	0.37	0.52	0.00	2.24	0.00	0.00	3.91	0.00	0.00
D029	REGULAR UNPB	Valve	12396	0.50	1.05	0.72	0.36	0.71	0.00	0.00	1.84	0.00	0.00
D030	REGULAR UNPB	Valve	12396	0.66	1.12	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D032	REGULAR UNPB	Valve	20897	0.45	0.96	0.65	0.27	0.72	0.00	0.00	2.35	0.00	1.41
D047	SUPER REGULAR	Connectio	1097	1.34	0.37	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D049	SUPER REGULAR	Connectio	1097	1.32	0.79	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D050	SUPER REGULAR	Connectio	1097	2.52	0.49	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D052	REGULAR UNPB	Connectio	96	1.17	0.71	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D057	REGULAR UNPB	Connectio	79	1.38	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D061	SUPER UNPB	Connectio	27	0.00	0.44	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D071	SUPER UNPB	Connectio	NA	0.00	1.60	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D073	SUPER UNPB	Connectio	524	0.00	0.79	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D085	SUP UNPB ENV	Valve	4247	0.87	0.69	0.84	0.25	0.48	0.56	0.00	1.17	0.00	0.00
D088	SUP UNPB ENV	Connectio	321	0.83	0.92	0.84	0.00	0.89	0.00	0.00	0.00	0.00	0.00
MEANS				0.93	0.74	0.67	0.12	0.43	0.26	0.00	0.79	0.00	0.30
SAMPLE STANDARD DEVIATION				1.02	0.43	0.35	0.16	0.58	0.46	0.00	1.16	0.00	0.53
LOWER 95% CONFID. FOR MEAN OF POPULATION				0.44	0.54	0.51	0.04	0.15	0.03	0.00	0.23	0.00	0.05
UPPER 95% CONFID. FOR MEAN OF POPULATION				1.42	0.95	0.84	0.20	0.70	0.48	0.00	1.34	0.00	0.56
DATA POINTS				19	19	19	19	19	19	19	19	19	19
'T' STATISTIC USED				2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10

NOTES:

Upper and lower confidence intervals computed from the formula : $INTERVAL = MEAN \pm ((\sigma_{STD}) * ('T' STATISTIC) / \sqrt{n})$
 Where the 'T' statistic for 19 data points and 2 sided 95% confidence is 2.101.
 Ref: Table V, Page 514, "Probability and Statistics for Engineers and Scientists", Ronald Walpole 2nd Ed. 1978.

TABLE D4

TERMINAL "D" FUGITIVE/STREAM COMPARISONS MASS/MASS BASIS NON-USABLE DATA DROPPED

Sample	Sample Type	Component	Liquid Sample	OVA Screen Value	n-Hexane	Isocutane	t-BME	Speciated	Total	Benzene	Toluene	Ethyl Benzene	p-Xylene	m-Xylene	Cumene	o-Xylene
D012	SUP UNPB ENV	Valve	D015B	3389	0.41	0.80	0.48	0.36	0.89	1.28	0.89	0.89	1.28	2.06	1.08	1.08
D013	SUP UNPB ENV	Valve	D015B	3389	0.35	0.68	0.40	0.32	0.80	1.18	0.80	0.80	1.18	1.84	1.10	1.10
D014	SUP UNPB ENV	Valve	D015B	3302	0.29	0.75	0.36	0.38	0.75	1.01	0.75	0.75	1.01	1.60	0.81	0.81
D018	SUPER REGULAR	Valve	D019B	46	4.27		1.64									
D025	SUPER REGULAR	Valve	D026B	10981	0.44	1.59	0.71	0.30	0.61	0.82	0.61	0.61	0.82	0.16	1.31	1.31
D027	REGULAR UNPB	Valve	D028B	8091	0.81	0.37	0.52		2.24		2.24			3.91		
D029	REGULAR UNPB	Valve	D028B	12396	0.50	1.05	0.72	0.36	0.71		0.71			1.84		
D030	REGULAR UNPB	Valve	D028B	12396	0.66	1.12	0.85									
D032	REGULAR UNPB	Valve	D028B	20897	0.45	0.96	0.65	0.27	0.72		0.72			2.35	1.41	1.41
D047	SUPER REGULAR	Connectio	D048B	1097	1.34	0.37	0.68									
D049	SUPER REGULAR	Connectio	D048B	1097	1.32	0.79	0.96									
D050	SUPER REGULAR	Connectio	D048B	1097	2.52	0.49	1.13									
D052	REGULAR UNPB	Connectio	D048B	96	1.17	0.71	0.86									
D057	REGULAR UNPB	Connectio	D048B	79	1.38		0.48									
D061	SUPER UNPB	Connectio	D048B	27	0.44	0.23										
D071	SUPER UNPB	Connectio	D048B	NA	1.60	0.31										
D073	SUPER UNPB	Connectio	D048B	524	0.79	0.15										
D085	SUPR UNPB ENV	Valve	D086B	4247	0.87	0.69	0.84	0.25	0.48	0.56	0.48	0.56	1.17	1.17		
D088	SUPR UNPB ENV	Connectio	D089B	321	0.83	0.92	0.84		0.89		0.89					
MEANS					1.10	0.83	0.67	0.32	0.90	0.97	0.90	0.97	1.87	1.14	0.98	0.98
SAMPLE STANDARD DEVIATION					1.02	0.36	0.35	0.05	0.52	0.29	0.52	0.29	1.06	0.23	0.42	0.42
LOWER 95% CONFID. FOR MEAN OF POPULATION					0.55	0.65	0.51	0.28	0.50	0.61	0.50	0.61	0.98	0.86	0.62	0.62
UPPER 95% CONFID. FOR MEAN OF POPULATION					1.65	1.02	0.84	0.37	1.30	1.33	1.30	1.33	2.76	1.43	1.34	1.34
DATA POINTS					16	17	19	7	9	5	9	5	8	5		5
'T' STATISTIC USED					2.15	2.12	2.10	2.45	2.31	2.78	2.31	2.78	2.37	2.78		2.78

NOTES:

Upper and lower confidence intervals computed from the formula: $INTERVAL = MEAN \pm ((@STD) * (T' STATISTIC) / @SQRT(n))$

Where the 't' statistic for 19 data points and 2 sided 95% confidence is 2.101.

Ref: Table V, Page 514, "Probability and Statistics for Engineers and Scientists", Ronald Walpole 2nd Ed. 1978.

08:21 Wednesday, October 21, 1992

Date=19MAY92
(continued)

Radian ID	Location	Type	Phase	Product	Load	Subtype
479	Tank 8	Valve	LL	Plus	No	Gate
480	Tank 8	Other	LL	Plus	No	PRV
481	Tank 8	Valve	LL	Plus	No	Gate
482	Tank 8	Conct*	LL	Plus	No	Union
483	Tank 8	Conct*	LL	Plus	No	Flange
484	Tank 8	Valve	LL	Plus	No	Gate
485	Tank 8	Valve	LL	Plus	No	Gate
486	Tank 8	Valve	LL	Plus	No	Gate
487	Tank 8	Conct*	LL	Plus	No	Screw
488	Tank 8	Conct*	LL	Plus	No	Screw
489	Tank 8	Conct*	LL	Plus	No	Union
490	Tank 8	Conct*	LL	Plus	No	Screw
491	Tank 8	Conct*	LL	Plus	No	Flange
492	Tank 8	Conct*	LL	Plus	No	Screw
493	Tank 8	Valve	LL	Plus	No	Globe
494	Tank 8	Valve	LL	Plus	No	Globe
495	Tank 8	Valve	LL	Plus	No	Gate
496	Tank 8	Valve	LL	Plus	No	Gate
497	Tank 8	Valve	LL	Plus	No	Globe
498	Tank 8	Valve	LL	Plus	No	Globe
499	Tank 8	Valve	LL	Plus	No	Gate
500	Tank 8	Valve	LL	Plus	No	Gate

Radian ID	Size	Screening Value	Comments
479	1/2"	12.0	Gate .5"
480	1"	0.0	PRV 1"
481	1/2"	16.0	Gate .5"
482		0.0	Union
483		0.0	Flange
484	1/2"	1.5	Gate .5"
485	1/2"	22.0	Gate .5"
486		200.0	
487		0.0	Screw
488		0.0	Screw
489		7.0	Union
490		0.0	Screw
491		0.0	flange
492		0.0	Screw
493	6"	0.0	Globe 6" -half buried
494	14"	0.0	Globe 14"
495	2"	7.5	Gate 2"
496	2"	110.0	Gate 2"
497	4"	26.0	Globe 4"
498	4"	47.0	Globe 4"
499	2"	2.0	Gate 2"
500	2"	4.0	Gate 2" -half buried

Radian ID	Location	Type	Phase	Product	Load	Subtype
501	Tank 8	Valve	LL	Unknown	No	Gate
502	Tank 8	Valve	LL	Unknown	No	Globe
503	Tank 8	Valve	LL	Unknown	No	Globe
504	Tank 8	Valve	LL	Unknown	No	Globe
505	Tank 8	Valve	LL	Supreme	No	Gate
506	Tank 8	OEL	LL	Super	No	Gate
507	Tank 8	Valve	LL	Super	No	Ball
508	Tank 8	Valve	LL	Plus	No	Gate
509	Tank 8	Valve	LL	Unknown	No	Globe
510	Tank 8	Valve	LL	Super	No	Globe
511	Tank 8	Valve	LL	Super	No	Globe
512	V.R. Area	Conct*	LL	Super	Yes	Screw
513	V.R. Area	Conct*	LL	Super	Yes	Screw
514	V.R. Area	Conct*	LL	Super	Yes	Screw
515	V.R. Area	Conct*	LL	Super	Yes	Screw
516	V.R. Area	Conct*	LL	Super	Yes	Screw
517	V.R. Area	Conct*	LL	Super	Yes	Flange
518	V.R. Area	Conct*	LL	Super	Yes	Tubing
519	V.R. Area	Conct*	LL	Super	Yes	Tubing
520	V.R. Area	Conct*	LL	Super	Yes	Screw
521	V.R. Area	Valve	LL	Super	Yes	Gate
522	V.R. Area	Valve	LL	Super	Yes	Solenoid

Radian ID	Size	Screening Value	Comments
501	4"	110	Gate 4"
502	4"	0	Globe 4"
503	4"	12	Globe 4"
504	2"	0	Gate 2"
505	2"	3	Gate 2"
506		0	
507	1/2"	0	Ball .5"
508	2"	0	Gate 2"
509	6"	5	Globe 6"
510	12"	42	Globe 12"
511	4"	4	Globe 4"
512		0	Screw
513		0	Screw
514		3	Screw
515		0	Screw
516		0	Screw
517		0	Flange
518		0	Tubing
519		0	Tubing
520		0	Screw
521	1/2"	0	Gate .5"
522	1/2"	0	Solenoid .5"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
523	V.R. Area	Valve	LL		Yes	Ball
524	V.R. Area	Valve	LL		Yes	Gate
525	V.R. Area	Valve	LL		Yes	Ball
526	V.R. Area	Valve	LL		Yes	Ball
527	V.R. Area	Valve	LL		Yes	Control
528	V.R. Area	Conct*	LL		Yes	Screw
529	V.R. Area	Conct*	LL		Yes	Screw
530	V.R. Area	Conct*	LL		Yes	Screw
531	V.R. Area	Conct*	LL		Yes	Flange
532	V.R. Area	Valve	LL		Yes	Globe
533	V.R. Area	Valve	LL		Yes	Globe
534	V.R. Area	Valve	LL		Yes	Globe
535	V.R. Area	Valve	LL		Yes	Globe
536	V.R. Area	Valve	LL		Yes	Globe
537	V.R. Area	Valve	LL		Yes	Butterfly
538	V.R. Area	Valve	LL		Yes	Globe
539	V.R. Area	Conct*	LL		Yes	Screw
540	V.R. Area	Conct*	LL		Yes	Screw
541	V.R. Area	Conct*	LL		Yes	Screw
542	V.R. Area	Conct*	LL		Yes	Screw
543	V.R. Area	Conct*	LL		Yes	Screw
544	V.R. Area	Valve	LL		Yes	Ball

Radian ID	Size	Screening Value	Comments
523	1/2"	0.0	Ball .5"
524	1/2"	2.0	Gate .5"
525	1/2"	0.0	Ball .5"
526	1/2"	0.0	Ball .5"
527	2"	13.0	Contr. 2"
528		0.0	Screw
529		0.0	Screw
530		0.0	Screw
531		0.0	Flange
532	2"	700.0	Globe 2"
533	4"	75000.0	Globe 4"
534	4"	45000.0	Globe 4"
535	4"	98.0	Globe 4"
536	4"	110.0	Globe 4"
537	4"	8.0	Butterfly 4"
538	4"	1200.0	Globe 4"
539		0.0	Screw
540		0.0	Screw
541		0.0	Screw
542		0.0	Screw
543		0.0	Screw
544	3/8"	0.0	Ball 3/8"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
545	V.R. Area	Valve	LL		Yes	Gate
546	V.R. Area	Valve	LL		Yes	Gate
547	V.R. Area	Valve	LL		Yes	Ball
548	V.R. Area	Valve	LL		Yes	Ball
549	V.R. Area	Pump	LL		No	
550	V.R. Area	Valve	LL		No	Ball
551	V.R. Area	Conct*	LL		No	Screw
552	V.R. Area	OEL	LL		No	
553	V.R. Area	Valve	LL		No	Ball
554	V.R. Area	Valve	LL		No	Ball
555	V.R. Area	OEL	LL		No	
556	V.R. Area	Conct*	LL		No	Screw
557	V.R. Area	Valve	LL		No	Ball
558	V.R. Area	Valve	LL		No	Ball

Radian ID	Size	Screening Value	Comments
545	2"	4.0	Gate 2"
546	1/2"	0.0	Gate .5"
547	1"	0.0	Ball 1"
548	1-1/2"	0.0	Ball 1.5"
549	1/2"	1.0	Contr. .5"
550		0.0	Ball .5"
551		0.0	Screw
552		0.0	.5"
553	1"	0.0	Ball 1"
554	1"	0.0	Ball 1"
555		3.5	.5"
556		4.5	Screw
557	1"	6.5	Ball 1"
558	1"	0.0	Ball 1"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
561	VRU	Conct*	LL	VRU	Yes	Screwed
562	VRU	Valve	LL	VRU	Yes	Gate
563	VRU	Valve	LL	VRU	Yes	Solenoid
564	VRU	Valve	LL	VRU	Yes	Gate
565	VRU	Valve	LL	VRU	Yes	Gate
566	VRU	Valve	LL	VRU	No	Gate
567	VRU	Valve	LL	VRU	No	Check
568	VRU	Valve	LL	VRU	No	Flange
569	VRU	Conct*	LL	VRU	No	Ball
570	VRU	Valve	LL	VRU	No	Ball
571	VRU	OEL	LL	VRU	No	
572	VRU	OEL	LL	VRU	Yes	
573	VRU	Conct*	LL	VRU	Yes	Screwed
574	VRU	Valve	LL	VRU	Yes	Ball
575	VRU	Valve	LL	VRU	Yes	Ball
576	VRU	Conct*	LL	VRU	Yes	Screwed
577	VRU	Valve	LL	VRU	Yes	Ball
578	VRU	Conct*	LL	VRU	Yes	Screwed
579	VRU	Valve	LL	VRU	Yes	Ball
580	VRU	Conct*	LL	VRU	Yes	Screwed
581	VRU	Pump	LL	VRU	Yes	
582	VRU	Pump	LL	VRU	Yes	

Radian ID	Size	Screening Value	Comments
561		0	Screw
562	3/4"	2	Gate 3/4"
563	1/2"	0	Solenoid .5"
564	3/4"	0	Gate 3/4"
565	3/4"	0	Gate 3/4"
566	3/4"	0	Gate 3/4"
567	3"	0	Check 3"
568		0	Flange -not w/in 1cm
569	3/8"	0	Ball 3/8"
570	3/8"	0	Ball 3/8"
571		0	1/4"
572		0	1/4"
573		0	Screw
574	3/8"	0	Ball 3/8"
575	1"	0	Ball 1"
576		0	Screw
577	1/2"	0	Ball .5"
578		0	Screw
579	1/2"	0	Ball .5"
580		0	Screw
581		0	Horz. centr
582		33	Horz. centr

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Radian ID	Location	Type	Phase	Product	Load	Subtype
583	VRU	Conct*	LL	VRU	Yes	Flange
584	VRU	Valve	LL	VRU	Yes	Check
585	VRU	Valve	LL	VRU	Yes	Control
586	VRU	Valve	LL	VRU	Yes	
587	VRU	Conct*	LL	VRU	Yes	Screwed
588	VRU	Valve	LL	VRU	Yes	Control
589	VRU	Valve	LL	VRU	Yes	Ball
590	VRU	Conct*	LL	VRU	Yes	Union
591	VRU	Conct*	LL	VRU	Yes	Screwed
592	VRU	Conct*	LL	VRU	Yes	Screwed
593	VRU	Conct*	LL	VRU	Yes	Screwed
594	VRU	Conct*	LL	VRU	Yes	Screwed
595	VRU	Conct*	LL	VRU	Yes	Tubing
596	VRU	Conct*	LL	VRU	Yes	Screwed
597	VRU	Conct*	LL	VRU	Yes	Screwed
598	VRU	Conct*	LL	VRU	Yes	Tubing
599	VRU	Conct*	LL	VRU	Yes	Tubing
600	VRU	Valve	LL	VRU	Yes	Ball
601	VRU	Valve	LL	VRU	Yes	Ball
602	VRU	Valve	LL	VRU	Yes	Diaphragm
603	VRU	Pump	LL	VRU	Yes	
604	VRU	Valve	LL	VRU	Yes	Ball

Radian ID	Size	Screening Value	Comments
583		2.0	Flange
584	3"	0.0	Check 3"
585	3"	130.0	3" Motor Contr.
586	1/4"	1.0	SV 1/4"
587		0.0	Screw
588	3"	77.0	3" Motor Contr.
589	1/4"	0.0	Ball 1/4"
590		0.0	Union
591		0.0	Screw
592		0.0	Screw
593		0.0	Screw
594		0.0	Screw
595		0.0	Tubing
596		0.0	Screw
597		0.0	Screw
598		0.0	Tubing
599		0.0	Tubing
600	3/8"	0.0	Ball 3/8"
601	3/8"	0.0	Ball 3/8"
602	1/4"	33.0	Diaphragm 1/4"
603		0.0	Horz. centr.
604	1"	1.0	Ball 1"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
605	VRU	Conct*	LL	VRU	Yes	Screw
606	VRU	Valve	LL	VRU	Yes	Ball
607	VRU	Valve	LL	VRU	Yes	Ball
608	VRU	Valve	LL	VRU	Yes	Gate
609	VRU	OEL	LL	VRU	Yes	Gate
610	VRU	Valve	LL	VRU	Yes	Gate
611	VRU	Valve	LL	VRU	Yes	Gate
613	VRU	Pump	LL	VRU	Yes	Screw
614	VRU	Conct*	LL	VRU	Yes	Screw
615	VRU	Conct*	LL	VRU	Yes	Screw
616	VRU	Conct*	LL	VRU	Yes	Screw
617	VRU	Conct*	LL	VRU	Yes	Screw
618	VRU	Conct*	LL	VRU	Yes	Screw
619	VRU	Conct*	LL	VRU	Yes	Tubing
620	VRU	Conct*	LL	VRU	Yes	Screw
621	VRU	Conct*	LL	VRU	Yes	Screw
622	VRU	Valve	LL	VRU	Yes	Check
623	VRU	Conct*	Gas	VRU	Yes	Screw
624	VRU	Conct*	Gas	VRU	Yes	Screw
625	VRU	Conct*	Gas	VRU	Yes	Screw
626	VRU	Conct*	Gas	VRU	Yes	Screw
627	VRU	Conct*	Gas	VRU	Yes	Screw

Radian ID	Size	Screening Value	Comments
605		0.0	Screw
606	3/8"	0.0	SV 3/8"
607	1/4"	0.0	Ball 1/4"
608	1/2"	0.0	Ball .5"
609		0.0	3/8"
610	1"	0.0	Gate 1"
611	1/2"	0.0	Gate .5"
613		6.5	Horz. centr.
614		0.0	Screw
615		0.0	Screw
616		0.0	Screw
617		0.0	Screw
618		0.0	Screw
619		0.0	Screw
620		0.0	Tubing
621		0.0	Screw
622		0.0	Screw
623	1"	0.0	Check 1"
624		0.0	Screw
625		0.0	Screw
626		0.0	Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype
628	VRU	Conct*	Gas	VRU	Yes	Screw
629	VRU	Conct*	Gas	VRU	Yes	Screw
630	VRU	Conct*	Gas	VRU	Yes	Screw
631	VRU	Valve	Gas	VRU	Yes	Gate
632	VRU	Valve	Gas	VRU	Yes	Gate
633	VRU	Valve	Gas	VRU	Yes	Gate
634	VRU	Valve	Gas	VRU	Yes	Gate
635	VRU	Valve	Gas	VRU	Yes	Gate
636	VRU	Valve	Gas	VRU	Yes	Control
637	VRU	Valve	Gas	VRU	Yes	Control
638	VRU	Valve	Gas	VRU	Yes	Ball
639	VRU	Valve	Gas	VRU	Yes	Control
640	VRU	Conct*	Gas	VRU	Yes	Screw
641	VRU	Conct*	Gas	VRU	Yes	Screw
642	VRU	Conct*	Gas	VRU	Yes	Screw
643	VRU	Valve	Gas	VRU	Yes	Control
644	VRU	Conct*	Gas	VRU	Yes	Screw
645	VRU	Conct*	Gas	VRU	Yes	Ball
646	VRU	Valve	Gas	VRU	Yes	Gate
647	VRU	Valve	Gas	VRU	Yes	Gate
649	VRU	Valve	Gas	VRU	Yes	Gate
650	VRU	Valve	Gas	VRU	Yes	Ball

Radian ID	Size	Screening Value	Comments
628		0.0	Screw
629		0.0	Screw
630		0.0	Screw
631	1"	0.0	1"
632	1"	1.0	SV 1"
633	1/2"	0.0	Gate .5"
634	1/2"	0.0	SV .5"
635	2"	0.0	SV 2"
636	4"	0.0	4" Bfly motor contr.
637	10"	1.5	10" Bfly motor contr.
638	3/8"	0.0	Ball 3/8"
639	10"	23.0	10" Bfly motor contr.
640		0.0	Screw
641		0.0	Tubing
642		1.0	Screw
643	4"	1.0	4" Bfly motor contr.
644		0.0	Screw
645		0.0	Screw -variable bkgd
646	1"	0.0	Ball 1"
647	1/2"	1500.0	Ball .5" -variable bkgd
649	2"		Gate 2"
650	3/8"	0.0	Ball 3/8"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
651	VRU	Conct*	Gas	VRU	Yes	Screw
652	VRU	Conct*	LL	VRU	Yes	Screw
653	VRU	Valve	LL	VRU	Yes	Ball
654	VRU	Conct*	LL	VRU	Yes	Flange
655	VRU	Conct*	LL	VRU	Yes	Screw
656	VRU	Valve	LL	VRU	Yes	Ball
657	VRU	Conct*	LL	VRU	Yes	Screw
658	VRU	Conct*	LL	VRU	Yes	Screw
659	VRU	Conct*	LL	VRU	Yes	Screw
660	VRU	Conct*	LL	VRU	Yes	Screw
661	VRU	Valve	LL	VRU	Yes	Ball
662	VRU	Valve	LL	VRU	Yes	Ball
663	VRU	Valve	LL	VRU	Yes	Ball
664	VRU	Valve	LL	VRU	Yes	Ball
665	VRU	Pump	LL	VRU	Yes	
666	VRU	Valve	LL	VRU	Yes	Control
667	VRU	Valve	LL	VRU	Yes	Control
668	VRU	Valve	LL	VRU	Yes	
669	VRU	Conct*	LL	VRU	Yes	Screw
670	VRU	Valve	LL	VRU	Yes	Ball
671	VRU	Valve	LL	VRU	Yes	Gate
672	VRU	Valve	LL	VRU	Yes	Gate

Radian ID	Size	Screening Value	Comments
651		0.0	Screw
652		0.0	Screw
653	1/2"	0.0	Ball .5"
654		0.0	Flange
655		0.0	Screw
656	1/2"	0.0	Ball .5"
657		0.0	Screw
658		0.0	Screw
659		0.0	Screw
660		0.0	Screw
661	3/8"	0.0	Ball 3/8"
662	3/8"	0.0	Ball 3/8"
663	3/8"	0.0	Ball 3/8"
664	1/2"	0.0	SV .5"
665		110.0	Vert. cent.
666	2"	0.0	2" Motor Contr.
667	2"	0.0	2" Motor Contr.
668	2"	0.0	SV 2"
669		0.0	Screw
670	2"	0.0	Ball 2"
671	1/2"	0.0	Gate .5"
672	1/2"	2.0	Gate .5"

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
673	VRU	Valve	LL	VRU	Yes	Ball	1/2"	0.0	Ball .5"
674	VRU	Valve	LL	VRU	Yes	Gate	1/2"	1.0	Gate .5"
675	VRU	Valve	LL	VRU	Yes	Gate	1/2"	0.0	Gate .5"
676	VRU	Conct*	LL	VRU	Yes	Screw		0.0	Screw
677	VRU	Conct*	LL	VRU	Yes	Tubing		1.5	Tubing
678	VRU	Valve	LL	VRU	Yes	Tubing	1/2"	0.0	SV .5"
679	VRU	Conct*	LL	VRU	Yes	Screw		0.0	Screw
680	Add.	Rack Conct*	LL	VRU	No	Screw		0.0	Screw
681	Add.	Rack Conct*	LL	VRU	No	Tubing		0.0	Tubing
682	Add.	Rack Conct*	LL	VRU	No	Tubing		0.0	Tubing
683	Add.	Rack Conct*	LL	VRU	No	Tubing		0.0	Tubing
684	Add.	Rack Conct*	LL	VRU	No	Screw		0.0	Screw
685	Add.	Rack OEL	LL	VRU	No			0.0	
686	Add.	Rack Valve	LL	VRU	No	Ball	3/8"	0.0	Ball 3/8"
687	Add.	Rack Valve	LL	VRU	No	Ball	3/8"	0.0	Ball 3/8"
688	Add.	Rack Valve	LL	VRU	No	Ball	3/8"	0.0	Ball 3/8"
689	Add.	Rack Valve	LL	VRU	No		1/2"	0.0	SV .5"
690	Add.	Rack Conct*	LL	VRU	No	Screw		0.0	Screw
691	Add.	Rack Conct*	LL	VRU	No	Tubing		0.0	Tubing
692	Add.	Rack Conct*	LL	VRU	No	Tubing		0.0	Tubing
693	Add.	Rack Conct*	LL	VRU	No	Tubing		0.0	Tubing
694	Add.	Rack Conct*	LL	VRU	No	Screw		0.0	Screw
695	Add.	Rack Conct*	LL	VRU	No	Tubing		0.0	Tubing
696	Add.	Rack Conct*	LL	VRU	No	Screw		0.0	Screw
697	Add.	Rack Valve	LL	VRU	No	Ball	3/8"	0.0	Ball 3/8"
698	Add.	Rack Valve	LL	VRU	No	Ball	3/8"	0.0	Ball 3/8"
699	Add.	Rack Valve	LL	VRU	No	Ball	3/8"	0.0	Ball 3/8"
700	Add.	Rack Valve	LL	VRU	No		1/2"	0.0	SV .5"
701	Add.	Rack OEL	LL	VRU	No			0.0	3/8"
702	Add.	Rack Conct*	LL	VRU	No	Screw		0.0	Screw
703	Add.	Rack Conct*	LL	VRU	No	Screw		0.0	Screw
704	Add.	Rack Conct*	LL	VRU	No	Tubing		0.0	Tubing
705	Add.	Rack Conct*	LL	VRU	No	Screw		0.0	Screw
706	Add.	Rack Conct*	LL	VRU	No	Screw		0.0	Screw
707	Add.	Rack Conct*	LL	VRU	No	Screw		0.0	Screw
708	Add.	Rack OEL	LL	VRU	No			0.0	3/8"
709	Add.	Rack Valve	LL	VRU	No	Ball	3/8"	0.0	Ball 3/8"
710	Add.	Rack Valve	LL	VRU	No	Ball	3/8"	0.0	Ball 3/8"
711	Add.	Rack Valve	LL	VRU	No	Ball	3/8"	0.0	Ball 3/8"
712	Add.	Rack Valve	LL	VRU	No		1/2"	0.0	SV .5"
713	Add.	Rack Conct*	LL	VRU	No	Screw		0.0	Screw
714	Add.	Rack Conct*	LL	VRU	No	Tubing		0.0	Tubing
715	Add.	Rack Conct*	LL	VRU	No	Screw		0.0	Screw
716	Add.	Rack Conct*	LL	VRU	No	Screw		0.0	Screw
717	Add.	Rack Conct*	LL	VRU	No	Screw		0.0	Screw
718	Add.	Rack Conct*	LL	VRU	No	Tubing		0.0	Tubing
719	Add.	Rack OEL	LL	VRU	No			1.0	3/8"
720	Add.	Rack Valve	LL	VRU	No	Ball	3/8"	0.0	Ball 3/8"

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API Screening Data
Terminal C
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Radian ID	Location	Type	Phase	Product	Load	Subtype
721	Add. Rack	Valve	LL	VRU	No	Ball
722	Add. Rack	Valve	LL	VRU	No	Ball
723	Add. Rack	Valve	LL	VRU	No	Screw
724	Add. Rack	Conc*	LL	VRU	No	Tubing
725	Add. Rack	Conc*	LL	VRU	No	Screw
726	Add. Rack	Conc*	LL	VRU	No	Screw
727	Add. Rack	Conc*	LL	VRU	No	Screw
728	Add. Rack	Conc*	LL	VRU	No	Screw
729	Add. Rack	Conc*	LL	VRU	No	Screw
730	Add. Rack	Conc*	LL	VRU	No	Screw
731	Add. Rack	OEL	LL	VRU	No	Ball
732	Add. Rack	Valve	LL	VRU	No	Ball
733	Add. Rack	Valve	LL	VRU	No	Ball
734	Add. Rack	Valve	LL	VRU	No	Ball
735	Add. Rack	Valve	LL	VRU	No	Union
736	Add. Rack	Conc*	LL	VRU	No	Screw
737	Add. Rack	Conc*	LL	VRU	No	Screw
738	Add. Rack	Conc*	LL	VRU	No	Screw
739	Add. Rack	Conc*	LL	VRU	No	Union
740	Add. Rack	Conc*	LL	VRU	No	Screw
741	Add. Rack	Conc*	LL	VRU	No	PRV
742	Add. Rack	Other	LL	VRU	Yes	

Radian ID	Size	Screening Value	Comments
721	3/8"	0.0	Ball 3/8"
722	3/8"	0.0	Ball 3/8"
723	1/2"	0.0	SV .5"
724		0.0	Screw
725		0.0	Tubing
726		0.0	Screw
727		0.0	Screw
728		0.0	Screw
729		1.5	Screw
730		0.0	Screw
731	3/8"	0.0	Ball 3/8"
732	3/8"	0.0	Ball 3/8"
733	3/8"	0.0	Ball 3/8"
734	3/8"	0.0	Ball 3/8"
735	1/2"	0.0	SV .5"
736		0.0	Union
737		0.0	Screw
738		0.0	Screw
739		0.0	Screw
740		0.0	Union
741		0.0	Screw
742	1"	0.0	PRV 1"

Radian ID	Location	Type	Phase	Product	Load	Subtype
743	Add. Rack	Valve	LL	VRU	Yes	Check
744	Add. Rack	Valve	LL	VRU	Yes	Ball
745	Add. Rack	Valve	LL	VRU	Yes	Ball
746	Add. Rack	Valve	LL	VRU	Yes	Ball
747	Add. Rack	Pump	LL	VRU	Yes	Ball
748	Add. Rack	Valve	LL	VRU	Yes	Ball
749	Add. Rack	Valve	LL	VRU	Yes	Ball
750	Add. Rack	Conc*	LL	VRU	No	Screw
751	Add. Rack	Conc*	LL	VRU	No	Tubing
752	Add. Rack	Conc*	LL	VRU	No	Screw
753	Add. Rack	Conc*	LL	VRU	No	Tubing
754	Add. Rack	Conc*	LL	VRU	No	Screw
755	Add. Rack	Conc*	LL	VRU	No	Screw
756	Add. Rack	Conc*	LL	VRU	No	Tubing
757	Add. Rack	OEL	LL	VRU	No	Ball
758	Add. Rack	Valve	LL	VRU	No	Ball
759	Add. Rack	Valve	LL	VRU	No	Ball
760	Add. Rack	Valve	LL	VRU	No	Ball
761	Add. Rack	Valve	LL	VRU	No	Ball
762	Add. Rack	Valve	LL	VRU	No	Ball
763	Add. Rack	Valve	LL	VRU	No	Ball
764	Add. Rack	Valve	LL	VRU	No	Ball

Radian ID	Size	Screening Value	Comments
743	1-1/4"	0.0	Check 1 1/4"
744	1"	0.0	Ball 1"
745	1/2"	0.0	Ball .5"
746	3/8"	0.0	Ball 3/8"
747		0.0	Horz. centr.
748	1"	0.0	Ball 1"
749	1/2"	0.0	Ball .5" -greasy
750		0.0	Screw
751		0.0	Tubing
752		11.0	Screw
753		0.0	Tubing
754		0.0	Screw
755		0.0	Screw
756		0.0	Tubing
757		0.0	3/8"
758	3/8"	0.0	Ball 3/8"
759	3/8"	0.0	Ball 3/8"
760	3/8"	0.0	Ball 3/8"
761	1"	0.0	Ball 1"
762	1"	0.0	Ball 1"
763	1"	0.0	Ball 1"
764	1"	0.0	Ball 1"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
765	Add. Rack	Conct*	LL	VRU	No	Tubing
766	Add. Rack	Conct*	LL	VRU	No	Screw
767	Add. Rack	Valve	LL	VRU	No	
768	Add. Rack	Conct*	LL	VRU	No	Tubing
769	Add. Rack	Conct*	LL	VRU	No	Tubing
770	Add. Rack	Conct*	LL	VRU	No	Screw
771	Add. Rack	OEL	LL	VRU	No	
772	Add. Rack	Valve	LL	VRU	No	Ball
773	Add. Rack	Valve	LL	VRU	No	Ball
774	Add. Rack	Valve	LL	VRU	No	Ball
775	Add. Rack	Valve	LL	VRU	No	
776	Add. Rack	Conct*	LL	VRU	No	Screw
777	Add. Rack	Conct*	LL	VRU	No	Tubing
778	Add. Rack	Conct*	LL	VRU	No	Tubing
779	Add. Rack	Conct*	LL	VRU	No	Screw
780	Add. Rack	Conct*	LL	VRU	No	Screw
781	Add. Rack	Conct*	LL	VRU	No	Screw
782	Add. Rack	OEL	LL	VRU	No	
783	Add. Rack	Valve	LL	VRU	No	Ball
784	Add. Rack	Valve	LL	VRU	No	Ball
785	Add. Rack	Valve	LL	VRU	No	Ball
786	Add. Rack	Valve	LL	VRU	No	

Radian ID	Size	Screening Value	Comments
765		0.0	Tubing
766		0.0	Screw
767	1/2"	0.0	SV .5"
768		0.0	Tubing
769		0.0	Tubing
770		0.0	Screw
771		0.0	3/8"
772	3/8"	0.0	Ball 3/8"
773	3/8"	0.0	Ball 3/8"
774	3/8"	0.0	Ball 3/8"
775	1/2"	0.0	.5"
776		0.0	Screw
777		0.0	Tubing
778		0.0	Tubing
779		0.0	Screw
780		1.5	Screw
781		0.0	Screw
782		0.0	3/8"
783	3/8"	0.0	Ball 3/8"
784	3/8"	0.0	Ball 3/8"
785	3/8"	0.0	Ball 3/8"
786	1/2"	0.0	SV .5"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
787	Add. Rack	Conct*	LL	VRU	No	Screw
788	Add. Rack	Conct*	LL	VRU	No	Screw
789	Add. Rack	Conct*	LL	VRU	No	Tubing
790	Add. Rack	Conct*	LL	VRU	No	Tubing
791	Add. Rack	Conct*	LL	VRU	No	Tubing
792	Add. Rack	Conct*	LL	VRU	No	Screw
793	Add. Rack	Conct*	LL	VRU	No	Screw
794	Add. Rack	OEL	LL	VRU	No	
795	Add. Rack	Valve	LL	VRU	No	Ball
796	Add. Rack	Valve	LL	VRU	No	Ball
797	Add. Rack	Valve	LL	VRU	No	Ball
798	Add. Rack	Valve	LL	VRU	No	
799	Add. Rack	Valve	LL	VRU	No	Ball
800	Add. Rack	Valve	LL	VRU	No	Ball
801	Add. Rack	Valve	LL	VRU	No	Ball
802	Add. Rack	Valve	LL	VRU	No	Ball
803	Add. Rack	Valve	LL	VRU	No	Ball
804	Load Rack 1A	Conct*	LL	Super	No	Flange
805	Load Rack 1A	Conct*	LL	VRU	No	Flange
806	Load Rack 1A	Conct*	LL	AVGAS100	No	Flange
807	Load Rack 1A	LA	LL	AVGAS100	No	Check
808	Load Rack 1A	Conct*	Gas	VRU	No	

Radian ID	Size	Screening Value	Comments
787		0.0	Screw
788		0.0	Screw
789		0.0	Tubing
790		0.0	Tubing
791		0.0	Tubing
792		0.0	Screw
793		0.0	Screw
794		0.0	3/8"
795	3/8"	0.0	Ball 3/8"
796	3/8"	0.0	Ball 3/8"
797	3/8"	0.0	Ball 3/8"
798	1/2"	0.0	SV .5"
799	1"	0.0	Ball 1"
800	1"	0.0	Ball 1"
801	1"	0.0	Ball 1"
802	1"	0.0	Ball 1"
803	1"	0.0	Ball 1"
804		0.0	Flange -not w/in lcm
805		0.0	Flange -not w/in lcm
806		0.0	Flange -not w/in lcm
807	4"	120.0	Check 4"
808		130.0	Cap on VRL .5" locked

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Radian ID	Location	Type	Phase	Product	Load	Subtype
809	Load Rack 1A	Conct*	Gas	VRU	No		831	Load Rack 1	LA	Gas	VRU	Yes	Clamp
810	Load Rack 1A	Valve	LL	Plus	No	Globe	832	Load Rack 1	LA	LL	Regular	Yes	Clamp
811	Load Rack 1A	Valve	LL	Super	No	Globe	833	Load Rack 1	LA	LL	Regular	Yes	Clamp
812	Load Rack 1A	Valve	LL		No	Globe	834	Load Rack 1	Conct*	LL	Regular	Yes	Flange
813	Load Rack 1A	LA	Gas	VRU	No	Check	835	Load Rack 1	Valve	LL	Super	No	
814	Load Rack 1A	Conct*	LL		No	Screw	836	Load Rack 1	Valve	LL	Super	No	
815	Load Rack 1A	Valve	LL		No	Butterfly	837	Load Rack 1	Valve	LL	Regular	Yes	
816	Load Rack 1A	Conct*	LL		No	Screw	838	Load Rack 1	Valve	LL	Regular	Yes	
817	Load Rack 1A	Conct*	LL		No	Screw	839	Load Rack 1	Valve	LL	Regular	No	Ball
818	Load Rack 1A	Valve	LL		No	Globe	840	Load Rack 1	Conct*	LL	Regular	Yes	Screw
819	Load Rack 1A	Pump	LL		No	Check	841	Load Rack 1	Conct*	LL	Regular	Yes	Screw
820	Load Rack 1A	Valve	LL		No	Check	842	Load Rack 1	Valve	LL	Regular	Yes	Gate
821	Load Rack 1A	LA	LL		No	Check	843	Load Rack 1	Valve	LL	Regular	Yes	Gate
822	Load Rack 1A	LA	LL		No	Check	844	Load Rack 1	Valve	LL	Regular	Yes	Gate
823	Load Rack 1A	Pump	LL		No	Screw	845	Load Rack 1	Valve	LL	Plus	No	
824	Load Rack 1A	Conct*	LL		No	Screw	846	Load Rack 1	Conct*	LL	Plus	No	Screw
825	Load Rack 1A	Valve	LL		No	Gate	847	Load Rack 1	Valve	LL	Plus	No	Ball
826	Load Rack 1A	Other	LL		No	Hatch	848	Load Rack 1	Valve	LL	Plus	No	Ball
827	Load Rack 1A	Conct*	LL		No	Screw	849	Load Rack 1	Valve	LL	Plus	No	Gate
828	Load Rack 1A	OEL	LL		No		850	Load Rack 1	Valve	LL	Plus	No	Gate
829	Load Rack 1A	LA	Gas	VRU	Yes	Clamp	851	Load Rack 1	Conct*	LL	Plus	No	Screw
830	Load Rack 1A	Valve	LL	AVGAS100	Yes		852	Load Rack 1	Conct*	LL	Plus	No	Screw

Radian ID	Size	Screening Value	Comments	Radian ID	Size	Screening Value	Comments
809		160.0	VRL .5" locked	831		15	Clamp -VRL connected to truck
810	4"	23.0	Globe 4"	832		40	Clamp -load arm
811	4"	120.0	Globe 4"	833		590	Clamp -load arm
812	4"	9.0	Globe 4"	834		0	Flange
813	4"	0.0	Check 4" - VRL	835	1/2"	0	SV .5"
814	4"	0.0	Screw	836	1/2"	0	SV .5"
815	4"	4.5	Butterfly 4"	837	1/2"	0	SV .5"
816		0.0	Screw	838	1/2"	0	SV .5"
817		0.0	Screw	839	3/8"	52	Ball 3/8"
818	1/2"	3.0	Globe .5"	840		0	Screw
819		0.0	Horz. centr.	841		0	Screw
820	4"	0.0	Globe 4"	842	1/2"	0	Gate .5"
821	4"	0.0	Check 4"	843	1/2"	0	Gate .5"
822	4"	0.0	Check 4"	844	1/2"	0	SV .5"
823		0.0	Horz. centr.	845	1/2"	0	SV .5"
824		0.0	Screw	846		0	Screw
825	1/2"	0.0	Gate .5"	847	3/8"	0	Ball 3/8"
826		88.0	Hatch -12" diameter	848	3/8"	0	Ball 3/8"
827		0.0	Screw	849	1/2"	0	Gate .5"
828		0.0	1"	850	1/2"	0	Gate .5"
829		5.0	Clamp -VRL connected to truck	851		0	Screw
830		250.0	L.A. connection	852		0	Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype
853	Load Rack 1	LA	LL	Super	No	Check
854	Load Rack 1	LA	LL	Plus	No	Check
855	Load Rack 1	Conct*	LL		No	Screw
856	Load Rack 1	LA	Gas	VRU	No	Clamp
857	Load Rack 1	LA	Gas	VRU	No	Check
858	Load Rack 1	Conct*	LL		No	Screw
859	Load Rack 1	Valve	LL	Plus	No	Butterfly
860	Load Rack 1	Valve	LL	Regular	Yes	Butterfly
861	Load Rack 1	Valve	LL	Super	No	Butterfly
862	LRI Add. Rack	Conct*	LL		No	Tubing
863	LRI Add. Rack	Conct*	LL		No	Tubing
864	LRI Add. Rack	Conct*	LL		No	Tubing
865	LRI Add. Rack	Conct*	LL		No	Tubing
866	LRI Add. Rack	Conct*	LL		No	Screw
867	LRI Add. Rack	Conct*	LL		No	Tubing
868	LRI Add. Rack	Conct*	LL		No	Screw
869	LRI Add. Rack	Valve	LL		No	Ball
870	LRI Add. Rack	Valve	LL		No	Ball
871	LRI Add. Rack	Valve	LL		No	Ball
872	LRI Add. Rack	Valve	LL		No	
873	LRI Add. Rack	Conct*	LL		No	Screw
874	LRI Add. Rack	Conct*	LL		No	Tubing

Radian ID	Size	Screening Value	Comments
853	4"	31	Check 4" -load arm unconn.
854	4"	76	Check 4" -load arm unconn.
855		0	Screw
856		140	Clamp -VRL .5" locked to post
857	4"	130	Check 4" -VRL
858		20	Screw
859	4"	8	Butterfly 4"
860	4"	50	Butterfly 4"
861	4"	0	Butterfly 4"
862		0	Tubing
863		0	Tubing
864		0	Tubing
865		0	Tubing
866		0	Screw
867		0	Tubing
868		0	Screw
869	3/8"	0	Ball 3/8"
870	3/8"	0	Ball 3/8"
871	3/8"	0	Ball 3/8"
872	1/2"	0	SV .5"
873		0	Screw
874		0	Tubing

Radian ID	Location	Type	Phase	Product
875	LRI Add. Rack	Conct*	LL	
876	LRI Add. Rack	Conct*	LL	
877	LRI Add. Rack	Conct*	LL	
878	LRI Add. Rack	Conct*	LL	
879	LRI Add. Rack	OEL	LL	
880	LRI Add. Rack	Valve	LL	
881	LRI Add. Rack	Valve	LL	
882	LRI Add. Rack	Valve	LL	
883	LRI Add. Rack	Valve	LL	
884	LRI Add. Rack	Conct*	LL	
885	LRI Add. Rack	Conct*	LL	
886	LRI Add. Rack	Conct*	LL	
887	LRI Add. Rack	Conct*	LL	
888	LRI Add. Rack	Valve	LL	
889	LRI Add. Rack	Valve	LL	
890	LRI Add. Rack	Valve	LL	
891	LRI Add. Rack	Valve	LL	
892	LRI Add. Rack	Valve	LL	
893	LRI Add. Rack	Valve	LL	
894	LRI Add. Rack	Valve	LL	
895	LRI Add. Rack	Conct*	LL	
896	LRI Add. Rack	Conct*	LL	

Radian ID	Load	Subtype	Size	Screening Value	Comments
875	No	Tubing		0	Tubing
876	No	Tubing		0	Tubing
877	No	Screw		0	Screw
878	No	Tubing		0	Tubing
879	No		3/8"	0	3/8"
880	No	Ball	3/8"	0	Ball 3/8"
881	No	Ball	3/8"	0	Ball 3/8"
882	No	Ball	3/8"	0	Ball 3/8"
883	No		1/2"	0	SV .5"
884	No	Screw		0	Screw
885	No	Tubing		0	Tubing
886	No	Screw		0	Screw
887	No	Tubing		0	tubing
888	No	Ball	3/8"	0	Ball 3/8"
889	No	Ball	3/8"	0	Ball 3/8"
890	No	Ball	3/8"	0	Ball 3/8"
891	No	Ball	1/2"	0	Ball .5"
892	No	Ball	1/2"	0	Ball .5"
893	No	Ball	1/2"	0	Ball .5"
894	No	Ball	1/2"	0	Ball .5"
895	No	Screw		0	Screw
896	No	Screw		0	Screw

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Radian ID	Location	Type	Phase	Product	Load	Radian ID	Location	Type	Phase	Product	Load
897	LRI Add. Rack	Conct*	LL		No	919	LRI Add. Rack	Conct*	LL	Sup. add	No
898	LRI Add. Rack	Conct*	LL	Plus add	No	920	LRI Add. Rack	Conct*	LL	Sup. add	No
899	LRI Add. Rack	Valve	LL	Plus add	No	921	LRI Add. Rack	Conct*	LL	Sup. add	No
900	LRI Add. Rack	Valve	LL	Reg. add	No	922	LRI Add. Rack	Conct*	LL	Sup. add	No
901	LRI Add. Rack	Valve	LL	Supr. add	No	923	LRI Add. Rack	Valve	LL	Sup. add	No
902	LRI Add. Rack	Conct*	LL	Supr. add	No	924	LRI Add. Rack	Valve	LL	Sup. add	No
903	LRI Add. Rack	Conct*	LL	Supr. add	No	925	LRI Add. Rack	Valve	LL	Sup. add	No
904	LRI Add. Rack	Conct*	LL	Supr. add	No	926	LRI Add. Rack	Valve	LL	Sup. add	No
905	LRI Add. Rack	Conct*	LL	Supr. add	No	927	LRI Add. Rack	Conct*	LL	Reg. add	No
906	LRI Add. Rack	Conct*	LL	Supr. add	No	928	LRI Add. Rack	Conct*	LL	Reg. add	No
907	LRI Add. Rack	Conct*	LL	Supr. add	No	929	LRI Add. Rack	Conct*	LL	Reg. add	No
908	LRI Add. Rack	Conct*	LL	Supr. add	No	930	LRI Add. Rack	Conct*	LL	Reg. add	No
909	LRI Add. Rack	Conct*	LL	Supr. add	No	931	LRI Add. Rack	Valve	LL	Reg. add	No
910	LRI Add. Rack	Conct*	LL	Supr. add	No	932	LRI Add. Rack	Valve	LL	Reg. add	No
911	LRI Add. Rack	Conct*	LL	Plus add	No	933	LRI Add. Rack	Valve	LL	Reg. add	No
912	LRI Add. Rack	Conct*	LL	Plus add	No	934	LRI Add. Rack	Valve	LL	Reg. add	No
913	LRI Add. Rack	Conct*	LL	Plus add	No	935	Load Rack 2	LA	LL	Super	Yes
914	LRI Add. Rack	Conct*	LL	Plus add	No	936	Load Rack 2	LA	LL	Regular	Yes
915	LRI Add. Rack	Valve	LL	Plus add	No	937	Load Rack 2	LA	LL	Plus	Yes
916	LRI Add. Rack	Valve	LL	Plus add	No	938	Load Rack 2	LA	Gas	Super	Yes
917	LRI Add. Rack	Valve	LL	Plus add	No	939	Load Rack 2	Conct*	LL	Super	Yes
918	LRI Add. Rack	Valve	LL	Plus add	No	940	Load Rack 2	Conct*	LL	Super	Yes

Radian ID	Subtype	Size	Screening Value	Comments
897	Screwed		0	Screw
898	Flange		0	Flange
899	Ball	3/8"	0	Ball 3/8"
900	Ball	3/8"	0	Ball 3/8"
901	Ball	3/8"	0	Ball 3/8"
902	Screwed		0	Screw
903	Screwed		0	Screw
904	Screwed		0	Screw
905	Tubing		0	Tubing
906	Screwed		0	Screw
907	Screwed		0	Screw
908	Screwed		0	Screw
909	Tubing		0	Tubing
910	Tubing		0	Tubing
911	Screwed		0	Screw
912	Tubing		0	Tubing
913	Screwed		0	Screw
914	Screwed		0	Screw
915	Ball	3/8"	0	Ball 3/8"
916	Ball	3/8"	0	Ball 3/8"
917	Ball	3/8"	0	Ball 3/8"
918		1/2"	0	SV .5"
919	Tubing		0	Tubing
920	Screwed		0	Screw
921	Screwed		0	Screw
922	Tubing		0	Tubing
923	Ball	3/8"	0	Ball 3/8"
924	Ball	3/8"	0	Ball 3/8"
925	Ball	3/8"	0	Ball 3/8"
926		1/2"	0	SV .5"
927	Screwed		0	Screw
928	Tubing		0	Tubing
929	Screwed		0	Screw
930	Screwed		0	Screw
931	Ball	3/8"	1	Ball 3/8"
932	Ball	3/8"	0	Ball 3/8"
933	Ball	3/8"	0	Ball 3/8"
934		1/2"	0	SV .5"
935			150	Load arm
936			200	Load arm
937			15	Load arm
938			5	Hose
939	Screwed		0	Screw
940	Screwed		0	Screw

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Radian ID	Location	Type	Phase	Product	Load
941	Load Rack 2	Valve	LL	Super	Yes
942	Load Rack 2	Valve	LL	Super	Yes
943	Load Rack 2	Valve	LL	Super	Yes
944	Load Rack 2	Valve	LL	Super	Yes
945	Load Rack 2	LA	LL	Super	Yes
946	Load Rack 2	Valve	LL	Super	Yes
947	Load Rack 2	Valve	LL	Super	Yes
948	Load Rack 2	Conct*	LL	Regular	No
949	Load Rack 2	Conct*	LL	Regular	No
950	Load Rack 2	LA	LL	Regular	No
951	Load Rack 2	Valve	LL	Regular	No
952	Load Rack 2	Valve	LL	Regular	No
953	Load Rack 2	Conct*	LL	Regular	No
954	Load Rack 2	Conct*	LL	Regular	No
955	Load Rack 2	Valve	LL	Regular	No
958	Load Rack 2	Conct*	LL	Regular	No
959	Load Rack 2	Valve	LL	Regular	No
960	Load Rack 2	Valve	LL	Regular	No
961	Load Rack 2	Conct*	LL	Plus	No
962	Load Rack 2	Valve	LL	Plus	No
963	Load Rack 2	Valve	LL	Plus	No
964	Load Rack 2	Conct*	LL	Plus	No

Radian ID	Location	Type	Phase	Product	Load
965	Load Rack 2	Conct*	LL	Plus	No
966	Load Rack 2	Valve	LL	Plus	No
967	Load Rack 2	LA	LL	Super	No
968	Load Rack 2	LA	LL	Regular	No
969	Load Rack 2	LA	LL	Plus	No
970	Load Rack 2	Valve	LL	Plus	No
971	Load Rack 2	Valve	LL	Plus	No
972	Load Rack 2	LA	Gas	VRU	No
973	Load Rack 2	Valve	Gas	VRU	No
974	Load Rack 2	Conct*	LL	Reg. add	No
975	Load Rack 2	Conct*	LL	Reg. add	No
976	Load Rack 2	Conct*	LL	Reg. add	No
977	Load Rack 2	Conct*	LL	Reg. add	No
978	Load Rack 2	Conct*	LL	Reg. add	No
979	Load Rack 2	Valve	LL	Reg. add	No
980	Load Rack 2	Valve	LL	Reg. add	No
981	Load Rack 2	Valve	LL	Reg. add	No
982	Load Rack 2	Valve	LL	Reg. add	No
983	Load Rack 2	Conct*	LL	Sup. add	No
984	Load Rack 2	Conct*	LL	Sup. add	No
985	Load Rack 2	Conct*	LL	Sup. add	No
986	Load Rack 2	Conct*	LL	Sup. add	No

Radian ID	Subtype	Size	Screening Value	Comments
941	Ball	3/8"	0	Ball 3/8"
942	Gate	1/2"	130	Gate .5"
943	Gate	1/2"	5	Gate .5"
944	Ball	3/8"	0	Ball 3/8"
945	Check	4"	0	Check 4"
946	Solenoid	1/2"	0	Solenoid .5"
947	Solenoid	1/2"	0	Solenoid .5"
948	Screwed		5	Screw
949	Screwed		10	Screw
950	Check	4"	0	Check 4"
951	Solenoid	4"	0	Solenoid 4"
952	Solenoid	1/2"	0	Solenoid .5"
953	Screwed		0	Screw
954	Screwed		0	Screw
955	Gate	1/2"	11	Gate .5"
958	Screwed		0	Screw
959	Ball	3/8"	0	Ball 3/8"
960	Ball	3/8"	0	Ball 3/8"
961	Screwed		0	Screw
962	Gate	1/2"	0	Gate .5"
963	Gate	1/2"	1	Gate .5"
964	Screwed		0	Screw

Radian ID	Subtype	Size	Screening Value	Comments
965	Screwed		0.0	Screw
966	Check	4"	0.0	Check 4"
967	Check		300.0	Check -load arm
968	Check		2000.0	Check -load arm
969	Check		250.0	Check -load arm
970	Solenoid	1/2"	0.0	Solenoid .5"
971	Solenoid	1/2"	0.0	Solenoid .5"
972			0.0	half locked
973	Check	4"	0.0	Check 4"
974	Tubing		0.0	Tubing
975	Tubing		0.0	Tubing
976	Screwed		1.0	Screw
977	Screwed		5.0	Screw
978	Screwed		0.0	Screw
979	Ball	3/8"	0.0	Ball 3/8"
980	Ball	3/8"	0.0	Ball 3/8"
981	Ball	3/8"	20.0	Ball 3/8"
982	Solenoid	1/4"	0.0	Solenoid 1/4"
983	Tubing		0.0	Tubing
984	Screwed		5.0	Screw
985	Tubing		2.0	Tubing
986	Tubing		0.0	Tubing

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Radian ID	Location	Type	Phase	Product	Load	Radian ID	Location	Type	Phase	Product	Load	Subtype
987	Load Rack 2	Conct*	LL	Sup. add	No	1009	Load Rack 2	Valve	LL	Plus add	No	Ball
988	Load Rack 2	Conct*	LL	Sup. add	No	1010	LR2 Add. Rack	Conct*	LL		No	Tubing
989	Load Rack 2	Valve	LL	Sup. add	No	1011	LR2 Add. Rack	Conct*	LL		No	Screw
990	Load Rack 2	Valve	LL	Sup. add	No	1012	LR2 Add. Rack	Conct*	LL		No	Screw
991	Load Rack 2	Valve	LL	Sup. add	No	1013	LR2 Add. Rack	Conct*	LL		No	Screw
992	Load Rack 2	Valve	LL	Sup. add	No	1014	LR2 Add. Rack	Conct*	LL		No	Tubing
993	Load Rack 2	Conct*	LL	Plus add	No	1015	LR2 Add. Rack	Conct*	LL		No	Screw
994	Load Rack 2	Conct*	LL	Plus add	No	1016	LR2 Add. Rack	Conct*	LL		No	Ball
995	Load Rack 2	Conct*	LL	Plus add	No	1017	LR2 Add. Rack	Valve	LL		No	Ball
996	Load Rack 2	Conct*	LL	Plus add	No	1018	LR2 Add. Rack	Valve	LL		No	Ball
997	Load Rack 2	Valve	LL	Plus add	No	1019	LR2 Add. Rack	Valve	LL		No	Screw
998	Load Rack 2	Valve	LL	Plus add	No	1020	LR2 Add. Rack	Conct*	LL		No	Screw
999	Load Rack 2	Valve	LL	Plus add	No	1021	LR2 Add. Rack	Conct*	LL		No	Screw
1000	Load Rack 2	Valve	LL	Plus add	No	1022	LR2 Add. Rack	Conct*	LL		No	Tubing
1001	Load Rack 2	Conct*	LL	Plus add	No	1023	LR2 Add. Rack	Conct*	LL		No	Screw
1002	Load Rack 2	Conct*	LL	Plus add	No	1024	LR2 Add. Rack	Conct*	LL		No	Tubing
1003	Load Rack 2	Valve	LL	Sup. add	No	1025	LR2 Add. Rack	Conct*	LL		No	Screw
1004	Load Rack 2	Conct*	LL	Sup. add	No	1026	LR2 Add. Rack	Conct*	LL		No	Tubing
1005	Load Rack 2	Conct*	LL	Reg. add	No	1027	LR2 Add. Rack	Valve	LL		No	Solenoid
1006	Load Rack 2	Valve	LL	Reg. add	No	1028	LR2 Add. Rack	Valve	LL		No	Ball
1007	Load Rack 2	Conct*	LL	Plus add	No	1029	LR2 Add. Rack	Valve	LL		No	Ball
1008	Load Rack 2	Conct*	LL	Plus add	No	1030	LR2 Add. Rack	Valve	LL		No	Ball

Radian ID	Subtype	Size	Screening Value	Comments	Radian ID	Size	Screening Value	Comments
987	Screw		0.0	Screw	1009	3/8"	0.0	Ball 3/8"
988	Screw		5.0	Screw	1010		0.0	Tubing
989	Ball	3/8"	4.0	Ball 3/8"	1011		0.0	Screw
990	Ball	3/8"	0.0	Ball 3/8"	1012		0.0	Screw
991	Ball	3/8"	0.0	Ball 3/8"	1013		0.5	Screw
992	Solenoid	1/4"	0.0	Solenoid 1/4"	1014		0.0	Screw
993	Screw		2.0	Screw	1015		0.0	Tubing
994	Screw		0.0	Screw	1016		0.0	Screw
995	Screw		0.0	Screw	1017	3/8"	0.0	Ball 3/8"
996	Tubing		0.0	Tubing	1018	3/8"	0.0	Ball 3/8"
997	Ball	3/8"	0.0	Ball 3/8"	1019	3/8"	0.0	Ball 3/8"
998	Ball	3/8"	0.0	Ball 3/8"	1020		0.0	Screw
999	Ball	3/8"	0.0	Ball 3/8"	1021		0.0	Screw
1000	Solenoid	1/4"	0.0	Solenoid 1/4"	1022		0.0	Screw
1001	Screw		0.0	Screw	1023		0.0	Tubing
1002	Screw		0.0	Screw	1024		10.0	Screw -wet
1003	Ball	3/8"	0.0	Ball 3/8"	1025		0.0	Screw
1004	Screw		0.0	Screw	1026		0.5	Tubing
1005	Screw		0.0	Screw	1027	1/4"	1.5	Solenoid 1/4"
1006	Ball	3/8"	0.0	Ball 3/8"	1028	3/8"	0.0	Ball 3/8"
1007	Screw		0.0	Screw	1029	3/8"	0.0	Ball 3/8"
1008	Screw		0.0	Screw	1030	3/8"	0.0	Ball 3/8"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1031	LR2 Add. Rack	Conct*	LL		No	Screwed
1032	LR2 Add. Rack	Conct*	LL		No	Screwed
1033	LR2 Add. Rack	Conct*	LL		No	Screwed
1034	LR2 Add. Rack	Conct*	LL		No	Screwed
1035	LR2 Add. Rack	Conct*	LL		No	Screwed
1036	LR2 Add. Rack	Conct*	LL		No	Tubing
1037	LR2 Add. Rack	Valve	LL		No	Ball
1038	LR2 Add. Rack	Valve	LL		No	Ball
1039	LR2 Add. Rack	Valve	LL		No	Ball
1040	LR2 Add. Rack	Valve	LL		No	Solenoid
1041	Load Rack 2	Valve	LL	Super	No	Butterfly
1042	Load Rack 2	Valve	LL	Regular	No	Butterfly
1043	Load Rack 2	Valve	LL		No	Butterfly
1044	Load Rack 2	Other	LL		No	
1045	Load Rack 2	LA	Gas		No	Clamp
1046	Dock	Conct*	LL	AVGAS100	No	Flange
1047	Dock	Valve	LL	AVGAS100	No	Butterfly
1048	Dock	Valve	LL	AVGAS100	No	Globe
1049	Dock	Valve	LL	Unknown	No	Globe
1050	Dock	Valve	LL	Plus	No	Globe
1051	Dock	Conct*	LL	Plus	No	Flange
1052	Dock	Valve	LL	Plus	No	Butterfly

Radian ID	Size	Screening Value	Comments
1031		0.0	Screw
1032		0.5	Screw
1033		0.0	Screw
1034		0.0	Screw
1035		1.0	Screw
1036		0.0	Tubing
1037	3/8"	0.0	Ball 3/8"
1038	3/8"	0.0	Ball 3/8"
1039	3/8"	0.0	Ball 3/8"
1040	1/4"	0.0	Solenoid 1/4"
1041	4"	0.0	Butterfly 4"
1042	4"	0.0	Butterfly 4"
1043	4"	5.0	Butterfly 4"
1044		300.0	Hatch cover
1045		10.0	Clamp connection
1046		45.0	Flange -capped on load arm
1047	8"	0.0	Butterfly 8" -on load arm
1048	8"	0.0	Globe 8"
1049	8"	0.0	Globe 8"
1050	8"	1.0	Globe 8"
1051		300.0	Flange -capped on load arm
1052	8"	0.0	Butterfly 8" -on load arm

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1053	Dock	Conct*	LL	Super	No	Flange
1054	Dock	Valve	LL	Super	No	Butterfly
1055	Dock	Valve	LL	Super	No	Globe
1056	Dock	Conct*	LL	Regular	No	Flange
1057	Dock	Valve	LL	Regular	No	Globe
1058	Dock	Valve	LL	Regular	No	Butterfly
1059	Dock	Conct*	LL	Super	No	Flange
1060	Dock	Valve	LL	Super	No	Butterfly
1061	Dock	Conct*	LL	Super	No	Flange
1062	Dock	Valve	LL	Super	No	Butterfly
1063	Dock	Conct*	LL	Regular	No	Flange
1064	Dock	Valve	LL	Regular	No	Butterfly
1065	Dock	Valve	LL	Plus	No	Globe
1066	Dock	Valve	LL	Plus	No	Globe
1067	Dock	Valve	LL	Regular	No	Globe
1068	Dock	Valve	LL	Super	No	Globe
1069	Dock	Valve	LL	Plus	No	Check
1070	Dock	Conct*	LL	Plus	No	Flange
1071	Dock	Valve	LL	Plus	No	Butterfly
1072	Dock	Valve	LL	Plus	No	Gate
1073	Dock	OEL	LL	Regular	No	
1074	Dock	Valve	LL	Regular	No	Gate

Radian ID	Size	Screening Value	Comments
1053		0	Flange -capped on load arm
1054	8"	0	Butterfly 8" -on load arm
1055	8"	250	Globe 8"
1056		0	Flange -capped on load arm
1057	8"	480	Globe 8"
1058	8"	0	Butterfly 8" -on load arm
1059		0	Flange -capped on load arm
1060	8"	0	Butterfly 8" -on load arm
1061		0	Flange -capped on load arm
1062	8"	0	Butterfly 8"
1063		0	Flange -capped on load arm
1064	8"	0	Butterfly 8" -on load arm
1065	8"	190	Globe 8"
1066	6"	5000	Globe 6"
1067	12"	6	Globe 12"
1068	12"	0	Globe 12"
1069	6"	0	Check 6"
1070		0	Flange -not w/in lcm
1071	8"	0	Butterfly 8"
1072	1/2"	0	Gate .5"
1073		0	.5"
1074	1/2"	0	Gate .5"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1075	Dock	Valve	LL	Regular	No	Butterfly
1076	Dock	Valve	LL	Regular	No	Check
1077	Dock	Valve	LL	Regular	No	Gate
1078	Dock	Valve	LL	Super	No	Globe
1079	Tank 7691 comm	Conct*	LL		No	Screw
1080	Tank 7691 comm	Valve	LL		No	Gate
1081	Tank 7691 comm	Conct*	LL		No	Flange
1082	Tank 7691 comm	OEL	LL		No	Gate
1083	Tank 7691 comm	Valve	LL		No	Gate
1084	Tank 7691 comm	LA	LL		No	Butterfly
1085	Tank 7691 comm	LA	LL		No	Control
1086	Tank 7691 comm	Conct*	LL		No	Flange
1087	Tank 7691 comm	Valve	LL		No	Globe
1088	Tank 7691 comm	Valve	LL		No	Globe
1089	Tank 7691 comm	Valve	LL		No	Globe
1090	Tank 7691 comm	Conct*	LL		No	Screw
1092	Tank 7691 comm	Pump	LL		No	
1093	Tank 7691 comm	Other	LL		No	
1094	Load Rack 3	Conct*	LL	Super	No	Screw
1095	Load Rack 3	Conct*	LL	Super	No	Screw
1096	Load Rack 3	Valve	LL	Super	No	
1097	Load Rack 3	Valve	LL	Super	No	

Radian ID	Size	Screening Value	Comments
1075	8"	0	Butterfly 8"
1076	8"	95	Check 8"
1077	1/2"	0	Gate .5"
1078	12"	0	Globe 12"
1079		0	Screw -clamp
1080	3"	0	Gate 3"
1081		0	Flange -not w/in lcm
1082		0	1"
1083	1"	0	Gate 1"
1084	4"	32	Butterfly 4"
1085	4"	180	4" Contr. Globe
1086		0	Flange -not w/in lcm
1087	4"	1	Globe 4"
1088	4"	4	Globe 4"
1089	4"	700	Globe 4"
1090		0	Screw
1092		0	Centr.
1093		0	Hatch cover
1094		0	Screw
1095		0	Screw
1096	1/4"	0	SV 1/4"
1097	1/4"	0	SV 1/4"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1098	Load Rack 3	Valve	LL	Add.	No	Gate
1099	Load Rack 3	Valve	LL	Add.	No	Gate
1100	Load Rack 3	Valve	LL	Add.	No	Gate
1101	Load Rack 3	Conct*	LL	Add.	No	Screw
1102	Load Rack 3	Conct*	LL	Add.	No	Screw
1103	Load Rack 3	Conct*	LL	Add.	No	Screw
1104	Load Rack 3	Valve	LL	Add.	No	Ball
1105	Load Rack 3	Valve	LL	Add.	No	Gate
1106	Load Rack 3	Valve	LL	Add.	No	Gate
1107	Load Rack 3	Valve	LL	Add.	No	Gate
1108	Load Rack 3	Valve	LL	Regular	No	Gate
1109	Load Rack 3	Conct*	LL	Regular	No	Screw
1110	Load Rack 3	Conct*	LL	Regular	No	Tubing
1111	Load Rack 3	Conct*	LL	Regular	No	Flange
1112	Load Rack 3	Valve	LL	Regular	No	Solenoid
1113	Load Rack 3	Valve	LL	Regular	No	Solenoid
1114	Load Rack 3	LA	LL	Super	No	Check
1115	Load Rack 3	LA	LL	Regular	No	Check
1116	Load Rack 3	LA	LL	Plus	No	Check
1117	Load Rack 3	Conct*	Gas	VRU	No	Hose
1118	Load Rack 3	Valve	Gas	VRU	No	Check
1119	Load Rack 3	Conct*	LL	Sup. add	No	Screw

Radian ID	Size	Screening Value	Comments
1098	1/2"	0	Gate .5"
1099	1/2"	0	Gate .5"
1100	1/2"	0	Gate .5"
1101		0	Screw
1102		0	Screw
1103		0	Screw
1104	3/8"	0	Ball 3/8"
1105	3/8"	0	Ball 3/8"
1106	1/2"	0	Gate .5"
1107	1/2"	0	Gate .5"
1108	1/2"	6	Gate .5"
1109		2	Screw
1110		0	Tubing
1111		0	Flange -not w/in lcm
1112	1/4"	0	Solenoid 1/4"
1113	1/4"	23	Solenoid 1/4"
1114	4"	20	Check 4" -load arm
1115	4"	990	Check 4" -load arm
1116	4"	990	Check 4" -load arm
1117	4"	90	Hose-attached to post-half locked
1118	4"	0	Check 4"
1119		10	Screw

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Radian ID	Location	Type	Phase	Product	Load
1120	Load Rack 3	Conct*	LL	Sup. add	No
1121	Load Rack 3	Conct*	LL	Sup. add	No
1122	Load Rack 3	Conct*	LL	Sup. add	No
1123	Load Rack 3	Conct*	LL	Sup. add	No
1124	Load Rack 3	Conct*	LL	Sup. add	No
1125	Load Rack 3	Conct*	LL	Sup. add	No
1126	Load Rack 3	Valve	LL	Sup. add	No
1127	Load Rack 3	Valve	LL	Sup. add	No
1128	Load Rack 3	Valve	LL	Sup. add	No
1129	Load Rack 3	Valve	LL	Sup. add	No
1130	Load Rack 3	Conct*	LL	Reg. add	No
1131	Load Rack 3	Conct*	LL	Reg. add	No
1132	Load Rack 3	Conct*	LL	Reg. add	No
1133	Load Rack 3	Conct*	LL	Reg. add	No
1134	Load Rack 3	Conct*	LL	Reg. add	No
1135	Load Rack 3	Conct*	LL	Reg. add	No
1136	Load Rack 3	Conct*	LL	Reg. add	No
1137	Load Rack 3	Valve	LL	Reg. add	No
1138	Load Rack 3	Valve	LL	Reg. add	No
1139	Load Rack 3	Valve	LL	Reg. add	No
1140	Load Rack 3	Valve	LL	Reg. add	No
1141	Load Rack 3	Conct*	LL	Plus add	No

Radian ID	Subtype	Size	Screening Value	Comments
1142	Screw		0.0	Screw
1143	Screw		0.0	Tubing
1144	Screw		0.0	Screw
1145	Screw		32.0	Tubing
1146	Screw		0.0	Screw
1147	Solenoid	1/4"	0.0	Solenoid 1/4"
1148	Ball	3/8"	0.0	Ball 3/8"
1149	Ball	3/8"	0.0	Ball 3/8"
1150	Ball	3/8"	0.0	Ball 3/8"
1151	Screw		0.0	Screw
1152	Screw	3/8"	0.0	Screw
1153	Ball	3/8"	1.0	Ball 3/8"
1154	Ball		0.0	Ball 3/8"
1155	Screw		0.0	Screw
1156	Screw	3/8"	0.5	Screw
1157	Ball	3/8"	0.5	Ball 3/8"
1158	Ball		0.0	Ball 3/8"
1159	Screw		0.0	Screw
1160	Screw		0.0	Screw
1161	Ball	3/8"	0.0	Ball 3/8"
1162	Ball	3/8"	0.0	Ball 3/8"
1163	Butterfly	3"	0.0	Butterfly 3"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1164	Load Rack 3	Valve	LL	Super	No	Butterfly
1165	LR3 Add. Rack	Conct*	LL		No	Screw
1166	LR3 Add. Rack	Conct*	LL		No	Screw
1167	LR3 Add. Rack	Conct*	LL		No	Screw
1168	LR3 Add. Rack	Conct*	LL		No	Screw
1169	LR3 Add. Rack	Conct*	LL		No	Screw
1170	LR3 Add. Rack	Conct*	LL		No	Screw
1171	LR3 Add. Rack	Conct*	LL		No	Screw
1172	LR3 Add. Rack	Conct*	LL		No	Screw
1173	LR3 Add. Rack	Valve	LL		No	Solenoid
1174	LR3 Add. Rack	Valve	LL		No	Ball
1175	LR3 Add. Rack	Valve	LL		No	Ball
1176	LR3 Add. Rack	Valve	LL		No	Ball
1177	LR3 Add. Rack	Conct*	LL		No	Screw
1178	LR3 Add. Rack	Conct*	LL		No	Screw
1179	LR3 Add. Rack	Conct*	LL		No	Screw
1180	LR3 Add. Rack	Conct*	LL		No	Tubing
1181	LR3 Add. Rack	Conct*	LL		No	Screw
1182	LR3 Add. Rack	Conct*	LL		No	Solenoid
1183	LR3 Add. Rack	Valve	LL		No	Ball
1184	LR3 Add. Rack	Valve	LL		No	Ball
1185	LR3 Add. Rack	Valve	LL		No	Ball

Radian ID	Size	Screening Value	Comments
1164	3"	97.0	Butterfly 3"
1165		1.0	Screw
1166		0.0	Screw
1167		0.0	Screw
1168		0.0	Screw
1169		0.0	Screw
1170		0.0	Screw
1171		1.0	Screw
1172		0.5	Screw
1173	1/4"	0.0	Solenoid 1/4"
1174	3/8"	0.0	Ball 3/8"
1175	3/8"	0.0	Ball 3/8"
1176	3/8"	0.0	Ball 3/8"
1177		0.0	Screw
1178		0.0	Screw
1179		0.5	Screw
1180		0.5	Screw
1181		0.0	Tubing
1182		0.0	Screw
1183	1/4"	0.0	Solenoid 1/4"
1184	3/8"	0.0	Ball 3/8"
1185	3/8"	0.0	Ball 3/8"

Radian ID	Location	Type	Phase	Product	Load	Subtype
1186	LR3 Add. Rack	Valve	LL		No	Ball
1187	LR3 Add. Rack	Conct*	LL		No	Screw
1188	LR3 Add. Rack	Conct*	LL		No	Screw
1189	LR3 Add. Rack	Conct*	LL		No	Tubing
1190	LR3 Add. Rack	Conct*	LL		No	Tubing
1191	LR3 Add. Rack	Conct*	LL		No	Screw
1192	LR3 Add. Rack	Conct*	LL		No	Screw
1193	LR3 Add. Rack	Valve	LL		No	Solenoid
1194	LR3 Add. Rack	Valve	LL		No	Ball
1195	LR3 Add. Rack	Valve	LL		No	Ball
1196	LR3 Add. Rack	Valve	LL		No	Ball
1197	LR3 Add. Rack	Valve	LL		No	Ball
1198	Load Rack 4	Valve	LL	Super	No	Control
1199	Load Rack 4	Conct*	LL	Super	No	Screw
1200	LR4 Add. Rack	Valve	LL		No	Gate
1201	LR4 Add. Rack	Valve	LL		No	Gate
1202	LR4 Add. Rack	Valve	LL		No	Gate
1203	LR4 Add. Rack	Valve	LL		No	Gate
1204	LR4 Add. Rack	Valve	LL		No	Ball
1205	LR4 Add. Rack	Conct*	LL		No	Screw
1206	LR4 Add. Rack	Conct*	LL		No	Tubing
1207	Load Rack 4	Valve	LL	Super	No	Solenoid

Radian ID	Size	Screening Value	Comments
1186	3/8"	0.0	Ball 3/8"
1187		0.0	Screw
1188		0.0	Screw
1189		0.5	Tubing
1190		0.0	Tubing
1191		0.0	Screw
1192		0.0	Screw
1193	1/4"	0.0	Solenoid 1/4"
1194	3/8"	0.0	Ball 3/8"
1195	3/8"	0.0	Ball 3/8"
1196	3/8"	0.0	Ball 3/8"
1197	3/8"	0.0	Ball 3/8"
1198	4"	0.0	Contr. 4"
1199		0.0	Screw
1200		0.0	Screw
1201	1/2"	0.0	Gate .5"
1202	1/2"	12.0	Gate .5"
1203	1/2"	0.0	Gate .5"
1204	3/8"	0.0	Ball 3/8"
1205		0.0	Screw
1206		0.0	Tubing
1207	1/4"	0.0	Solenoid 1/4"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1208	Load Rack 4	Valve	LL	Super	No	Solenoid
1209	Load Rack 4	Valve	LL	Super	No	Check
1210	Load Rack 4	Valve	LL	Regular	No	Control
1211	Load Rack 4	Valve	LL	Regular	No	Solenoid
1212	Load Rack 4	Valve	LL	Regular	No	Solenoid
1213	Load Rack 4	Conct*	LL	Regular	No	Screw
1214	Load Rack 4	Conct*	LL	Regular	No	Tubing
1215	Load Rack 4	Valve	LL	Add.	No	Gate
1216	Load Rack 4	Valve	LL	Add.	No	Gate
1217	Load Rack 4	Valve	LL	Add.	No	Gate
1218	Load Rack 4	Valve	LL	Add.	No	Ball
1219	Load Rack 4	Valve	LL	Add.	No	Ball
1220	Load Rack 4	Valve	LL	Add.	No	Gate
1221	Load Rack 4	Valve	LL	Add.	No	Gate
1222	Load Rack 4	Valve	LL	Add.	No	Gate
1223	Load Rack 4	Conct*	LL	Add.	No	Screw
1224	Load Rack 4	Conct*	LL	Add.	No	Screw
1225	Load Rack 4	Conct*	LL	Add.	No	Screw
1226	Load Rack 4	Conct*	LL	Add.	No	Screw
1227	Load Rack 4	LA	LL	Regular	No	Check
1228	Load Rack 4	Conct*	LL	Plus	No	Flange
1229	Load Rack 4	Valve	LL	Plus	No	Control

Radian ID	Size	Screening Value	Comments
1208	1/4"	0.0	Solenoid 1/4"
1209	4"	9.5	Check 4" -load arm
1210	4"	1.0	Contr. 4"
1211	1/4"	0.0	Solenoid 1/4"
1212	1/4"	0.0	Solenoid 1/4"
1213		0.0	Screw
1214		0.0	Tubing
1215	1/2"	4.0	Gate .5"
1216	1/2"	0.0	Gate .5"
1217	1/2"	0.0	Gate .5"
1218	1/2"	0.0	Ball .5"
1219	1/2"	0.0	Ball .5"
1220	1/2"	0.0	Gate .5"
1221	1/2"	0.0	Gate .5"
1222	1/2"	0.0	Gate .5"
1223		0.0	Screw
1224		0.0	Screw
1225		0.0	Screw
1226		0.5	Screw
1227	4"	4.0	Check 4" -load arm connection
1228		0.0	Flange
1229	4"	0.0	Contr. 4"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1230	Load Rack 4	Conct*	LL	Plus	No	Screw
1231	Load Rack 4	Conct*	LL	Plus	No	Tubing
1232	Load Rack 4	Valve	LL	Plus	No	Solenoid
1233	Load Rack 4	Valve	LL	Plus	No	Solenoid
1234	Load Rack 4	LA	LL	Plus	No	Check
1235	Load Rack 4	LA	Gas	VRU	No	Hose
1236	Load Rack 4	Valve	Gas	VRU	No	Check
1237	Load Rack 4	Conct*	LL	Reg. add	No	Screw
1238	Load Rack 4	Conct*	LL	Reg. add	No	Tubing
1239	Load Rack 4	Conct*	LL	Reg. add	No	Screw
1240	Load Rack 4	Conct*	LL	Reg. add	No	Screw
1241	Load Rack 4	Conct*	LL	Reg. add	No	Tubing
1242	Load Rack 4	Conct*	LL	Reg. add	No	Screw
1243	Load Rack 4	Conct*	LL	Reg. add	No	Screw
1244	Load Rack 4	Valve	LL	Reg. add	No	Solenoid
1245	Load Rack 4	Valve	LL	Reg. add	No	Ball
1246	Load Rack 4	Valve	LL	Reg. add	No	Ball
1247	Load Rack 4	Valve	LL	Reg. add	No	Ball
1248	Load Rack 4	Conct*	LL	Plus add	No	Screw
1249	Load Rack 4	Conct*	LL	Plus add	No	Screw
1250	Load Rack 4	Conct*	LL	Plus add	No	Tubing
1251	Load Rack 4	Conct*	LL	Plus add	No	Tubing

Radian ID	Size	Screening Value	Comments
1230		0.0	Screw
1231		0.0	Tubing
1232	1/4"	0.0	Solenoid 1/4"
1233	1/4"	0.0	Solenoid 1/4"
1234	4"	9.5	Check 4" -load arm connection
1235	4"	22.0	Hose connection 4"
1236		0.0	Check 4"
1237		0.0	Screw
1238		0.0	Tubing
1239		0.5	Screw
1240		0.0	Screw
1241		0.0	Tubing
1242		0.0	Screw
1243		0.0	Screw
1244	1/4"	1.5	Solenoid 1/4"
1245	3/8"	0.0	Ball 3/8"
1246	3/8"	0.0	Ball 3/8"
1247	3/8"	0.0	Ball 3/8"
1248		0.0	Screw
1249		0.0	Screw
1250		0.0	Tubing
1251		0.0	Tubing

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Radian ID	Location	Type	Phase	Product	Load
1252	Load Rack 4	Conct*	LL	Plus add	No
1253	Load Rack 4	Conct*	LL	Plus add	No
1254	Load Rack 4	Conct*	LL	Plus add	No
1255	Load Rack 4	Valve	LL	Plus add	No
1256	Load Rack 4	Valve	LL	Plus add	No
1257	Load Rack 4	Valve	LL	Plus add	No
1258	Load Rack 4	Valve	LL	Plus add	No
1259	Load Rack 4	Conct*	LL	Plus add	No
1260	Load Rack 4	Conct*	LL	Sup. add	No
1261	Load Rack 4	Conct*	LL	Sup. add	No
1262	Load Rack 4	Conct*	LL	Sup. add	No
1263	Load Rack 4	Conct*	LL	Sup. add	No
1264	Load Rack 4	Conct*	LL	Sup. add	No
1265	Load Rack 4	Conct*	LL	Sup. add	No
1266	Load Rack 4	Valve	LL	Sup. add	No
1267	Load Rack 4	Valve	LL	Sup. add	No
1268	Load Rack 4	Valve	LL	Sup. add	No
1269	Load Rack 4	Valve	LL	Sup. add	No
1270	Load Rack 4	Conct*	LL	Reg. add	No
1271	Load Rack 4	Conct*	LL	Reg. add	No
1272	Load Rack 4	Conct*	LL	Plus add	No
1273	Load Rack 4	Conct*	LL	Plus add	No

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Radian ID	Location	Type	Phase	Product	Load
1274	Load Rack 4	Valve	LL	Plus add	No
1275	Load Rack 4	Valve	LL	Reg. add	No
1276	Load Rack 4	Conct*	LL	Sup. add	No
1277	Load Rack 4	Valve	LL	Sup. add	No
1278	LR4 Add. Rack	Conct*	LL	Sup. add	No
1279	LR4 Add. Rack	Conct*	LL	Sup. add	No
1280	LR4 Add. Rack	Conct*	LL	Sup. add	No
1281	LR4 Add. Rack	Conct*	LL	Sup. add	No
1282	LR4 Add. Rack	Conct*	LL	Sup. add	No
1283	LR4 Add. Rack	Conct*	LL	Sup. add	No
1284	LR4 Add. Rack	Conct*	LL	Sup. add	No
1285	LR4 Add. Rack	Conct*	LL	Sup. add	No
1286	LR4 Add. Rack	LA	LL	Sup. add	No
1287	LR4 Add. Rack	Valve	LL	Sup. add	No
1288	LR4 Add. Rack	Valve	LL	Sup. add	No
1289	LR4 Add. Rack	Valve	LL	Sup. add	No
1290	LR4 Add. Rack	Conct*	LL	Sup. add	No
1291	LR4 Add. Rack	Conct*	LL	Sup. add	No
1292	LR4 Add. Rack	Conct*	LL	Reg. add	No
1293	LR4 Add. Rack	Conct*	LL	Reg. add	No
1294	LR4 Add. Rack	Conct*	LL	Plus add	No
1295	LR4 Add. Rack	Conct*	LL	Plus add	No

Radian ID	Subtype	Size	Screening Value	Comments
1252	Screwed		0.0	Screw
1253	Screwed		0.0	Screw
1254	Screwed		0.0	Screw
1255	Solenoid	1/4"	0.0	Solenoid 1/4"
1256	Ball	3/8"	1.0	Ball 3/8"
1257	Ball	3/8"	0.5	Ball 3/8"
1258	Ball	3/8"	0.0	Ball 3/8"
1259	Tubing		0.0	Tubing
1260	Screwed		1.0	Screw
1261	Tubing		0.0	Tubing
1262	Screwed		0.0	Screw
1263	Tubing		0.5	Tubing
1264	Tubing		0.0	Tubing
1265	Screwed		1.0	Screw
1266	Solenoid	1/4"	1.5	Solenoid 1/4"
1267	Ball	3/8"	0.0	Ball 3/8"
1268	Ball	3/8"	0.0	Ball 3/8"
1269	Ball	3/8"	0.0	Ball 3/8"
1270	Screwed		0.0	Screw
1271	Screwed		2.0	Screw
1272	Screwed		0.0	Screw
1273	Screwed		0.0	Screw

Radian ID	Subtype	Size	Screening Value	Comments
1274	Ball	3/8"	0.0	Ball 3/8"
1275	Ball	3/8"	0.0	Ball 3/8"
1276	Screwed		0.0	Screw
1277	Ball	3/8"	0.0	Ball 3/8"
1278	Tubing		0.0	Tubing
1279	Tubing		0.0	Tubing
1280	Screwed		1.5	Screw
1281	Screwed		0.0	Screw
1282	Screwed		0.0	Screw
1283	Tubing		0.0	Tubing
1284	Screwed		0.0	Screw
1285	Screwed		0.0	Screw
1286	Solenoid	1/4"	0.0	Solenoid 1/4"
1287	Ball	3/8"	0.5	Ball 3/8"
1288	Ball	3/8"	0.0	Ball 3/8"
1289	Ball	3/8"	2.0	Ball 3/8"
1290	Screwed		1.5	Screw
1291	Screwed		0.0	Screw
1292	Screwed		0.0	Screw
1293	Screwed		0.0	Screw
1294	Screwed		1.0	Screw
1295	Screwed		0.0	Screw

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Radian ID	Location	Type	Phase	Product	Load	Subtype
1296	LR4 Add. Rack	Conct*	LL		No	Screw	1318	Pump Area	Conct*	LL	Super	Yes	Screw
1297	LR4 Add. Rack	Valve	LL		No	Solenoid	1319	Pump Area	Conct*	LL	Super	Yes	Screw
1298	LR4 Add. Rack	Valve	LL		No	Ball	1320	Pump Area	Valve	LL	Super	Yes	Globe
1299	LR4 Add. Rack	Valve	LL		No	Ball	1321	Pump Area	Valve	LL	Super	Yes	Globe
1300	LR4 Add. Rack	Valve	LL		No	Ball	1322	Pump Area	Valve	LL	Super	Yes	Check
1301	LR4 Add. Rack	Conct*	LL		No	Tubing	1323	Pump Area	Conct*	LL	Super	Yes	Screw
1302	LR4 Add. Rack	Conct*	LL		No	Screw	1324	Pump Area	Valve	LL	Super	Yes	Globe
1303	LR4 Add. Rack	Conct*	LL		No	Screw	1325	Pump Area	Valve	LL	Super	Yes	Globe
1304	LR4 Add. Rack	Conct*	LL		No	Tubing	1326	Pump Area	Valve	LL	Super	Yes	Globe
1305	LR4 Add. Rack	Conct*	LL		No	Tubing	1327	Pump Area	Valve	LL	Super	Yes	Globe
1306	LR4 Add. Rack	Conct*	LL		No	Screw	1328	Pump Area	Valve	LL	Regular	Yes	Globe
1307	LR4 Add. Rack	Conct*	LL		No	Solenoid	1329	Pump Area	Conct*	LL	Regular	Yes	Screw
1308	LR4 Add. Rack	Valve	LL		No	Ball	1330	Pump Area	Conct*	LL	Regular	Yes	Flange
1309	LR4 Add. Rack	Valve	LL		No	Ball	1331	Pump Area	Valve	LL	Regular	Yes	Globe
1310	LR4 Add. Rack	Valve	LL		No	Ball	1332	Pump Area	Valve	LL	Regular	Yes	Ball
1311		Valve	LL		No	Ball	1333	Pump Area	Valve	LL	Regular	Yes	Globe
1312	Pump Area	Valve	LL	Supreme	No	Globe	1334	Pump Area	Valve	LL	Regular	Yes	Globe
1313	Pump Area	Valve	LL	Regular	No	Globe	1335	Pump Area	Valve	LL	Regular	Yes	Ball
1314	Pump Area	LA	LL	Plus	No	Globe	1336	Pump Area	Conct*	LL	Regular	Yes	Screw
1315	Pump Area	Conct*	LL	AVGAS100	No	Screw	1337	Pump Area	Valve	LL	Plus	Yes	Globe
1316	Pump Area	Valve	LL	AVGAS100	No	Globe	1338	Pump Area	Valve	LL	Plus	Yes	Check
1317	Pump Area	LA	LL	Super	Yes	Globe	1339	Pump Area	Valve	LL	Plus	Yes	Globe

Radian ID	Size	Screening Value	Comments	Radian ID	Size	Screening Value	Comments
1296		0	Screw	1318		0.0	Screw
1297	1/4"	4	Solenoid 1/4"	1319		0.0	Screw
1298	3/8"	0	Ball 3/8"	1320	1"	0.0	Gate 1"
1299	3/8"	0	Ball 3/8"	1321	6"	240.0	Globe 6"
1300	3/8"	6	Ball 3/8"	1322	8"	0.0	Check 8"
1301		0	Tubing	1323		0.0	Screw
1302		0	Screw	1324	1/2"	400.0	Gate .5"
1303		0	Screw -wet	1325	8"	2.0	Globe 8"
1304		2	Tubing	1326	1"	0.0	Gate 1"
1305		1	Tubing	1327	2"	33.0	Gate 2"
1306		5	Screw	1328	8"	0.0	Globe 8"
1307	1/4"	0	Solenoid 1/4"	1329		0.0	Screw
1308	3/8"	0	Ball 3/8"	1330		0.0	Flange -not w/in 1cm
1309	3/8"	0	Ball 3/8"	1331	2"	83.0	Gate 2"
1310	3/8"	0	Ball 3/8"	1332	1/2"	0.0	Ball .5"
1311	3/8"	0	Ball 3/8"	1333	1/2"	8.0	Gate .5"
1312	1"	0	Gate 1"	1334	10"	300.0	Globe 10"
1313	1"	16	Gate 1"	1335	3/4"	0.0	Ball 3/4"
1314	1"	4	Gate 1"	1336		1200.0	Screw
1315		48	Screw	1337	10"	200.0	Globe 10"
1316	1"	200	Gate 1"	1338	10"	0.0	Check 10"
1317	8"	500	Globe 8"	1339	8"	16.0	Globe 8"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1340	Pump Area	Valve	LL	Plus	Yes	Globe
1341	Pump Area	Valve	LL	Plus	Yes	Check
1342	Pump Area	OEL	LL	Plus	Yes	
1343	Pump Area	Valve	LL	Plus	Yes	Gate
1344	Pump Area	Valve	LL	Plus	Yes	Ball
1345	Pump Area	Conct*	LL	Plus	Yes	Screw
1346	Pump Area	Valve	LL	Plus	Yes	Globe
1347	Pump Area	Valve	LL	Plus	Yes	Gate
1348	Pump Area	Conct*	LL	Plus	Yes	Screw
1349	Pump Area	Valve	LL	Plus	Yes	Ball
1350	Pump Area	Valve	LL	Plus	Yes	Gate
1351	Pump Area	Valve	LL	AVGAS100	Yes	Globe
1352	Pump Area	Valve	LL	AVGAS100	Yes	Check
1353	Pump Area	Conct*	LL	AVGAS100	Yes	Screw
1354	Pump Area	Valve	LL	AVGAS100	Yes	Gate
1355	Pump Area	Valve	LL	AVGAS100	Yes	Ball
1356	Pump Area	Valve	LL	AVGAS100	Yes	Gate
1357	Pump Area	Valve	LL	AVGAS100	Yes	Globe
1358	Pump Area	Valve	LL	AVGAS100	Yes	Gate
1359	Pump Area	Valve	LL	AVGAS100	Yes	Ball

Radian ID	Size	Screening Value	Comments
1340	8"	400.0	Globe 8"
1341	8"	0.0	Check 8"
1342		16.0	
1343	1 1/2"	0.0	Gate .5"
1344	3/4"	0.0	Ball 3/4"
1345		0.0	Screw
1346	8"	2000.0	Globe 8"
1347	1 1/2"	10.0	Gate .5"
1348		0.0	Screw
1349	1 1/2"	0.0	Ball .5"
1350	2"	35.0	Gate 2"
1351	8"	1400.0	Globe 8"
1352	6"	0.0	Check 6"
1353		150.0	Screw
1354	3/8"	3.0	Gate 3/8"
1355	1-1 1/2"	3.5	Ball 1.5"
1356	3/8"	3.0	Gate 3/8"
1357	8"	240.0	Globe 8"
1358	1 1/2"	0.0	Gate .5"
1359	1 1/2"	1.5	Ball .5"

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size
1362	Load Rack 5	Conct*	HL	F.O. #2	No	Screw	3/8"
1363	Load Rack 5	Valve	HL	F.O. #2	No	Ball	
1364	Load Rack 5	Conct*	HL	F.O. #2	No	Flange	4"
1365	Load Rack 5	LA	HL	F.O. #2	No	Check	4"
1366	Load Rack 5	Valve	HL	F.O. #2	No	Control	4"
1367	Load Rack 5	LA	HL	F.O. #2	No	Check	3/8"
1368	Load Rack 5	Valve	HL	F.O. #2	No		3/8"
1369	Load Rack 5	Valve	HL	F.O. #2	No	Flange	
1370	Load Rack 5	Conct*	HL	F.O. #2	No	Ball	1/2"
1371	Load Rack 5	Valve	HL	F.O. #2	No		
1372	Load Rack 5	Conct*	Gas	VRU	Yes	Flange	4"
1373	Load Rack 5	LA	Gas	VRU	Yes	Check	4"
1374	Load Rack 5	Valve	HL	Diesel	Yes	Check	4"
1375	Load Rack 5	Valve	HL	F.O. #2	No	Butterfly	4"
1376	Load Rack 5	Valve	HL	F.O. #2	No	Check	4"
1377	Load Rack 5	Conct*	HL	F.O. #2	No	Flange	3/8"
1378	Load Rack 5	Valve	HL	F.O. #2	No	Ball	3/4"
1379	Load Rack 5	Valve	HL	F.O. #2	No	Gate	3/8"
1380	Load Rack 6	Valve	HL	F.O. #2	No		3/8"
1381	Load Rack 6	Valve	HL	F.O. #2	No		3/8"
1382	Load Rack 6	Valve	HL	F.O. #2	No	Ball	3/8"
1383	Load Rack 6	Valve	HL	F.O. #2	No	Ball	3/8"

Radian ID	Screening Value	Comments
1362	0.0	Screw
1363	0.0	Ball 3/8"
1364	0.0	Flange -load arm
1365	17.0	Check 4" -load arm
1366	0.0	Contr. 4"
1367	21.0	Check 4" -load arm
1368	0.0	SV 3/8"
1369	0.0	SV 3/8"
1370	0.0	Flange -partially inaccessible
1371	0.0	Ball .5"
1372	2500.0	Flange -VRL connect to truck
1373	0.0	Check 4" -VRL
1374	0.0	Check 4" -load arm
1375	0.0	Butterfly 4"
1376	0.0	Check 4"
1377	0.0	Flange -not w/in lcm
1378	0.0	Ball 3/8"
1379	0.0	Gate 3/4"
1380	0.0	SV 3/8"
1381	0.0	SV 3/8"
1382	0.0	Ball 3/8"
1383	0.5	Ball 3/8"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1405	Load Rack 6	Conct*	HL		No	Tubing
1407	Load Rack 6	Conct*	HL		No	Screwed
1408	Load Rack 6	Valve	HL		No	Ball
1409	Load Rack 6	Conct*	HL		No	Screwed
1410	Load Rack 8	LA	HL		Yes	Clamp
1411	Load Rack 8	DEL	-HL		No	
1412	Load Rack 8	Valve	HL	F.O. #2	No	Control
1413	Load Rack 8	Valve	HL	F.O. #2	No	Butterfly
1414	Load Rack 8	Valve	HL	F.O. #2	No	Gate
1415	Load Rack 8	Conct*	HL	F.O. #2	No	Flange
1416	Load Rack 8	Valve	HL	F.O. #2	No	Diaphragm
1417	Load Rack 8	Valve	HL	F.O. #2	No	Needle
1418	Load Rack 8	Conct*	HL	F.O. #2	No	Union
1419	Load Rack 8	Valve	HL	F.O. #2	No	Ball
1420	Load Rack 8	Valve	HL	F.O. #2	No	Screwed
1421	Load Rack 8	Conct*	HL	F.O. #2	No	Ball
1422	Load Rack 8	Valve	HL	F.O. #2	No	
1423	Load Rack 8	Valve	HL	F.O. #2	No	
1424	Load Rack 8	Valve	HL	F.O. #2	No	Butterfly
1425	Load Rack 8	Valve	HL	F.O. #2	No	Butterfly
1426	Load Rack 8	Conct*	HL	F.O. #2	No	Flange
1427	Load Rack 8	Other	HL	F.O. #2	No	

Radian ID
Screening Value
Comments

1406	0.0	Tubing
1407	0.0	Screw -oily
1408	0.0	Ball .5"
1409	0.0	Screw
1410	2700.0	Clamp -ovhd load arm
1411	100.0	Load arm after load
1412	0.0	Contr. 4"
1413	0.0	Butterfly 4"
1414	0.0	Gate 3/4"
1415	0.0	Flange
1416	0.0	Diaphragm 3/8"
1417	0.0	Needle 3/8"
1418	0.0	Union
1419	0.0	Ball .5"
1420	0.0	SV 3/8"
1421	2.0	Screw -wet
1422	0.0	Ball 3/8"
1423	0.0	SV 3/8"
1424	0.0	Butterfly 4"
1425	0.0	Butterfly 4"
1426	0.0	Flange -load arm
1427	0.0	Open truck hatch -empty

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size
1384	Load Rack 6	Conct*	HL	F.O. #2	No	Tubing	
1385	Load Rack 6	Conct*	HL	F.O. #2	No	Screwed	
1386	Load Rack 6	Valve	HL	F.O. #2	No	Control	4"
1387	Load Rack 6	LA	HL	F.O. #2	No	Check	4"
1388	Load Rack 6	Conct*	HL	F.O. #2	No	Flange	
1389	Load Rack 6	Valve	HL	F.O. #2	No		3/8"
1390	Load Rack 6	Valve	HL	F.O. #2	No		3/8"
1391	Load Rack 6	Valve	HL	F.O. #2	No	Ball	3/8"
1392	Load Rack 6	Valve	HL	F.O. #2	No	Flange	3/8"
1393	Load Rack 6	Conct*	HL	F.O. #2	No	Check	4"
1394	Load Rack 6	Valve	HL	F.O. #2	No		
1395	Load Rack 6	LA	Gas	VRU	No	Check	4"
1396	Load Rack 6	Valve	Gas	VRU	No	Flange	
1397	Load Rack 6	Conct*	Gas	VRU	No	Butterfly	4"
1398	Load Rack 6	Valve	HL	F.O. #2	No	Butterfly	4"
1399	Load Rack 6	Valve	HL	F.O. #2	No	Ball	1/2"
1400	Load Rack 6	Valve	HL	F.O. #2	No		
1401	Load Rack 6	Conct*	HL	F.O. #2	No	Flange	3/8"
1402	Load Rack 6	Valve	HL		No	Diaphragm	3/8"
1403	Load Rack 6	Valve	HL		No	Needle	3/8"
1404	Load Rack 6	Valve	HL		No		3/8"
1405	Load Rack 6	Valve	HL		No		3/8"

Radian ID
Screening Value
Comments

1384	0.0	Tubing
1385	0.0	Screw
1386	0.0	Contr. 4"
1387	14.0	Check 4" -load arm not connected -wet
1388	0.0	Flange
1389	0.0	SV 3/8"
1390	0.0	SV 3/8"
1391	0.0	Ball 3/8"
1392	0.0	Ball 3/8"
1393	7.5	Flange -load arm wet
1394	9.5	Check 4" -load arm not connected -wet
1395	11000.0	VRU on post half locked
1396	0.0	Check 4"
1397	0.0	Flange -not w/in lcm
1398	1.0	Butterfly 4"
1399	0.0	Butterfly 4"
1400	0.0	Ball .5"
1401	1.0	Flange -not w/in lcm
1402	0.0	Diaphragm 3/8"
1403	0.0	Needle 3/8"
1404	0.0	SV 3/8"
1405	0.0	SV 3/8"

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Radian ID	Location	Type	Phase	Product	Load	Subtype
1428	Load Rack 9	OEL	HL	F.O. #2	No		1450	Pipeline 8	Valve	HL	F.O. #2	Yes	Globe
1429	Load Rack 9	Valve	HL	F.O. #2	No		1451	Pipeline 8	Conct*	HL	F.O. #2	Yes	Flange
1430	Load Rack 9	Valve	HL	F.O. #2	No		1452	Pipeline 8	Valve	HL	F.O. #2	No	Globe
1431	Load Rack 9	Conct*	HL	F.O. #2	No	Screwed Gate	1453	Pipeline 8	Valve	HL	F.O. #2	No	Globe
1432	Load Rack 9	Valve	HL	F.O. #2	No	Butterfly	1454	Pipeline 8	Valve	HL	F.O. #2	No	Globe
1433	Load Rack 9	Valve	HL	F.O. #2	No		1455	Pipeline 8	Valve	HL	F.O. #2	No	Globe
1434	Pipeline 8	Other	HL	F.O. #2	Yes		1456	Pipeline 8	Valve	HL	F.O. #2	No	Globe
1435	Pipeline 8	Valve	HL	F.O. #2	No	Globe	1457	Pipeline 8	Conct*	HL	F.O. #2	No	Flange
1436	Pipeline 8	Valve	HL	F.O. #2	No	Globe	1458	Pipeline 8	Valve	HL	F.O. #2	No	Globe
1437	Pipeline 8	Valve	HL	F.O. #2	No	Globe	1459	Pipeline 8	Valve	HL	F.O. #2	No	Check
1438	Pipeline 8	Valve	HL	F.O. #2	No	Globe	1460	Pipeline 8	Valve	HL	F.O. #2	No	Globe
1439	Pipeline 8	Valve	HL	F.O. #2	No	Flange	1461	Pipeline 8	Valve	HL	F.O. #2	No	Check
1440	Pipeline 8	Conct*	HL	F.O. #2	No		1462	Pipeline 8	Conct*	HL	F.O. #2	No	Screwed
1441	Pipeline 8	Valve	HL	F.O. #2	Yes	Globe	1463	Pipeline 8	Valve	HL	F.O. #2	No	Globe
1442	Pipeline 8	Valve	HL	F.O. #2	Yes	Check	1464	Pipeline 8	Valve	HL	F.O. #2	No	Globe
1443	Pipeline 8	Valve	HL	F.O. #2	Yes	Globe	1465	Pipeline 8	Valve	HL	F.O. #2	No	Gate
1444	Pipeline 8	Conct*	HL	F.O. #2	Yes	Screwed	1466	Pipeline 8	Valve	HL	F.O. #2	No	Ball
1445	Pipeline 8	Valve	HL	F.O. #2	Yes	Gate	1467	Pipeline 8	Conct*	HL	F.O. #2	No	Flange
1446	Pipeline 8	Other	HL	F.O. #2	Yes	PRV	1468	Pipeline 8	Valve	HL	F.O. #2	No	Gate
1447	Pipeline 8	Conct*	HL	F.O. #2	Yes	Screwed	1469	Pipeline 8	Valve	HL	F.O. #2	No	Globe
1448	Pipeline 8	Valve	HL	F.O. #2	Yes	Gate	1470	Pipeline 8	Valve	HL	F.O. #2	No	Gate
1449	Pipeline 8	Valve	HL	F.O. #2	Yes	Globe	1471	Pipeline 8	Other	HL	F.O. #2	No	PRV

Radian ID	Size	Screening Value	Comments	Radian ID	Size	Screening Value	Comments
1428		110.0	Load arm	1450	8"	8.0	Globe 8" -wet
1429	3/8"	0.0	SV 3/8"	1451		0.0	Flange -not w/in 1cm
1430	3/8"	0.0	SV 3/8"	1452	8"	0.5	Globe 8" -wet
1431		0.0	Screw	1453	8"	16.0	Globe 8"
1432	1"	0.0	Gate 1"	1454	18"	0.0	Globe 18"
1433	4"	0.0	Butterfly 4"	1455	18"	2.5	Globe 18"
1434		2100.0	Open truck hatch during load	1456	16"	0.0	Globe 16"
1435	8"	0.0	Globe 8"	1457		0.0	Flange -not w/in 1cm
1436	8"	25.0	Globe 8"	1458	16"	0.0	Globe 16"
1437	8"	5.0	Globe 8"	1459	16"	0.0	Check 16"
1438	1"	0.0	Gate 1"	1460	16"	0.0	Globe 16"
1439	10"	1.0	Globe 10"	1461	16"	0.0	Check 16"
1440		0.0	Flange	1462		0.0	Screw
1441	12"	0.0	Globe 12"	1463	16"	0.0	Globe 16"
1442	12"	0.0	Check 12"	1464	10"	0.0	Globe 10"
1443	10"	0.0	Globe 10"	1465	1/2"	1.0	Gate .5"
1444		0.0	Screw	1466	3/8"	0.0	Ball 3/8"
1445	2"	0.0	Gate 2"	1467		0.5	Flange
1446	2"	0.0	PRV 2"	1468	1/2"	0.0	Gate .5"
1447		47.0	Screw -wet	1469	10"	0.0	Globe 10"
1448	2"	0.0	Gate 2"	1470	2"	0.0	Gate 2"
1449	12"	10.0	Globe 12"	1471	2"	0.0	PRV 2"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1472	Pipeline 8	Conct*	HL	F.O. #2	No	Flange
1473	Pipeline 8	Valve	HL	F.O. #2	No	Globe
1474	Pipeline 8	Valve	HL	F.O. #2	No	Ball
1475	Pipeline 8	Valve	HL	F.O. #2	No	Ball
1476	Pipeline 8	Valve	HL	F.O. #2	No	Check
1477	Pipeline 8	Valve	HL	F.O. #2	No	Globe
1478	Pipeline 8	Conct*	HL	F.O. #2	No	Screw
1479	Pipeline 8	Conct*	HL	F.O. #2	No	Screw
1480	Pipeline 8	Conct*	HL	F.O. #2	No	Union
1481	Pipeline 8	Valve	HL	F.O. #2	No	Ball
1482	Pipeline 8	Valve	HL	F.O. #2	No	Ball
1483	Pipeline 8	Valve	HL	F.O. #2	No	Ball
1484	Pipeline 8	Valve	HL	F.O. #2	No	Schrader
1485	Pipeline 8	Valve	HL	F.O. #2	No	Gate
1486	Pipeline 8	Conct*	HL	F.O. #2	No	Flange
1487	Pipeline 8	Valve	HL	F.O. #2	No	Schrader
1488	Pipeline 8	Valve	HL	F.O. #2	No	Ball
1489	Pipeline 8	Valve	HL	F.O. #2	No	Ball
1490	Pipeline 8	Valve	HL	F.O. #2	No	Ball
1491	Pipeline 8	Conct*	HL	F.O. #2	No	Screw
1492	Pipeline 8	Valve	HL	F.O. #2	No	Gate
1493	Pipeline 8	Conct*	HL	F.O. #2	No	Union

Radian ID	Size	Screening Value	Comments
1472	10"	0	Flange
1473	10"	17	Globe 10"
1474	1"	1	Ball 1"
1475	3/8"	0	Ball 3/8"
1476	10"	21	Check 10" -wet
1477	10"	1	Globe 10"
1478		0	Screw
1479		0	Screw
1480		10	Union -wet
1481	1/2"	0	Ball .5"
1482	1/2"	0	Ball .5"
1483	1/2"	1	Ball .5" -wet
1484	1/4"	0	Schrader 1/4"
1485	2"	0	Gate 2"
1486		0	Flange -not w/in 1cm
1487	1/4"	0	Schrader 1/4"
1488	1/2"	0	Ball .5"
1489	1/2"	0	Ball .5"
1490	1/2"	0	Ball .5"
1491		0	Screw
1492	2"	0	Gate 2"
1493		0	Union

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1494	Pipeline 8	Valve	HL	F.O. #2	No	Ball
1495	Pipeline 8	Valve	HL	F.O. #2	No	Ball
1496	Pipeline 8	Valve	HL	F.O. #2	No	Ball
1497	Pipeline 8	Valve	HL	F.O. #2	No	Schrader
1498	Pipeline 8	Valve	HL	F.O. #2	No	Gate
1499	Pipeline 8	Conct*	HL	F.O. #2	No	Screw
1500	Pipeline 8	Conct*	HL	F.O. #2	No	Screw
1501	Pipeline 8	Valve	HL	F.O. #2	No	Gate
1502	Pipeline 8	Valve	HL	F.O. #2	No	Schrader
1503	Pipeline 8	Valve	HL	F.O. #2	No	Ball
1504	Pipeline 8	Valve	HL	F.O. #2	No	Ball
1505	Pump St.	Valve	HL	F.O. #2	No	Ball
1506	Pump St.	Valve	HL	F.O. #2	No	Globe
1507	Pump St.	Conct*	HL	F.O. #2	No	Flange
1508	Pump St.	OEL	HL	F.O. #2	No	
1509	Pump St.	OEL	HL	F.O. #2	No	
1510	Pump St.	Pump	HL	F.O. #2	No	
1511	Pump St.	Pump	HL	F.O. #2	No	
1512	Pump St.	Pump	HL	F.O. #2	Yes	
1513	Pump St.	Pump	HL	F.O. #2	No	
1514	Pump St.	OEL	HL	F.O. #2	No	
1515	Pump St.	OEL	HL	F.O. #2	No	

Radian ID	Size	Screening Value	Comments
1494	1/2"	0.0	Ball .5"
1495	1/2"	0.0	Ball .5"
1496	1/2"	0.0	Ball .5"
1497	1/4"	0.0	Schrader 1/4"
1498	2"	0.0	Gate 2"
1499		0.0	Screw
1500		0.0	Screw
1501	2"	0.0	Gate 2"
1502	1/4"	0.0	Schrader 1/4"
1503	1/2"	0.0	Ball .5"
1504	1/2"	0.0	Ball .5"
1505	1/2"	0.0	Ball .5"
1506	12"	0.0	Globe 12"
1507		0.0	Flange
1508		0.0	.5"
1509		0.0	3/8"
1510		30.0	Horz. centr. -off
1511		0.0	Horz. centr. -off
1512		0.0	Horz. centr. -on
1513		30.0	Horz. centr. -off
1514		0.0	.5"
1515		0.0	.5"

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API Screening Data
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Radian ID	Location	Type	Phase	Product	Load	Subtype
1516	Pump St.	OEL	HL	F.O. #2	No	
1517	Pump St.	OEL	HL	F.O. #2	No	
1518	Pump St.	OEL	HL	F.O. #2	No	
1519	Pump St.	OEL	HL	F.O. #2	No	
1520	Pump St.	Valve	HL	F.O. #2	No	Globe
1521	Pump St.	Valve	HL	F.O. #2	No	Globe
1522	Pump St.	Conct*	HL	F.O. #2	No	Flange
1523	Pump St.	Conct*	HL	F.O. #2	No	Screw
1524	Pump St.	Valve	HL	F.O. #2	No	Globe
1525	Pump St.	Valve	HL	F.O. #2	No	Globe
1526	Pump St.	Valve	HL	F.O. #2	No	Globe
1527	Pump St.	Valve	HL	F.O. #2	No	Globe
1528	Pump St.	Valve	HL	F.O. #2	No	Globe
1529	Pump St.	Valve	HL	F.O. #2	No	Globe
1530	Pump St.	Valve	HL	F.O. #2	No	Globe
1531	Pump St.	Valve	HL	F.O. #2	No	Globe
1532	Pump St.	Valve	HL	F.O. #2	No	Globe
1533	Pump St.	Valve	HL	F.O. #2	No	Globe
1534	Pump St.	Valve	HL	F.O. #2	No	Globe
1535	Pump St.	Valve	HL	F.O. #2	No	Globe
1536	Pump St.	Valve	HL	F.O. #2	No	Globe
1537	Pump St.	Valve	HL	F.O. #2	No	Globe

Radian ID	Size	Screening Value	Comments
1516		0.0	.5"
1517		0.0	.5"
1518		25.0	.5" -drip rate 22/min
1519		2.0	.5"
1520	12"	0.0	Globe 12"
1521	1/2"	0.0	Globe .5"
1522		0.0	Flange
1523		0.0	Screw
1524	3/8"	0.0	Globe 3/8"
1525	3/8"	1.5	Globe 3/8"
1526	1/2"	0.0	Ball .5"
1527	1/2"	0.0	Globe .5"
1528	3/8"	0.0	Ball 3/8"
1529	1/2"	0.0	Globe .5"
1530	3/8"	0.0	Ball 3/8"
1531	1/2"	0.0	Ball .5"
1532	1/2"	0.0	Globe .5"
1533	1/2"	0.0	Ball .5"
1534	3/8"	0.0	Ball 3/8"
1535	1/2"	0.0	Globe .5"
1536	1/2"	0.0	Ball .5"
1537	3/8"	0.0	Ball 3/8"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1538	Pump St.	Valve	HL	F.O. #2	No	Globe
1539	Pump St.	Valve	HL	F.O. #2	No	Check
1540	Pump St.	Valve	HL	F.O. #2	No	Globe
1541	Pump St.	Valve	HL	F.O. #2	No	Check
1542	Pump St.	Valve	HL	F.O. #2	No	Globe
1543	Pump St.	Valve	HL	F.O. #2	No	Check
1544	Pump St.	Valve	HL	F.O. #2	No	Globe
1545	Pump St.	Valve	HL	F.O. #2	No	Check

Radian ID	Size	Screening Value	Comments
1538	12"	0.0	Globe 12"
1539	12"	0.0	Check 12"
1540	12"	0.0	Globe 12"
1541	12"	0.0	Check 12"
1542	12"	2.0	Globe 12"
1543	12"	0.0	Check 12"
1544	12"	0.0	Globe 12"
1545	12"	0.0	Check 12"

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Radian
ID

Radian ID	Location	Type	Phase	Product	Load	Subtype
1	LRI	Conct*	HL	D	No	Flange
2	LRI	Valve	HL	D	No	Ball
3	LRI	Valve	HL	D	No	Meter
4	LRI	LA	HL	D	No	
5	LRI	LA	LL		No	
6	LRI	Conct*	LL		No	Union
7	LRI	Conct*	LL		No	Union
8	LRI	Conct*	LL		No	Threaded
9	LRI	Conct*	LL		No	Flange
10	LRI	Conct*	LL	Add	No	Threaded
11	LRI	Valve	LL		No	Tubing
12	LRI	Valve	LL		No	Gate
13	LRI	Valve	LL		No	Needle
14	LRI	Valve	LL		No	Solenoid
15	LRI	Valve	LL		No	Solenoid
16	LRI	Valve	LL		No	Gate
17	LRI	Valve	LL		No	Gate
18	LRI	Valve	LL	Add	No	Gate
19	LRI	Valve	LL		No	Butterfly
20	LRI	Valve	LL		No	Gate
21	LRI	Valve	LL		No	Butterfly
22	LRI	Conct*	LL	Add	No	Threaded

Radian
ID

Radian ID	Size	Screening Value	Comments
1		0.5	
2	1-1/2"	0.0	not = lcm
3	1-1/2"	0.0	
4	1"	6.0	truck fuel line
5	8"	140.0	visibly wet
6	3/8"	1.0	
7	3/8"	1.0	
8	1/2"	0.5	
9		0.0	not = lcm
10	1/2"	0.0	
11	3/8"	1.0	
12	1/2"	16.0	
13	3/8"	0.0	
14	1/2"	0.0	
15	1/2"	0.0	
16	1/2"	0.0	
17	1/2"	0.0	
18	1/2"	2.0	
19	3"	0.0	
20	1/2"	14.0	
21	3"	0.0	
22	3/8"	0.0	

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Radian ID	Location	Type	Phase	Product	Load	Subtype
23	LRI	Conct*	LL	Add	No	Tubing
24	LRI	Conct*	LL	Add	No	Threaded
25	LRI	Conct*	LL	Add	No	Threaded
26	LRI	Conct*	LL	Add	No	Tubing
27	LRI	Conct*	LL	Add	No	Threaded
28	LRI	Conct*	LL	Add	No	Threaded
29	LRI	Conct*	LL	Add	No	Tubing
30	LRI	Valve	LL	Add	No	Solenoid
31	LRI	Valve	LL	Add	No	Solenoid
32	LRI	Valve	LL	Add	No	Solenoid
33	LRI	Valve	LL	Add	No	Ball
34	LRI	Valve	LL	Add	No	Gate
35	LRI	Valve	LL	Add	No	Gate
36	LRI	Valve	LL	Add	No	Gate
37	LRI	Conct*	LL	Add	No	Flange
38	LRI	Valve	LL	Add	No	Gate
39	LRI	LA	LL		No	
40	LRI	Conct*	LL		No	Threaded
41	LRI	Conct*	LL		No	Tubing
42	LRI	Conct*	LL		No	Threaded
43	LRI	Conct*	LL		No	Plug
44	LRI	Valve	LL		No	Gate

Radian ID	Size	Screening Value	Comments
23	1/4"	0.0	
24	1/4"	0.0	
25	1/4"	0.0	
26	1/4"	0.0	
27	1/2"	0.0	
28	1/4"		inacc
29	1/4"		inacc
30	1/2"	0.0	
31	1/2"	0.0	
32	1/2"	0.0	
33	1/2"	0.5	
34	1"	1.0	
35	1/2"	2.0	
36	1/2"	2.0	
37		0.0	
38	1/2"	3.0	
39	8"	4.0	
40	1/2"	0.0	
41	1/2"	0.0	
42	3/4"	0.0	
43	1/2"	0.0	
44	1/2"	0.0	

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(continued)

Radian ID	Location	Type	Phase	Product	Load	Subtype	Radian ID	Location	Type	Phase	Product	Load	Subtype
45	LR1	Valve	LL		No	Needle	67	LR1	Valve	LL		No	Butterfly Gate
46	LR1	Valve	LL		No	Solenoid	68	LR1	Valve	Gas	VR	No	Gate
47	LR1	Valve	LL		No	Solenoid	69	LR1	Valve	Gas	VR	No	Butterfly
48	LR1	Valve	LL		No	Gate	70	LR1	Valve	Gas	VR	No	Hose
49	LR1	Valve	LL		No	Gate	71	LR1	LA	Gas	VR	No	
50	LR1	Valve	LL		No	Gate	72	LR2	LA	LL		Yes	
51	LR1	Valve	LL		No	Butterfly	73	LR2	Conct*	HL	D	No	Flange
52	LR1	Valve	LL		No	Gate	74	LR2	Conct*	HL	D	No	Hose
53	LR1	Valve	LL		No	Butterfly	75	LR2	Valve	HL	D	No	Ball
54	LR1	LA	LL		No		76	LR2	Valve	HL	D	No	Meter
55	LR1	Conct*	LL		No	Tubing	77	LR2	LA	HL	D	No	
56	LR1	Conct*	LL		No	Threaded	78	LR2	Conct*	LL	Add	No	Threaded
57	LR1	Conct*	LL		No	Threaded	79	LR2	Conct*	LL	Add	No	Threaded
58	LR1	Conct*	LL		No	Flange	80	LR2	Conct*	LL	Add	No	Threaded
59	LR1	Valve	LL		No	Gate	81	LR2	Conct*	LL	Add	No	Threaded
60	LR1	Valve	LL		No	Needle	82	LR2	Conct*	LL	Add	No	Threaded
61	LR1	Valve	LL		No	Needle	83	LR2	Conct*	LL	Add	No	Threaded
62	LR1	Valve	LL		No	Solenoid	84	LR2	Conct*	LL	Add	No	Tubing
63	LR1	Valve	LL		No	Solenoid	85	LR2	Conct*	LL	Add	No	Tubing
64	LR1	Valve	LL		No	Gate	86	LR2	Conct*	LL	Add	No	Tubing
65	LR1	Valve	LL		No	Gate	87	LR2	Conct*	LL	Add	No	Tubing
66	LR1	Valve	LL		No	Butterfly	88	LR2	Conct*	LL	Add	No	Threaded

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(continued)

Radian ID	Size	Screening Value	Comments	Radian ID	Size	Screening Value	Comments
45	3/8"	0		67	4"	0	
46	1/2"	1		68	1"	0	
47	1/2"	0		69	3"	0	
48	1/2"	1		70	4"		inacc
49	1/2"	0		71	4"	200000	VRU arm halfed locked
50	1/2"	0		72	8"	990	
51	4"	0		73		0	
52	1/2"	1		74	1"	0	
53	4"	0		75	2"	1	
54	8"	2		76	2"	0	
55	1/2"	0		77	1"	7	truck fuel line
56	1/2"	1		78	3/8"	0	
57	1/2"	0		79	1/4"	0	
58		0		80	1/4"	0	
59	1/2"	2	not = 1cm	81	1/2"	0	
60	1/2"	4		82	1/4"		inacc
61	1/2"	0		83	1/4"	0	
62	1/2"	0		84	1/4"	0	
63	1/2"	0		85	1/2"	0	
64	1/2"	0		86	3/8"	0	
65	1/2"	5		87	1/4"	0	
66	4"	0		88	1/4"	0	inacc

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(continued)

Radian ID	Location	Type	Phase	Product	Load	Subtype
89	LR2	Valve	LL	Add	No	Solenoid
90	LR2	Valve	LL	Add	No	Solenoid
91	LR2	Valve	LL	Add	No	Solenoid
92	LR2	Valve	LL	Add	No	Ball
93	LR2	Valve	LL	Add	No	Ball
94	LR2	Valve	LL	Add	No	Gate
95	LR2	Conct*	LL	Add	No	Plug
96	LR2	Valve	LL	Add	No	Gate
97	LR2	Valve	LL	Add	No	Gate
98	LR2	Valve	LL	Add	No	Gate
99	LR2	LA	LL		No	
100	LR2	Conct*	LL		No	Threaded
101	LR2	Conct*	LL		No	Tubing
102	LR2	Conct*	LL		No	Threaded
103	LR2	Conct*	LL		No	Threaded
104	LR2	Conct*	LL		No	Flange
105	LR2	Valve	LL		No	Gate
106	LR2	Valve	LL		No	Solenoid
107	LR2	Valve	LL		No	Solenoid
108	LR2	Valve	LL		No	Needle
109	LR2	Valve	LL		No	Needle
110	LR2	Valve	LL		No	Gate

Radian ID	Size	Screening Value	Comments
89	1/2"	0	
90	1/2"	1	
91	1/2"	0	
92	1/2"	0	
93	1/2"	0	
94	1/2"	0	
95	1/2"	0	
96	1/2"	10	
97	1/2"	1	
98	1/2"	8	
99	8"	3000	visibly wet 15min after use
100	3/8"	0	
101	3/8"	0	
102	1/4"	0	
103	1/2"	0	
104		0	
105	1/2"	0	
106	1/2"	0	
107	1/2"	0	
108	3/8"	0	
109	3/8"	0	
110	1"	2	

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Radian ID	Location	Type	Phase	Product	Load	Subtype
111	LR2	Valve	LL		No	Gate
112	LR2	Valve	LL		No	Butterfly
113	LR2	Valve	LL		No	Gate
114	LR2	Valve	LL		No	Gate
115	LR2	Valve	LL		No	Butterfly
116	LR2	Valve	LL		No	Gate
117	LR2	LA	LL		No	
118	LR2	Conct*	LL		No	Threaded
119	LR2	Conct*	LL		No	Tubing
120	LR2	Conct*	LL		No	Union
121	LR2	Conct*	LL		No	Flange
122	LR2	Conct*	LL		No	Threaded
123	LR2	Valve	LL		No	Gate
124	LR2	Conct*	LL		No	Plug
125	LR2	Valve	LL		No	Needle
126	LR2	Valve	LL		No	Needle
127	LR2	Valve	LL		No	Solenoid
128	LR2	Valve	LL		No	Solenoid
129	LR2	Valve	LL		No	Gate
130	LR2	Valve	LL		No	Gate
131	LR2	Valve	LL		No	Gate
132	LR2	Valve	LL		No	Butterfly

Radian ID	Size	Screening Value	Comments
111	1/2"	0.0	
112	4"	1.0	
113	1/2"	2.0	
114	1/2"	0.0	
115	4"	0.0	
116	1/2"	0.0	
117	8"	43.0	
118	3/8"	0.0	
119	3/8"	0.0	
120	1/2"	0.0	
121		0.0	
122	1/2"	0.0	
123	1/2"	2.0	
124	1/2"	990.0	
125	3/8"	0.0	
126	3/8"	2.0	
127	1/2"	0.0	
128	1/2"	0.0	
129	1/2"	4.0	
130	1/2"	2.0	
131	1/2"	2.0	
132	4"	0.0	

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Radian ID	Location	Type	Phase	Product	Load	Subtype
133	LR2	Valve	LL		No	Gate
134	LR2	Valve	LL		No	
135	LR2	LA	LL		No	
136	LR2	Conct*	LL		No	Flange
137	LR2	Conct*	LL		No	Threaded
138	LR2	Conct*	LL		No	Threaded
139	LR2	Conct*	LL		No	Plug
140	LR2	Valve	LL		No	Gate
141	LR2	Valve	LL		No	Needle
142	LR2	Valve	LL		No	Needle
143	LR2	Valve	LL		No	Solenoid
144	LR2	Valve	LL		No	Solenoid
145	LR2	Valve	LL		No	Gate
146	LR2	Valve	LL		No	Butterfly
147	LR2	Valve	LL		No	Gate
148	LR2	Valve	LL		No	Butterfly
149						
150	LR2	OEL	Gas	VR	No	
151	LR2	Valve	Gas	VR	No	Gate
152	LR2	Valve	Gas	VR	No	Gate
153	LR2	Conct*	Gas	VR	No	Union
154	LR2	Valve	Gas	VR	No	Butterfly

Radian ID	Size	Screening Value	Comments
133	4"	0.0	
134	1/2"	0.0	
135	8"	32.0	
136		6.0	
137	3/8"	0.0	
138	3/8"	0.0	
139	1/2"	0.0	
140	1/2"	6.0	
141	3/8"	0.0	
142	3/8"	2.0	
143	1/2"	0.0	
144	1/2"	0.0	
145	1/2"	2.0	
146	4"	0.0	
147	1/2"	0.0	
148	4"	0.0	
149			
150		0.0	
151	1/2"	0.0	
152	1/2"	0.0	
153	1/2"	10.0	inacc
154	3"		

Radian ID	Location	Type	Phase	Product	Load	Subtype
155	LR2	LA	Gas	VR	No	Hose
156	LR2	Conct*	HL	D	No	Threaded
157	LR3	Conct*	HL	D	No	Threaded
158	LR3	Valve	HL	D	No	Meter
159	LR3	Conct*	HL	D	No	Threaded
160	LR3	LA	HL	D	No	
161	LR3	Valve	HL	D	No	Ball
162	LR3	Conct*	LL	Add	No	Tubing
163	LR3	Conct*	LL	Add	No	Threaded
164	LR3	Conct*	LL	Add	No	Threaded
165	LR3	Conct*	LL	Add	No	Threaded
166	LR3	Conct*	LL	Add	No	Threaded
167	LR3	Conct*	LL	Add	No	Threaded
168	LR3	Conct*	LL	Add	No	Tubing
169	LR3	Conct*	LL	Add	No	Tubing
170	LR3	Conct*	LL	Add	No	Threaded
171	LR3	Conct*	LL	Add	No	Threaded
172	LR3	Conct*	LL	Add	No	Tubing
173	LR3	Conct*	LL	Add	No	Threaded
174	LR3	Conct*	LL	Add	No	Tubing
175	LR3	Conct*	LL	Add	No	Threaded
176	LR3	Valve	LL	Add	No	Solenoid

Radian ID	Size	Screening Value	Comments
155	4"	12000.0	half locked
156	1/2"	0.0	
157	1/2"	0.0	
158	2"	0.0	
159	1/2"	0.0	
160	1"	3.5	truck fuel line
161	2"	0.0	
162	3/8"	0.0	
163	1/2"	0.5	
164	3/8"	0.0	
165	1/4"	0.5	
166	1/2"	0.0	
167	3/8"	0.0	
168	3/8"	0.0	
169	3/8"	0.0	inacc.
170	3/8"	0.0	inacc.
171	1/4"		
172	3/8"	0.5	
173	3/8"	0.0	
174	3/8"	0.0	
175	3/8"	0.0	
176	1/4"	1.0	

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Screening Value	Size	Comments
177	LR3	Valve	LL	Add	No	Solenoid	0.0	1/4"	0.0
178	LR3	Valve	LL	Add	No	Solenoid	0.5	1/4"	0.5
179	LR3	Valve	LL	Add	No	Ball	0.0	1/2"	0.0
180	LR3	Conc*	LL	Add	No	Threaded	0.0	1/2"	0.0
181	LR3	Conc*	LL	Add	No	Threaded	0.5	1/2"	0.5
182	LR3	Conc*	LL	Add	No	Flange	0.0	not = 1cm	0.0
183	LR3	Valve	LL	Add	No	Gate	0.5	1/2"	0.5
184	LR3	Valve	LL	Add	No	Gate	0.0	1/2"	0.0
185	LR3	Valve	LL	Add	No	Gate	94.0	1/2"	0.0
186	LR3	LA	LL		No		220.0	8"	0.0
187	LR3	Conc*	LL		No	Flange	0.0	not = 1cm	0.0
188	LR3	Conc*	LL		No	Threaded	0.0	1/2"	0.0
189	LR3	Conc*	LL		No	Tubing	0.0	3/8"	0.0
190	LR3	Conc*	LL		No	Threaded	0.0	1/2"	0.0
191	LR3	Valve	LL		No	Gate	1.0	1/2"	1.0
192	LR3	Valve	LL		No	Needle	3/8"	1.0	1.0
193	LR3	Valve	LL		No	Needle	3/8"	1.0	1.0
194	LR3	Valve	LL		No	Solenoid	3/8"	0.0	0.0
195	LR3	Valve	LL		No	Solenoid	3/8"	0.0	0.0
196	LR3	Valve	LL		No	Gate	1/2"	2.5	2.5
197	LR3	Valve	LL		No	Gate	1/2"	10.0	10.0
198	LR3	Valve	LL		No	Butterfly 4"	9.5	1/2"	9.5
199	LR3	Valve	LL		No	Butterfly 4"	0.5	8"	0.5
200	LR3	LA	LL		No		3000.0	8"	0.0
201	LR3	Conc*	LL		No	Flange	0.0	not = 1cm	0.0
203	LR3	Conc*	LL		No	Flange	0.5	not = 1cm	0.5
204	LR3	Conc*	LL		No	Threaded	3/8"	0.0	0.0
205	LR3	Conc*	LL		No	Threaded	1/2"	0.0	0.0
206	LR3	Valve	LL		No	Gate	1/2"	0.0	0.0
207	LR3	Valve	LL		No	Needle	3/8"	4.0	4.0
208	LR3	Valve	LL		No	Needle	3/8"	4.0	4.0
209	LR3	Valve	LL		No	Solenoid	1/2"	0.0	0.0
210	LR3	Valve	LL		No	Solenoid	1/2"	2.0	2.0
211	LR3	Valve	LL		No	Gate	1/2"	3.5	3.5
212	LR3	Valve	LL		No	Gate	1/2"	49.0	49.0
214	LR3	Valve	LL		No	Butterfly 4"	9.0	1/2"	9.0
215	LR3	Valve	LL		No	Butterfly 4"	1.0	4"	1.0
216	LR3	LA	LL		No		44.0	8"	44.0
217	LR3	Conc*	LL		No	Flange	1.0	not = 1cm	1.0
218	LR3	Conc*	LL		No	Threaded	1/2"	63.0	63.0
219	LR3	Conc*	LL		No	Tubing	3/8"	0.0	0.0
220	LR3	Conc*	LL		No	Threaded	1/2"	0.0	0.0
221	LR3	Valve	LL		No	Gate	1/2"	2.5	2.5
222	LR3	Valve	LL		No	Needle	3/8"	0.0	0.0
223	LR3	Valve	LL		No	Needle	3/8"	5.0	5.0
224	LR3	Valve	LL		No	Solenoid	1/2"	0.5	0.5
225	LR3	Valve	LL		No	Solenoid	1/2"	0.0	0.0
226	LR3	Valve	LL		No	Gate	1/2"	5.0	5.0

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Screening Value	Size	Comments
227	LR3	Valve	LL		No	Gate			
228	LR3	Valve	LL		No	Butterfly			
229	LR3	Valve	LL		No	Butterfly			
230	LR3	Conc*	Gas	VR	No	Swivel			
231	LR3	Valve	Gas	VR	No	Butterfly			
232	LR3	LA	Gas	VR	No	Hose			
233	LR3	Valve	Gas	VR	No	Gate			
234	LR3	OEL	Gas	VR	No	Gate			
235	LR3	Valve	Gas	VR	No	Gate			
236	LR3	Valve	Gas	VR	No	Gate			
237	LR4	Conc*	HL	D	No	Flange			
238	LR4	Conc*	HL	D	No	Threaded			
239	LR4	Conc*	HL	D	No	Threaded			
240	LR4	Conc*	HL	D	No	Flange			
241	LR4	Valve	HL	D	No	Ball			
242	LR4	Valve	HL	D	No	Solenoid			
243	LR4	Valve	HL	D	No	Meter			
244	LR4	LA	HL	D	No				
245	LR4	Conc*	LL	Add	No	Tubing			
246	LR4	Conc*	LL	Add	No	Tubing			
247	LR4	Conc*	LL	Add	No	Threaded			
248	LR4	Conc*	LL	Add	No	Plug			

Radian ID	Size	Screening Value	Comments
227	1/2"	54.0	
228	4"	1.0	
229	4"	0.0	
230		0.0	
231	4"		inacc
232	4"	140.0	half locked
233	4"	0.0	
234	1"	0.5	
235	1/2"	1.0	
236	1/2"	0.5	
237		0.0	not = 1cm
238	3/8"	0.0	
239		0.0	not = 1cm
240	1/2"	0.0	
241	2"	0.0	
242	1/2"	0.0	
243	1"	0.0	
244	1"	4.0	truck fill hose
245	1/2"	0.0	
246	1/4"	0.0	
247	1/4"	0.0	
248	1/2"	0.0	

API Screening Data
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API Screening Data
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Radian ID	Location	Type	Phase	Product	Load	Subtype
249	LR4	Conct*	LL	Add	No	Threaded
250	LR4	Conct*	LL	Add	No	Threaded
251	LR4	Conct*	LL	Add	No	Plug
252	LR4	Conct*	LL	Add	No	Threaded
253	LR4	Conct*	LL	Add	No	Threaded
254	LR4	Conct*	LL	Add	No	Tubing
255	LR4	Conct*	LL	Add	No	Threaded
256	LR4	Conct*	LL	Add	No	Gate
257	LR4	Conct*	LL	Add	No	Needle
258	LR4	Conct*	LL	Add	No	Needle
259	LR4	Conct*	LL	Add	No	Solenoid
260	LR4	Conct*	LL	Add	No	Solenoid
261	LR4	Valve	LL	Add	No	Gate
262	LR4	Valve	LL	Add	No	Gate
263	LR4	Valve	LL	Add	No	Butterfly
264	LR4	Valve	LL	Add	No	Butterfly
265	LR4	Valve	LL	Add	No	Threaded
266	LR4	Valve	LL	Add	No	Swivel
267	LR4	Valve	LL	Add	No	Hose
268	LR4	Valve	LL	Add	No	Gate
269	LR4	Valve	LL	Add	No	Gate
270	LR4	Valve	LL	Add	No	Butterfly
271	LR4	LA	LL	Add	No	Butterfly
272	LR4	Conct*	LL	Add	No	Threaded
273	LR4	Conct*	LL	Add	No	Swivel
274	LR4	Conct*	LL	Add	No	Hose
275	LR4	Conct*	LL	Add	No	Gate
276	LR4	Valve	LL	Add	No	Gate
277	LR4	Valve	LL	Add	No	Butterfly
278	LR4	Valve	LL	Add	No	Butterfly
279	LR4	Valve	LL	Add	No	Threaded
280	LR4	Valve	LL	Add	No	Swivel
281	LR4	Valve	LL	Add	No	Hose
282	LR4	Valve	LL	Add	No	Gate
283	LR4	Valve	LL	Add	No	Gate
284	LR4	Valve	LL	Add	No	Butterfly
285	LR4	LA	LL	Add	No	Butterfly
286	LR4	Conct*	LL	Add	No	Threaded
287	LR4	Conct*	LL	Add	No	Swivel
288	LR4	Valve	LL	Add	No	Hose
289	LR4	Valve	LL	Add	No	Gate
290	LR4	Valve	LL	Add	No	Gate
291	LR4	Valve	LL	Add	No	Butterfly
292	LR4	Valve	LL	Add	No	Butterfly
293	LR4	Valve	LL	Add	No	Threaded
294	LR4	Valve	LL	Add	No	Swivel
295	LR4	Valve	LL	Add	No	Hose
296	LR4	Valve	LL	Add	No	Gate

Radian ID	Location	Type	Phase	Product	Load	Subtype
297	LR4	LA	LL	Add	No	Threaded
298	LR4	Conct*	LL	Add	No	Plug
299	LR4	Conct*	LL	Add	No	Threaded
300	LR4	Conct*	LL	Add	No	Threaded
301	LR4	Conct*	LL	Add	No	Tubing
302	LR4	Conct*	LL	Add	No	Threaded
303	LR4	Conct*	LL	Add	No	Gate
304	LR4	Valve	LL	Add	No	Needle
305	LR4	Valve	LL	Add	No	Needle
306	LR4	Valve	LL	Add	No	Solenoid
307	LR4	Valve	LL	Add	No	Solenoid
308	LR4	Valve	LL	Add	No	Gate
309	LR4	Valve	LL	Add	No	Gate
310	LR4	Valve	LL	Add	No	Butterfly
311	LR4	Valve	LL	Add	No	Butterfly
312	LR4	Valve	LL	Add	No	Threaded
313	LR4	Conct*	Gas	VR	No	Swivel
314	LR4	Conct*	Gas	VR	No	Hose
315	LR4	LA	Gas	VR	No	Gate
316	LR4	Valve	Gas	VR	No	Gate
317	LR4	Valve	Gas	VR	No	Butterfly
318	LR4	Valve	Gas	VR	No	Butterfly
319	VRU	OEL	Gas	VR	No	Butterfly

Radian ID	Location	Type	Phase	Product	Load	Subtype
297	8"	18.0				
298	1"	0.0				
299	1/2"	63.0				
300	1/2"	0.0				
301	3/8"	0.0				
302	3/8"	0.5				
303	1/2"	3.0				
304	3/8"	2.5				
305	3/8"	3.0				
306	3/8"	0.5				
307	3/8"	0.0				
308	1/2"	94.0				
309	1/2"	0.0				
310	4"	3.5				
311	4"	0.0				
312	1/2"	0.0				
313	4"	0.0				
314	4"	0.0				
315	4"	12000.0				
316	1/2"	0.5				
317	1/2"	0.0				
318	4"	0.0				
319	6"	1.0				

not locked at all
char. vent

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Radian ID	Location	Type	Phase	Product	Load	Subtype
320	VRU	Valve	Gas	VR	No	Ball
321	VRU	Valve	Gas	VR	No	Gate
322	VRU	Conct*	Gas	VR	No	Flange
323	VRU	OEL	Gas	VR	No	
324	VRU	Valve	Gas	VR	No	Gate

Radian ID	Size	Screening Value	Comments
320	3/8"	0.0	
321	8"	0.0	
323	8"	1800.0	not = 1cm, no reading
324	8"	390.0	char. purge

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Screening Value	Comments
325	VRU	Conct*	Gas	VR	No	Threaded	1/2"	0.0
326	VRU	Conct*	Gas	VR	No	Threaded	1/2"	0.0
327	VRU	Conct*	Gas	VR	No	Threaded	1"	0.0
328	VRU	Conct*	Gas	VR	No	Threaded	1"	0.0
329	VRU	Conct*	Gas	VR	No	Threaded	1"	0.0
330	VRU	Conct*	Gas	VR	No	Threaded	1/2"	0.0
331	VRU	Conct*	Gas	VR	No	Flange	1/2"	not = 1cm
332	VRU	Conct*	Gas	VR	No	Plug	1/2"	2.0
333	VRU	Conct*	Gas	VR	No	Flange	1/2"	0.0
334	VRU	Conct*	Gas	VR	No	Threaded	1/2"	0.0
335	VRU	OEL	Gas	VR	No	1/2"	1/2"	0.0
336	VRU	Conct*	Gas	VR	No	Threaded	1"	0.0
337	VRU	Conct*	Gas	VR	No	Threaded	1/2"	0.0
338	VRU	Conct*	Gas	VR	No	Threaded	1/2"	1.0
339	VRU	Valve	Gas	VR	No	Gate	1/2"	5.0
340	VRU	Valve	Gas	VR	No	Gate	1/2"	0.0
341	VRU	Valve	Gas	VR	No	Ball	1/2"	0.0
342	VRU	Valve	Gas	VR	No	Ball	1/2"	0.0
343	VRU	Valve	Gas	VR	No	Ball	1/2"	0.0
344	VRU	Valve	Gas	VR	No	Ball	1"	0.0
345	VRU	Valve	Gas	VR	No	Ball	1/2"	0.5
346	VRU	Valve	Gas	VR	No	Butterfly	4"	0.0
347	VRU	Valve	Gas	VR	No	Ball	1/2"	0.0
348	VRU	Valve	Gas	VR	No	Ball	1/2"	0.0
349	VRU	Valve	Gas	VR	No	Ball	1/2"	1.0

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
350	VRU	Valve	Gas	VR	No	Motor	6"	1.0	
351	VRU	Valve	Gas	VR	No	Motor	6"	0.0	
352	VRU	Valve	Gas	VR	No	Ball	1"	0.0	
353	VRU	Valve	Gas	VR	No	Horz Cent	1"		
354	VRU	Valve	Gas	VR	No	Solenoid	4"	0.0	
355	VRU	Valve	Gas	VR	No	Motor	4"	0.0	
356	VRU	Valve	Gas	VR	No	Motor	1/2"	0.0	
357	VRU	Pump	LL	VR	No	Horz Cent	3/8"	990.0	
358	VRU	Conct*	Gas	VR	No	Threaded	3/8"	0.0	
359	VRU	Conct*	Gas	VR	No	Threaded	3/8"	0.0	
360	VRU	Conct*	Gas	VR	No	Threaded	1/4"	1.0	
361	VRU	OEL	Gas	VR	No		2"	0.0	tank vent
362	VRU	Valve	Gas	VR	No	Diaphragm	2"	0.0	
363	VRU	Valve	Gas	VR	No	Butterfly	3"	0.0	
364	VRU	Conct*	Gas	VR	No	Threaded	3/8"	0.0	
365	VRU	OEL	Gas	VR	No		3/8"	0.0	
366	VRU	Valve	Gas	VR	No	Ball	3/8"	0.0	
367	VRU	Conct*	LL	VR	No	Threaded	3"	0.0	
368	VRU	Conct*	LL	VR	No	Flange	1/2"	0.0	not = 1cm
370	VRU	Valve	LL	VR	No	Ball	1"	0.0	
371	VRU	Valve	LL	VR	No	Ball	1"	0.0	
372	VRU	Valve	LL	VR	No	Motor	1"	0.0	
373	VRU	Valve	LL	VR	No	Ball	1"	0.0	
374	VRU	Valve	LL	VR	No	Ball	1/2"	0.0	
375	VRU	Conct*	LL	VR	No	Threaded	3/8"	0.0	
376	VRU	Conct*	LL	VR	No	Threaded	1/2"	0.0	
377	VRU	Conct*	LL	VR	No	Threaded	3/8"	0.0	
378	VRU	Conct*	LL	VR	No	Threaded	1/2"	0.0	
379	VRU	Conct*	LL	VR	No	Threaded	1"	0.5	
380	VRU	Conct*	LL	VR	No	Threaded	1/2"	0.0	
381	VRU	Conct*	LL	VR	No	Threaded	1"	0.0	
382	VRU	Valve	LL	VR	No	Ball	1/2"	0.0	
383	VRU	Valve	LL	VR	No	Ball	1/2"	0.0	
384	VRU	Valve	LL	VR	No	Gate	1/2"	0.0	
385	VRU	Valve	LL	VR	No	Ball	1/2"	0.0	
386	VRU	Valve	LL	VR	No	Ball	1/2"	0.0	
387	VRU	Valve	LL	VR	No	Ball	3/8"	0.0	
388	VRU	Valve	LL	VR	No	Ball	3/8"	0.0	
389	VRU	Valve	LL	VR	No	Ball	2"	0.0	
390	VRU	Valve	LL	VR	No	Ball	3/8"	0.0	
391	VRU	Valve	LL	VR	No	Ball	1/2"	0.0	
392	VRU	Valve	LL	VR	No	Ball	1/2"	0.0	
393	VRU	Valve	LL	VR	No	Globe	1/2"	2.0	
394	VRU	Valve	LL	VR	No	Globe	1/2"	0.0	
395	VRU	Valve	LL	VR	No	Ball	3/8"	0.0	
396	VRU	Valve	LL	VR	No	Ball	1/2"	0.0	
397	VRU	Valve	LL	VR	No	Ball	1/2"	0.0	
398	VRU	Valve	LL	VR	No	Globe	1/2"	0.0	

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Radian ID	Location	Type	Phase	Product	Load	Subtype
399	VRU	Valve	LL	VR	No	Globe	421	VRU	Valve	LL	VR	Yes	Ball
400	VRU	Valve	LL	VR	No	Butterfly	422	VRU	Valve	LL	VR	Yes	Ball
401	VRU	Valve	LL	VR	No	Gate	423	VRU	OEL	LL	VR	Yes	
402	VRU	Valve	LL	VR	No	Ball	424	VRU stop tank	Valve	LL	VR	Yes	Globe
403	VRU	Pump	LL	VR	No	Horz Cent	425	VRU stop tank	Pump	LL	VR	No	Horz Cent
404	VRU	Conct*	LL	VR	Yes	Threaded	426	VRU stop tank	Conct*	LL	VR	No	Clamp
405	VRU	Conct*	LL	VR	Yes	Threaded	427	VRU stop tank	OEL	LL	VR	No	
406	VRU	Conct*	LL	VR	Yes	Flange	428	TANK 19	Conct	LL		No	Flange
407	VRU	Conct*	LL	VR	Yes	Union	429	TANK 19	Conct	LL		No	Flange
408	VRU	Conct*	LL	VR	Yes	Flange	430	TANK 19	Conct	LL		No	Flange
409	VRU	Conct*	LL	VR	Yes	Threaded	431	TANK 19	Conct	LL		No	Plug
410	VRU	Pump	LL	VR	Yes	Horz Cent	432	TANK 19	Conct	LL		No	Threaded
411	VRU	Valve	LL	VR	Yes	Ball	433	TANK 19	Conct	LL		No	Threaded
412	VRU	Valve	LL	VR	Yes	Ball	434	TANK 19	Conct	LL		No	Threaded
413	VRU	Valve	LL	VR	Yes	Ball	435	TANK 19	Conct	LL		No	Threaded
414	VRU	Valve	LL	VR	Yes	Ball	436	TANK 19	Conct	LL		No	Tubing
415	VRU	Valve	LL	VR	Yes	Ball	437	TANK 19	Conct	LL		No	Tubing
416	VRU	Valve	LL	VR	Yes	Ball	438	TANK 19	Conct	LL		No	Threaded
417	VRU	Valve	LL	VR	Yes	Ball	439	TANK 19	Conct	LL		No	Threaded
418	VRU	Valve	LL	VR	Yes	Ball	440	TANK 19	Valve	LL		No	Butterfly
419	VRU	OEL	LL	VR	Yes		441	TANK 19	Conct	LL		No	Flange
420	VRU	Valve	LL	VR	Yes	Ball	442	TANK 19	Conct	LL		No	Flange

Radian ID	Size	Screening Value	Comments
399	1/2"	1.0	
400	2"	0.0	
401	4"	17.0	
402	1/2"	0.0	
403		490.0	
404	1/2"	0.0	
405	1/2"	0.0	
406		0.0	
407	1"	0.0	
408		0.0	
409	3/8"	0.5	not = 1cm
410		0.0	
411	1/2"	0.0	
412	1/2"	0.0	
413	1/2"	0.0	
414	1/2"	0.0	
415	3/8"	0.0	
416	3/8"	0.5	
417	1"	0.0	
418	3/8"	0.0	
419	3/8"	0.0	
420	1"	0.0	

Radian ID	Size	Screening Value	Comments
421	3/8"	2.0	
422	3/8"	0.0	
423	3/8"	0.5	
424	1/2"	1.0	
425		9000.0	
426	1-1/2"	130.0	tank vent line
427	1/8"	11000.0	tank vent
428		0.0	not = 1cm
429		0.0	
430		1.0	
431	1/2"	0.0	
432	1/2"	0.0	
433	1/2"	0.0	
434	1/2"	0.0	
435	1/2"	0.0	
436	3/8"	0.0	
437	3/8"	0.0	
438	1/2"	0.0	
439	1/2"	0.0	
440	12"	0.0	
441	12"	0.0	
442	12"	0.0	not = 1cm

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Screening Value	Size	Comments
443	TANK 19	Conct	LL	No	No	Flange	1700.0	12"	
444	TANK 19	Valve	LL	No	No	Globe	14000.0	12"	
445	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
446	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
447	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
448	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
449	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
450	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
451	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
452	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
453	TANK 19	Conct	LL	No	No	Union 1/2"	0.0		
454	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
455	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
456	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
457	TANK 19	Conct	LL	No	No	Plug 1/2"	0.0		
458	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
459	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
460	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
461	TANK 19	Valve	LL	No	No	Globe 1/2"	1.0		
462	TANK 19	Valve	LL	No	No	Globe 1/2"	0.0		
463	TANK 19	Valve	LL	Yes	Yes	Globe 4"	86.0		
464	TANK 19	Conct	LL	Yes	Yes	Flange	5.0		
465	TANK 19	Conct	LL	No	No	Flange	0.0		
466	TANK 19	Valve	LL	No	No	Globe 4"	0.0		
467	TANK 19	Conct	LL	No	No	Flange 4"	2.0		not = 1cm
468	TANK 19	Conct	LL	No	No	Flange 4"	2.0		
469	TANK 19	Conct	LL	No	No	Threaded 1/2"	1.0		
470	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
471	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
472	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
473	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
474	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.5		
475	TANK 19	Other	LL	No	No	PRV 1"	0.0		
476	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
477	TANK 19	Conct	LL	No	No	Plug 1/2"	2.0		
478	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.5		
479	TANK 19	Conct	LL	No	No	Threaded 1/2"	0.0		
480	TANK 19	Valve	LL	No	No	Globe 1/2"	15.0		
481	TANK 19	Valve	LL	No	No	Globe 1/2"	14.0		
482	TANK 19	Conct	LL	No	No	Flange 10"	2.0		not = 1cm
483	TANK 19	Valve	LL	No	No	Globe 10"	0.0		
484	TANK 19	Conct	LL	No	No	Threaded 2"	0.0		water draw
485	TANK 19	Conct	LL	No	No	Threaded 2"	0.0		
486	TANK 19	Conct	LL	No	No	Threaded 2"	1.0		
487	TANK 19	Conct	LL	No	No	Threaded 2"	0.0		
488	TANK 19	Conct	LL	No	No	Threaded 2"	0.0		
489	TANK 19	Conct	LL	No	No	Threaded 2"	0.0		
490	TANK 19	Conct	LL	No	No	Threaded 2"	0.0		

Radian ID	Location	Type	Phase	Product	Load	Subtype
491	TANK 19	Conct	LL	No	No	Threaded
492	TANK 19	Conct	LL	No	No	Threaded
493	TANK 19	Valve	LL	No	No	Globe
494	TANK 19	Valve	LL	No	No	Ball
495	TANK 19	Conct	LL	No	No	Threaded
496	TANK 19	Conct	LL	No	No	Threaded
497	TANK 19	Conct	LL	No	No	Threaded
498	TANK 19	Conct	LL	No	No	Threaded
499	TANK 19	Conct	LL	No	No	Threaded
500	TANK 19	Conct	LL	No	No	Threaded
501	TANK 19	Conct	LL	No	No	Threaded
502	TANK 19	Conct	LL	No	No	Threaded
503	TANK 19	Conct	LL	No	No	Threaded
504	TANK 19	Conct	LL	No	No	Threaded
505	TANK 19	Conct	LL	No	No	Flange
506	TANK 19	Valve	LL	No	No	Ball
507	TANK 19	Valve	LL	No	No	Ball
508	TANK 19	Valve	LL	No	No	Ball
509	TANK 19	Conct	LL	No	No	Threaded
510	TANK 19	Conct	LL	No	No	Threaded
511	TANK 19	Conct	LL	No	No	Threaded
512	TANK 19	Conct	LL	No	No	Threaded

Radian ID	Size	Screening Value	Comments
491	2"	0.0	
492	2"	50.0	
493	2"	80.0	
494	2"	20.0	
495	2"	0.0	
496	2"	0.0	
497	2"	0.0	
498	2"	0.0	
499	2"	1.0	
500	2"	0.0	
501	2"	0.5	
502	2"	0.5	
503	2"	0.0	
504	2"	0.0	
505	2"	0.5	not = 1cm
506	2"	0.0	
507	2"	0.0	
508	1 1/2"	0.0	
509	2"	0.0	
510	2"	0.0	
511	2"	0.0	
512	2"	0.0	water draw system

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Radian ID	Location	Type	Phase	Product	Load	Subtype
513	TANK 19	Conct	LL		No	Threaded
514	TANK 19	Conct	LL		No	Threaded
515	TANK 19	Conct	LL		No	Threaded
516	TANK 19	Conct	LL		No	Threaded
517	TANK 19	Conct	LL		No	Threaded
518	TANK 19	Conct	LL		No	Threaded
519	TANK 19	Conct	LL		No	Plug
520	TANK 19	Conct	LL		No	Flange
521	TANK 19	Conct	LL		No	Threaded
522	TANK 19	Conct	LL		No	Threaded
523	TANK 19	Conct	LL		No	Threaded
524	TANK 19	Conct	LL		No	Threaded
525	TANK 19	Conct	LL		No	Threaded
526	TANK 19	Valve	LL		No	Ball
527	TANK 19	OEL	LL		No	
528	TANK 19	Pump	LL		No	Horz Cent
529	TANK 19	Conct	LL		No	Threaded
530	TANK 19	Conct	LL		No	Threaded
531	TANK 19	Conct	LL		No	Threaded
532	TANK 19	Conct	LL		No	Threaded
533	TANK 19	Conct	LL		No	Threaded
534	TANK 19	Conct	LL		No	Threaded

Radian ID	Size	Screening Value	Comments
513	2"	0.0	
514	1/2"	0.0	
515	1/2"	0.0	
516	1/2"	0.5	
517	1/2"	1.0	
518	1/2"	0.0	
519	1/2"	0.0	
520	2"	1.0	
521	2"	0.0	
522	2"	0.0	
523	1/2"	0.0	
524	1/2"	1.0	
525	1/2"	0.5	
526	1/2"	0.0	
527	1/2"	0.0	
528	1/2"	0.0	
529	1/2"	0.0	
530	1/2"	0.0	
531	1/2"	0.0	
532	1/2"	0.0	
533	1/2"	0.0	
534	1/2"	0.0	

Radian ID	Location	Type	Phase	Product	Load	Subtype
535	TANK 19	OEL	LL		No	
536	TANK 19	Valve	LL		No	Ball
537	TANK 19	Conct	LL		Yes	Threaded
538	TANK 19	Valve	LL		Yes	Gate
539	TANK 19	Conct	LL		Yes	Threaded
540	TANK 19	Conct	LL		Yes	Threaded
541	TANK 19	Conct	LL		Yes	Threaded
542	TANK 19	Conct	LL		Yes	Threaded
543	TANK 19	Conct	LL		Yes	Threaded
544	TANK 19	Conct	LL		Yes	Threaded
545	TANK 19	Conct	LL		Yes	Threaded
546	TANK 19	Conct	LL		No	Threaded
547	TANK 19	Conct	LL		No	Flange
548	TANK 19	Conct	LL		No	Threaded
549	TANK 19	Conct	LL		No	Threaded
550	TANK 19	Conct	LL		No	Threaded
551	TANK 19	Conct	LL		No	Threaded
552	TANK 19	Conct	LL		No	Threaded
553	TANK 19	Valve	LL		No	Ball
554	TANK 19	Other	LL		No	Cover
555	TANK 19	Other	LL		No	Flange
556	TANK 19	Conct	LL		No	Flange

Radian ID	Size	Screening Value	Comments
535	1/2"	0.0	
536	1/2"	0.0	
537	2"	0.0	water draw system
538	2"	0.0	
539	2"	1.5	
540	2"	0.0	
541	2"	0.0	
542	2"	0.0	
543	2"	0.0	
544	2"	0.0	
545	2"	0.5	
546	2"	0.0	not = lcm
547	2"	1.0	
548	2"	0.0	
549	2"	0.0	
550	2"	0.0	
551	2"	0.0	
552	2"	0.0	
553	2"	0.0	
554	72"	3000.0	water draw tank
555	30"	0.0	manhole cover
556	18"	0.0	not = lcm

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size
557	TANK 19	Conct	LL	No	No	Flange	10"
558	TANK 19	Other	LL	No	No	Globe	10"
559	TANK 18	Conct	LL	No	No	Flange	10"
560	TANK 18	Conct	LL	No	No	Globe	1 1/2"
561	TANK 18	Conct	LL	No	No	Threaded	3/4"
562	TANK 18	Conct	LL	No	No	Threaded	1/2"
563	TANK 18	Valve	LL	No	No	Threaded	1/2"
564	TANK 18	Conct	LL	No	No	Threaded	1/2"
565	TANK 18	Conct	LL	No	No	Threaded	1/2"
566	TANK 18	Conct	LL	No	No	Threaded	1/2"
567	TANK 18	Conct	LL	No	No	Union	1 1/2"
568	TANK 18	Conct	LL	No	No	Threaded	1 1/2"
569	TANK 18	Conct	LL	No	No	PRV	1"
570	TANK 18	Conct	LL	No	No	Threaded	1 1/2"
571	TANK 18	Valve	LL	No	No	Plug	1 1/2"
572	TANK 18	Conct	LL	No	No	Threaded	1 1/2"
573	TANK 18	Conct	LL	No	No	Threaded	1 1/2"
574	TANK 18	Valve	LL	No	No	Globe	1 1/2"
575	TANK 18	Conct	LL	No	No	Gate	2"
576	TANK 18	Conct	LL	No	No	Threaded	2"
577	TANK 18	Conct	LL	No	No	Threaded	2-1/4"
578	TANK 18	Valve	LL	No	No	Threaded	2"
579	TANK 18	Conct	LL	No	No	Threaded	3/4"
580	TANK 18	Conct	LL	No	No	Threaded	3/4"
581	TANK 18	Conct	LL	No	No	Threaded	1/2"
582	TANK 18	Conct	LL	No	No	Threaded	1/2"
583	TANK 18	Conct	LL	No	No	Threaded	1/2"
584	TANK 18	Conct	LL	No	No	Threaded	1/2"
585	TANK 18	Conct	LL	No	No	Threaded	1/2"
586	TANK 18	Conct	LL	No	No	Globe	1/2"
587	TANK 18	Valve	LL	No	No	Globe	1/2"
588	TANK 18	Valve	LL	No	No	Threaded	1/2"
589	TANK 18	Conct	LL	No	No	Plug	1/2"
590	TANK 18	Conct	LL	No	No	Threaded	1/2"
591	TANK 18	Conct	LL	No	No	Threaded	1/2"
592	TANK 18	Conct	LL	No	No	Threaded	3/4"
593	TANK 18	Other	LL	No	No	PRV	1"
594	TANK 18	Conct	LL	No	No	Threaded	1/2"
595	TANK 18	Conct	LL	No	No	Threaded	1/2"
596	TANK 18	Conct	LL	No	No	Union	1/2"
597	TANK 18	Conct	LL	No	No	Threaded	1/2"
598	TANK 18	Conct	LL	No	No	Threaded	1/2"
599	TANK 18	Conct	LL	No	No	Threaded	1/2"
600	TANK 18	Conct	LL	No	No	Flange	4"
601	TANK 18	Conct	LL	No	No	Flange	4"
602	TANK 18	Conct	LL	No	No	Check	4"
603	TANK 18	Valve	LL	No	No	Globe	4"
604	TANK 18	Valve	LL	No	No	Globe	4"

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Radian ID	Location	Type	Phase	Product	Load	Subtype
627	TANK 18	Conct	LL		No	Threaded
628	TANK 18	Conct	LL		No	Threaded
629	TANK 18	Conct	LL		No	Threaded
630	TANK 18	Conct	LL		No	Threaded
631	TANK 18	Conct	LL		No	Threaded
632	TANK 18	Conct	LL		No	Threaded
633	TANK 18	Conct	LL		No	Threaded
634	TANK 18	Conct	LL		No	Threaded
635	TANK 18	Conct	LL		No	Plug
636	TANK 18	Conct	LL		No	Flange
637	TANK 18	Conct	LL		No	Threaded
638	TANK 18	Valve	LL		No	Ball
639	TANK 18	Conct	LL		No	Threaded
640	TANK 18	Conct	LL		No	Threaded
641	TANK 18	Conct	LL		No	Threaded
642	TANK 18	Conct	LL		No	Threaded
643	TANK 18	Conct	LL		No	Flange
644	TANK 18	Conct	LL		No	Threaded
645	TANK 18	Conct	LL		No	Threaded
646	TANK 18	Conct	LL		No	Threaded
647	TANK 18	Conct	LL		No	Threaded
648	TANK 18	Valve	LL		No	Ball

Radian ID	Size	Screening Value	Comments
627	2"	0	water draw system
628	2"	4	water draw system
629	2"	2	water draw system
630	2"	0	water draw system
631	2"	0	water draw system
632	2"	1	water draw system
633	2"	0	water draw system
634	2"	2	water draw system
635	2"	4	water draw system
636	2"	0	water draw system, not = 1cm
637	2"	0	water draw system
638	2"	0	water draw system
639	2"	0	water draw system
640	2"	0	water draw system
641	2"	0	water draw system
642	2"	1	water draw system
643	2"	0	water draw system
644	2"	0	water draw system
645	2"	0	water draw system
646	2"	0	water draw system
647	2"	0	water draw system
648	2"	0	water draw system

Radian ID	Location	Type	Phase	Product	Load	Subtype
649	TANK 18	Conct	LL		No	Threaded
650	TANK 18	Conct	LL		No	Threaded
651	TANK 18	Valve	LL		No	Gate
652	TANK 18	Conct	LL		No	Threaded
653	TANK 18	Conct	LL		No	Threaded
654	TANK 18	Conct	LL		No	Threaded
655	TANK 18	Valve	LL		No	Ball
656	TANK 18	Conct	LL		No	Threaded
657	TANK 18	Conct	LL		No	Threaded
658	TANK 18	Conct	LL		No	Flange
659	TANK 18	Conct	LL		No	Threaded
660	TANK 18	Conct	LL		No	Threaded
661	TANK 18	Valve	LL		No	Ball
662	TANK 18	Conct	LL		No	Threaded
663	TANK 18	Conct	LL		No	Threaded
664	TANK 18	Conct	LL		No	Threaded
665	TANK 18	Valve	LL		No	Ball
666	TANK 18	Conct	LL		No	Plug
667	TANK 18	Conct	LL		No	Threaded
668	TANK 18	Conct	LL		No	Threaded
669	TANK 18	Pump	LL		No	Horz Cent
670	TANK 18	Conct	LL		No	Threaded

Radian ID	Size	Screening Value	Comments
649	2"	0	water draw system
650	2"	0	water draw system
651	2"	88	water draw system
652	2"	0	water draw system
653	2"	0	water draw system
654	2"	0	water draw system
655	2"	0	water draw system
656	2"	6	water draw system
657	2"	0	water draw system
658	2"	0	water draw system
659	2"	0	water draw system
660	2"	0	water draw system
661	2"	0	water draw system
662	2"	0	water draw system
663	2"	0	water draw system
664	2"	0	water draw system
665	1/2"	0	water draw system
666	1/2"	0	water draw system
667	2"	0	water draw system
668	2"	0	water draw system
669	2"	0	water draw system
670	1/2"	0	water draw system

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Radian ID	Location	Type	Phase	Product	Load	Subtype
671	TANK 18	Conct	LL		No	Threaded
672	TANK 18	Conct	LL		No	Threaded
673	TANK 18	Conct	LL		No	Threaded
674	TANK 18	Valve	LL		No	Ball
675	TANK 18	Conct	LL		No	Threaded
676	TANK 18	Conct	LL		No	Threaded
677	TANK 18	OEL	LL		No	
678	TANK 18	Conct	LL		No	Flange
679	TANK 18	Conct	LL		No	Threaded
680	TANK 18	Conct	LL		No	Threaded
681	TANK 18	Valve	LL		No	Ball
682	TANK 18	Conct	LL		No	Threaded
683	TANK 18	Conct	LL		No	Threaded
684	TANK 18	Conct	LL		No	Threaded
685	TANK 18	Conct	LL		No	Threaded
686	TANK 18	Valve	LL		No	Ball
687	TANK 18	Conct	LL		No	Threaded
688	TANK 18	Conct	LL		No	Threaded
689	TANK 18	OEL	LL		No	
690	TANK 18	Conct	LL		No	Threaded
691	TANK 18	Conct	LL		No	Threaded
692	TANK 18	Conct	LL		No	Threaded

Radian ID	Size	Screening Value	Comments
671	1/2"	0	
672	1/2"	0	
673	1/2"	0	
674	1/2"	0	
675	1/2"	0	
676	1/2"	0	
677	1/2"	0	
678		0	
679	2"	0	
680	2"	0	
681	2"	0	
682	2"	0	
683	2"	0	
684	2"	0	
685	2"	0	
686	2"	0	
687	2"	0	
688	2"	0	
689	2"	0	
690	2"	0	
691	2"	0	
692	2"	0	

Radian ID	Location	Type	Phase	Product	Load	Subtype
693	TANK 18	Other	LL		No	Cover
694	TANK 18	Other	LL		No	Flange
695	TANK 18	Conct	LL		No	Flange
696	TANK 18	Other	LL		No	Flange
697	TANK 17	Conct	LL		No	Flange
698	TANK 17	Conct	LL		No	Flange
699	TANK 17	Conct	LL		No	Flange
700	TANK 17	Valve	LL		No	Butterfly
701	TANK 17	Conct	LL		No	Threaded
702	TANK 17	Conct	LL		No	Threaded
703	TANK 17	Conct	LL		No	Plug
704	TANK 17	Conct	LL		No	Threaded
705	TANK 17	Conct	LL		No	Threaded
706	TANK 17	Conct	LL		No	Threaded
707	TANK 17	Conct	LL		No	Tubing
708	TANK 17	Conct	LL		No	Threaded
709	TANK 17	Conct	LL		No	Threaded
710	TANK 17	Valve	LL		No	Gate
711	TANK 17	Conct	LL		No	Threaded
712	TANK 17	Conct	LL		No	Threaded
713	TANK 17	Conct	LL		No	Flange
714	TANK 17	Conct	LL		No	Flange

Radian ID	Size	Screening Value	Comments
693	30"	0	
694	30"	0	water draw tank
695	24"	0	manhole cover
696	30"	4	
697	12"	0	manhole cover
698	12"	0	
699	12"	0	not = lcm
700	12"	0	not = lcm
701	1/2"	0	
702	1/2"	0	
703	1/2"	0	
704	1/2"	0	
705	1/2"	0	
706	1/2"	0	
707	1/2"	0	
708	1/2"	0	
709	1/2"	0	
710	1/2"	0	
711	1/2"	0	
712	1/2"	0	
713	12"	0	
714	4"	0	not = lcm

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Radian ID	Screening				Radian ID	Type	Phase	Product	Load	Subtype	Size
	Location	Type	Subtype	Value							
715	TANK 17	Conct	LL	0	not = 1cm	763	TANK 17	Valve	LL	Gate	1/2"
716	TANK 17	Conct	LL	2		764	TANK 17	Conct	LL	Threaded	3/4"
717	TANK 17	Conct	LL	0		765	TANK 17	Conct	LL	Threaded	3/4"
718	TANK 17	Conct	LL	0		766	TANK 17	Valve	LL	Gate	2"
719	TANK 17	Conct	LL	0		767	TANK 17	Conct	LL	Threaded	2-1/4"
720	TANK 17	Valve	LL	0		768	TANK 17	Conct	LL	Threaded	2"
721	TANK 17	Conct	LL	0		769	TANK 17	Conct	LL	Threaded	3"
722	TANK 17	Conct	LL	0		770	TANK 17	Conct	LL	Threaded	3"
723	TANK 17	Conct	LL	0		771	TANK 17	Conct	LL	Threaded	2"
724	TANK 17	Conct	LL	0		772	TANK 17	Conct	LL	Threaded	2"
725	TANK 17	Conct	LL	0		773	TANK 17	Conct	LL	Threaded	2"
726	TANK 17	Conct	LL	0		774	TANK 17	Conct	LL	Threaded	2"
727	TANK 17	Conct	LL	0		775	TANK 17	Conct	LL	Threaded	2"
728	TANK 17	Other	LL	0		776	TANK 17	Conct	LL	Threaded	2"
729	TANK 17	Conct	LL	0		777	TANK 17	Conct	LL	Threaded	2"
730	TANK 17	Conct	LL	0		778	TANK 17	Conct	LL	Threaded	2"
731	TANK 17	Conct	LL	0		779	TANK 17	Conct	LL	Threaded	2"
732	TANK 17	Conct	LL	0		780	TANK 17	Conct	LL	Threaded	2"
733	TANK 17	Valve	LL	1		781	TANK 17	Conct	LL	Plug	2"
734	TANK 17	Conct	LL	0		782	TANK 17	Valve	LL	Threaded	2"
735	TANK 17	Conct	LL	0		783	TANK 17	Conct	LL	Ball	2"
736	TANK 17	Conct	LL	4		784	TANK 17	Conct	LL	Threaded	2"
737	TANK 17	Valve	LL	110							
738	TANK 17	Conct	LL	0	not = 1cm						
739	TANK 17	Conct	LL	88	not = 1cm						
740	TANK 17	Valve	LL	0		763					
741	TANK 17	Conct	LL	0	not = 1cm	764					
742	TANK 17	Conct	LL	0	not = 1cm	765					
743	TANK 17	Conct	LL	0		766					
744	TANK 17	Conct	LL	0	not = 1cm	767					
745	TANK 17	Valve	LL	0		768					
746	TANK 17	Conct	LL	0		769					
747	TANK 17	Conct	LL	0		770					
748	TANK 17	Valve	LL	2		771					
749	TANK 17	Conct	LL	0		772					
750	TANK 17	Conct	LL	33		773					
751	TANK 17	Conct	LL	6		774					
752	TANK 17	Conct	LL	0		775					
753	TANK 17	Conct	LL	0		776					
754	TANK 17	Conct	LL	0		777					
755	TANK 17	Conct	LL	0		778					
756	TANK 17	Conct	LL	0		779					
757	TANK 17	Other	LL	0		780					
758	TANK 17	Conct	LL	0		781					
759	TANK 17	Conct	LL	0		782					
760	TANK 17	Conct	LL	0		783					
761	TANK 17	Conct	LL	0		784					
762	TANK 17	Conct	LL	2							

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size
785	TANK 17	Conct	LL	SU	No	Threaded	2"
786	TANK 17	Conct	LL	SU	No	Threaded	2"
Radian ID	Screening Value	Comments					
785	0	water draw system					
786	0	water draw system					
N = 461							

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
787	TANK 17	Conct	LL	No	Flange	2"	0.0		
788	TANK 17	Conct	LL	No	Threaded	2"	0.0		
789	TANK 17	Conct	LL	No	Threaded	2"	0.0		
790	TANK 17	Conct	LL	No	Threaded	2"	0.0		
791	TANK 17	Valve	LL	No	Ball	2"	0.0		
792	TANK 17	Conct	LL	No	Threaded	2"	0.0		
793	TANK 17	Conct	LL	No	Threaded	2"	0.0		
794	TANK 17	Conct	LL	No	Threaded	2"	0.0		
795	TANK 17	Conct	LL	No	Threaded	2"	0.0		
796	TANK 17	Valve	LL	No	Globe	2"	24.0		
797	TANK 17	Conct	LL	No	Threaded	2"	0.0		
798	TANK 17	Conct	LL	No	Threaded	2"	0.0		
799	TANK 17	Conct	LL	No	Threaded	2"	0.0		
800	TANK 17	Valve	LL	No	Ball	2"	19.0		
801	TANK 17	Conct	LL	No	Threaded	2"	0.0		
802	TANK 17	Conct	LL	No	Threaded	2"	0.0		
803	TANK 17	Conct	LL	No	Threaded	2"	0.0		
804	TANK 17	Conct	LL	No	Threaded	2"	0.0		
805	TANK 17	Conct	LL	No	Threaded	2"	0.5		
806	TANK 17	Conct	LL	No	Threaded	2"	1.0		
807	TANK 17	Valve	LL	No	Ball	2"	0.5		
808	TANK 17	Conct	LL	No	Threaded	2"	0.0		
809	TANK 17	Conct	LL	No	Threaded	2"	0.0		
810	TANK 17	Conct	LL	No	Plug	1/2"	1.0		
811	TANK 17	Conct	LL	No	Flange	2"	0.0		
812	TANK 17	Conct	LL	No	Threaded	2"	0.5		
813	TANK 17	Conct	LL	No	Threaded	2"	0.0		
814	TANK 17	Conct	LL	No	Threaded	2"	0.0		
815	TANK 17	Conct	LL	No	Flange	2"	0.0		
816	TANK 17	Conct	LL	No	Threaded	2"	0.0		
817	TANK 17	Conct	LL	No	Threaded	2"	0.0		

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Radian ID	Location	Type	Phase	Product	Load	Subtype
818	TANK 17	Valve	LL		No	Ball
819	TANK 17	Conct	LL		No	Threaded
820	TANK 17	Conct	LL		No	Threaded
821	TANK 17	Conct	LL		No	Threaded
822	TANK 17	Conct	LL		No	Threaded
823	TANK 17	Conct	LL		No	Threaded
824	TANK 17	Conct	LL		No	Threaded
825	TANK 17	Conct	LL		No	Threaded
826	TANK 17	Conct	LL		No	Threaded
827	TANK 17	Conct	LL		No	Threaded
828	TANK 17	Valve	LL		No	Ball
829	TANK 17	OEL	LL		No	
830	TANK 17	Pump	LL		No	Horz Cent
831	TANK 17	Conct	LL		No	Threaded
832	TANK 17	Conct	LL		No	Threaded
833	TANK 17	Valve	LL		No	Ball
834	TANK 17	Conct	LL		No	Threaded
835	TANK 17	OEL	LL		No	
836	TANK 17	Conct	LL		No	Threaded
837	TANK 17	Conct	LL		No	Threaded
838	TANK 17	Other	LL		No	Hatch
839	TANK 17	Other	LL		No	Flange

Radian ID Size Screening Value Comments

818	2"	0.0	
819	2"	0.5	
820	2"	0.0	
821	2"	0.0	
822	1/2"	0.0	
823	1/2"	0.0	
824	1/2"	0.0	
825	1/2"	0.0	
826	1/2"	0.0	
827	1/2"	0.0	
828	1/2"	0.0	
829	1/2"	0.0	
830		0.0	
831	2"	0.0	
832	2"	0.0	
833	2"	0.0	
834	2"	0.0	
835	2"	0.0	
836	2"	0.0	
837	2"	0.0	
838	72"	0.0	tank cover lid
839	30"	0.0	manhole cover

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
840	TANK 17	Conct	LL	No	Flange	12"	0.0	0.0	
841	TANK 17	Other	LL	No	Flange	30"	0.0	0.0	manhole cover
842	TANK 16	Conct	LL	No	Flange	12"	8.0	not = 1cm	
843	TANK 16	Conct	LL	No	Flange	12"	2.0		
844	TANK 16	Conct	LL	No	Flange	12"	0.0	not = 1cm	
845	TANK 16	Valve	LL	No	Butterfly	12"	0.5		
846	TANK 16	Conct	LL	No	Flange	4"	0.5	not = 1cm	
847	TANK 16	Conct	LL	No	Threaded	1"	0.0		
848	TANK 16	Conct	LL	No	Threaded	1"	0.0		
849	TANK 16	Valve	LL	No	Globe	1"	2.0		
850	TANK 16	Conct	LL	No	Threaded	1"	0.0		
851	TANK 16	Conct	LL	No	Threaded	1"	0.0		
852	TANK 16	Conct	LL	No	Threaded	1"	0.0		
853	TANK 16	Conct	LL	No	Threaded	1"	3.0		
854	TANK 16	Conct	LL	No	Threaded	1"	0.5		
855	TANK 16	Conct	LL	No	Threaded	1"	0.0		
856	TANK 16	Conct	LL	No	Threaded	1"	0.0		
857	TANK 16	Other	LL	No	PRV	1"	0.0		
858	TANK 16	Conct	LL	No	Threaded	1"	0.0		
859	TANK 16	Conct	LL	No	Plug	1/2"	1.0		
860	TANK 16	Conct	LL	No	Threaded	1"	0.0		
861	TANK 16	Conct	LL	No	Threaded	1"	0.0		
862	TANK 16	Valve	LL	No	Globe	1"	0.0		
863	TANK 16	Conct	LL	No	Threaded	1"	0.0		
864	TANK 16	Conct	LL	No	Threaded	1"	0.0		
865	TANK 16	Conct	LL	No	Flange	12"	0.0		
866	TANK 16	Conct	LL	No	Flange	12"	0.0	not = 1cm	
867	TANK 16	Valve	LL	No	Globe	12"	1200.0		
868	TANK 16	Conct	LL	No	Flange	4"	0.0		
869	TANK 16	Conct	LL	No	Threaded	3"	0.0		
870	TANK 16	Conct	LL	No	Threaded	3"	0.0		
871	TANK 16	Valve	LL	No	Gate	3"	0.0		
872	TANK 16	Conct	LL	No	Threaded	3"	0.0		
873	TANK 16	Conct	LL	No	Threaded	2"	0.0		
874	TANK 16	Conct	LL	No	Threaded	2"	44.0		
875	TANK 16	Conct	LL	No	Threaded	2"	0.5		
876	TANK 16	Conct	LL	No	Threaded	2"	0.0		
877	TANK 16	Conct	LL	No	Threaded	2"	0.0		
878	TANK 16	Conct	LL	No	Threaded	2"	0.0		
879	TANK 16	Conct	LL	No	Plug	2"	43.0		
880	TANK 16	Conct	LL	No	Threaded	2"	0.0		
881	TANK 16	Conct	LL	No	Flange	2"	0.0	not = 1cm	
882	TANK 16	Conct	LL	No	Threaded	2"	0.0		
883	TANK 16	Conct	LL	No	Threaded	2"	0.0		
884	TANK 16	Conct	LL	No	Threaded	2"	0.0		
885	TANK 16	Conct	LL	No	Threaded	2"	0.0		
886	TANK 16	Conct	LL	No	Threaded	2"	0.0		
887	TANK 16	Valve	LL	No	Ball	2"	0.0		

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
888	TANK 16	Conct	LL	No	Threaded	2"	0.0	0.0	
889	TANK 16	Conct	LL	No	Threaded	2"	0.0	0.0	
890	TANK 16	Conct	LL	No	Threaded	2"	0.0	0.0	
891	TANK 16	Conct	LL	No	Threaded	2"	0.0	0.0	
892	TANK 16	Conct	LL	No	Threaded	2"	1.0		
893	TANK 16	Valve	LL	No	Globe	2"	44.0		
894	TANK 16	Valve	LL	No	Plug	2"	1.0		
895	TANK 16	Conct	LL	No	Threaded	2"	0.0		
896	TANK 16	Conct	LL	No	Threaded	2"	0.0		
897	TANK 16	Conct	LL	No	Flange	2"	0.0	not = 1cm	
898	TANK 16	Conct	LL	No	Flange	2"	0.0	not = 1cm	
899	TANK 16	Conct	LL	No	Threaded	2"	0.0		
900	TANK 16	Conct	LL	No	Threaded	2"	0.0		
901	TANK 16	Conct	LL	No	Threaded	2"	0.0		
902	TANK 16	Conct	LL	No	Threaded	2"	0.0		
903	TANK 16	Conct	LL	No	Threaded	2"	0.0		
904	TANK 16	Conct	LL	No	Threaded	2"	0.0		
905	TANK 16	Conct	LL	No	Threaded	2"	0.0		
906	TANK 16	Valve	LL	No	Plug	2"	0.0		
907	TANK 16	Conct	LL	No	Threaded	2"	0.0		
908	TANK 16	Conct	LL	No	Threaded	2"	0.0		
909	TANK 16	Conct	LL	No	Threaded	2"	0.0		
910	TANK 16	Conct	LL	No	Threaded	2"	0.0		
911	TANK 16	Conct	LL	No	Flange	2"	0.0	not = 1cm	
912	TANK 16	Conct	LL	No	Threaded	2"	0.0		
913	TANK 16	Conct	LL	No	Threaded	2"	0.0		
914	TANK 16	Conct	LL	No	Threaded	2"	0.0		
915	TANK 16	Valve	LL	No	Ball	2"	0.0		
916	TANK 16	Conct	LL	No	Threaded	2"	0.0		
917	TANK 16	Conct	LL	No	Threaded	2"	0.0		
918	TANK 16	Conct	LL	No	Threaded	2"	0.0		
919	TANK 16	Conct	LL	No	Threaded	2"	0.0		
920	TANK 16	Conct	LL	No	Flange	2"	0.0		
921	TANK 16	Conct	LL	No	Threaded	2"	1.5		
922	TANK 16	Conct	LL	No	Threaded	2"	0.0		
923	TANK 16	Conct	LL	No	Threaded	2"	0.0		
924	TANK 16	Valve	LL	No	Ball	2"	0.0		
925	TANK 16	Conct	LL	No	Threaded	2"	0.0		
926	TANK 16	Conct	LL	No	Threaded	2"	0.5		
927	TANK 16	Conct	LL	No	Threaded	2"	0.0		
928	TANK 16	Conct	LL	No	Threaded	2"	0.0		
929	TANK 16	Conct	LL	No	Threaded	2"	0.0		
930	TANK 16	Conct	LL	No	Threaded	2"	0.0		
931	TANK 16	Valve	LL	No	Ball	2"	0.0		
932	TANK 16	OEL	LL	No	Threaded	2"	0.0		
933	TANK 16	Conct	LL	No	Threaded	2"	0.0		
934	TANK 16	Conct	LL	No	Threaded	2"	0.0		
935	TANK 16	Other	LL	No	Hatch	72"	0.0		tank lid

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Radian ID	Location	Type	Phase	Product	Load	Subtype
936	TANK 16	Conct	LL		No	Threaded
937	TANK 16	Conct	LL		No	Threaded
938	TANK 16	Conct	LL		No	Threaded
939	TANK 16	Conct	LL		No	Threaded
940	TANK 16	Conct	LL		No	Threaded
941	TANK 16	Conct	LL		No	Threaded
942	TANK 16	Conct	LL		No	Plug
943	TANK 16	Valve	LL		No	Ball
944	TANK 16	Other	LL		No	Flange
945	TANK 16	Conct	LL		No	Flange
946	TANK 16	Conct	LL		No	Flange
947	TANK 16	Conct	LL		No	Flange
948	TANK 16	Valve	LL		No	Globe
949	TANK 16	Other	LL		No	Flange
950	TANK 16	Other	LL		No	Threaded
951	TANK 16	Conct	LL		No	Flange
952	TANK 16	Conct	LL		No	Flange
953	TANK 16	Conct	LL		No	Threaded
954	TANK 16	Conct	LL		No	Threaded
955	TANK 16	Conct	LL		No	Threaded
956	TANK 16	Conct	LL		No	Plug
957	TANK 16	Conct	LL		No	Plug

Radian ID	Size	Screening Value	Comments
936	1/2"	0.0	
937	1/2"	0.0	
938	1/2"	0.0	
939	1/2"	0.0	
940	1/2"	0.0	
941	1/2"	0.0	
942	1/2"	0.0	
943	1/2"	0.0	
944	30"	0.0	manhole cover
945	12"	1.0	
946	8"	0.0	not = lcm
947	8"	0.0	not = lcm
948	8"	600.0	
949	30"	0.0	manhole cover
950	3/4"	140.0	thermowell
951	10"	4.0	
952	10"	0.0	not = lcm
953	1"	0.0	
954	1"	1.5	
955	1"	1.0	
956	1"	0.0	
957	1"	0.0	

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
958	TANK 16	Conct	LL		No	Plug	1"	1	
959	TANK 16	Valve	LL		No	Globe	1"	0	
960	TANK 16	Valve	LL		No	Globe	1"	45	
961	TANK 16	Valve	LL		No	Globe	10"	3000	
962	TANK 16	Pump	LL		No	Horz Cent		0	
963	TANK 16	Conct*	LL		No	Threaded	1/2"	15	
964	TANK 16	Valve	LL		No	Gate	1/2"	20	
966	TANK 16	Conct*	LL		No	Threaded	1/2"	3	
967	TANK 16	Valve	LL		No	Gate	1/2"	0	
968	TANK 16	Other	LL		No	PRV	1"	0	
969	TANK 16	Valve	LL		No	Gate	1"	11	
970	TANK 16	Valve	LL		No	Butterfly	10"	1500	
971	TANK 16	Valve	LL		No	Globe	4"	0	
972	TANK 15	Valve	LL		No	Gate	1"	0	
973	TANK 15	Conct*	LL		No	Threaded	1/2"	0	
974	TANK 15	Conct*	LL		No	Flange	12"	0	not = lcm
975	TANK 15	Valve	LL		No	Butterfly	12"	7	
976	TANK 15	Valve	LL		No	Globe	4"	0	
977	TANK 15	Valve	LL		No	Globe	12"	300	
978	TANK 15	Conct*	LL		No	Threaded	1/2"	0	
979	TANK 15	Valve	LL		No	Gate	1"	3	
980	TANK 15	Valve	LL		No	Gate	1"	1	
981	TANK 15	Other	LL		No	PRV	1"	0	
982	TANK 15	Conct*	LL		No	Flange	4"	0	not = lcm
983	TANK 15	Valve	LL		No	Gate	3"	0	
984	TANK 15	Conct*	LL		No	Plug	2"	0	
985	TANK 15	Valve	LL		No	Ball	2"	0	
986	TANK 15	Conct*	LL		No	Threaded	2"	0	
987	TANK 15	Valve	LL		No	Gate	2"	13	
988	TANK 15	Valve	LL		No	Plug	2"	0	
989	TANK 15	Conct*	LL		No	Threaded	2"	0	
990	TANK 15	Valve	LL		No	Ball	2"	0	
991	TANK 15	Conct*	LL		No	Threaded	2"	0	
992	TANK 15	Valve	LL		No	Plug	2"	0	
993	TANK 15	Conct*	LL		No	Threaded	2"	0	
994	TANK 15	Conct*	LL		No	Threaded	2"	0	
995	TANK 15	OEL	LL		No	Threaded	2"	0	
996	TANK 15	Pump	LL		No	Horz Cent		0	
997	TANK 15	Valve	LL		No	Ball	2"	0	
998	TANK 15	Valve	LL		No	Ball	2"	0	
999	TANK 15	Valve	LL		No	Ball	1/2"	0	
1000	TANK 15	OEL	LL		No	Threaded	1/2"	0	
1001	TANK 15	Other	LL		No	Flange	30"	0	manhole
1002	TANK 15	Conct*	LL		No	Threaded	1/2"	0	
1003	TANK 15	Conct*	LL		No	Threaded	1/2"	0	
1004	TANK 15	Conct*	LL		No	Threaded	1/2"	4	
1005	TANK 15	Conct*	LL		No	Plug	1/2"	0	
1006	TANK 15	Conct	LL		No	Threaded	1/2"	6	

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Radian ID	Location	Type	Phase	Product	Load	Subtype
1007	TANK 15	Valve	LL		No	Gate	1033	TANK 14	Other	LL	ENV	No	PRV
1008	TANK 15	Conct*	LL		No	Threaded	1034	TANK 14	Valve	LL	ENV	No	Ball
1009	TANK 15	Conct*	LL		No	Flange	1035	TANK 14	Conct*	LL	ENV	No	Threaded
1010	TANK 15	Valve	LL		No	Globe	1036	TANK 14	Conct*	LL	ENV	No	Threaded
1012	TANK 15	Valve	LL		No	Gate	1037	TANK 14	Valve	LL	ENV	No	Gate
1013	TANK 15	Valve	LL		No	Gate	1038	TANK 14	Valve	LL	ENV	No	Butterfly
1014	TANK 15	Valve	LL		No	Globe	1039	TANK 14	Conct*	LL	ENV	No	Threaded
1015	TANK 15	Pump	LL		No	Horz Cent	1040	TANK 14	Conct*	LL	ENV	No	Plug
1016	TANK 15	Valve	LL		No	Gate	1041	TANK 14	Valve	LL	ENV	No	Gate
1017	TANK 15	Valve	LL		No	Gate	1042	TANK 14	Valve	LL	ENV	No	Gate
1018	TANK 15	Other	LL		No	PRV	1043	TANK 14	Valve	LL	ENV	No	Globe
1019	TANK 15	Valve	LL		No	Globe	1044	TANK 14	Other	LL	ENV	No	PRV
1020	TANK 14	Conct*	LL		No	Flange	1045	TANK 14	Conct*	LL	ENV	No	Threaded
1023	TANK 14	Conct*	LL	ENV	No	Plug	1046	TANK 14	Conct*	LL	ENV	No	Threaded
1024	TANK 14	Conct*	LL		No	Threaded	1047	TANK 14	Valve	LL	ENV	No	Globe
1026	TANK 14	Valve	LL	ENV	No	Globe	1048	TANK 14	Valve	LL	ENV	No	Ball
1027	TANK 14	Valve	LL	ENV	No	Globe	1049	TANK 14	Valve	LL	ENV	No	Control
1028	TANK 14	Valve	LL	ENV	No	Globe	1050	TANK 14	Valve	LL	ENV	No	Ball
1029	TANK 14	Valve	LL	ENV	No	Globe	1051	TANK 14	Valve	LL	ENV	No	Control
1030	TANK 14	Pump	LL	ENV	No	Horz Cent	1052	TANK 14	Valve	LL	ENV	No	Gate
1031	TANK 14	Valve	LL	ENV	No	Gate	1053	TANK 14	Valve	LL	ENV	No	Ball
1032	TANK 14	Valve	LL	ENV	No	Gate	1054	TANK 14	Valve	LL	ENV	No	Ball

Radian ID	Size	Screening Value	Comments
1007	1/2"	10.0	
1008	1/2"	0.0	
1009	8"	0.0	
1010	10"	0.0	not = 1cm
1012	1"	0.0	
1013	1"	2.5	
1014	8"	120.0	
1015		1.0	
1016	1/2"	0.0	
1017	1/2"	15.0	
1018	1"	13.0	
1019	4"	0.0	
1020	8"	0.0	
1023	1/2"	10.0	
1024	1/2"	120.0	
1026	10"	300.0	
1027	4"	200.0	
1028	4"	5000.0	
1029	8"	0.0	
1030		0.0	
1031	1"	2.0	
1032	1"	22.0	

Radian ID	Size	Screening Value	Comments
1033	1"	5.0	
1034	1/2"	0.0	
1035	1/2"	0.0	
1036	1/2"	0.0	
1037	1/2"	0.0	
1038	12"	0.0	
1039	1/2"	0.0	
1040	1/2"	0.0	
1041	1"	0.5	
1042	1"	0.5	
1043	4"	0.0	
1044	1"	0.0	
1045	1/2"	0.0	
1046	1/2"	0.0	
1047	4"	8.0	
1048	1/2"	0.0	
1049	4"	3000.0	motor control
1050	3/8"	0.0	
1051	2"	0.0	
1052	3"	0.0	
1053	2"	0.0	
1054	2"	0.0	

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1055	TANK 14	OEL	LL	ENV	No	
1056	TANK 14	Valve	LL	ENV	No	Ball
1057	TANK 14	OEL	LL	ENV	No	
1058	TANK 14	Valve	LL	ENV	No	Ball
1059	TANK 14	Valve	LL	ENV	No	Ball
1060	TANK 14	Pump	LL	ENV	No	Horz Cent
1061	TANK 14	Valve	LL	ENV	No	Plug
1062	TANK 14	Valve	LL	ENV	No	Ball
1063	TANK 14	Valve	LL	ENV	No	Plug
1064	TANK 14	Valve	LL	ENV	No	Globe
1065	TANK 14	Valve	LL	ENV	No	Globe
1066	TANK 14	Valve	LL	ENV	No	Plug
1067	TANK 14	Conct*	LL	ENV	No	Threaded
1068	TANK 14	Conct*	LL	ENV	No	Threaded
1069	TANK 14	Conct*	LL	ENV	No	Threaded
1070	TANK 14	Conct*	LL	ENV	No	Threaded
1071	TANK 14	Conct*	LL	ENV	No	Flange
1072	TANK 14	Valve	LL	ENV	No	Globe
1073	VRU Slop Tank	Valve	LL	ENV	No	Globe
1074	VRU Slop Tank	Pump	LL		No	Horz Cent
1075	VRU Slop Tank	Conct*	LL		No	Flange
1076	VRU Slop Tank	Conct*	LL		No	Threaded

Radian ID	Size	Screening Value	Comments
1055	2"	0.0	
1056	1/2"	0.0	
1057	1/2"	0.0	
1058	2"	0.5	
1059	2"	0.0	
1060	2"	0.0	
1061	2"	0.0	
1062	2"	0.0	
1063	2"	1.0	
1064	1"	0.0	
1065	2"	25.0	
1066	2"	0.0	
1067	2"	0.0	
1068	2"	0.0	
1069	2"	0.0	
1070	1"	0.0	
1071	30"	0.0	
1072	4"	3.0	
1073	1"		inacc
1074			inacc
1075	1"	0.0	not = lcm
1076	1"		unable to get reading - inacc

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Radian ID	Location	Type	Phase	Product	Load
1077	VRU Slop Tank	OEL	LL		No
1078	VRU Slop Tank	Conct*	LL		No
1079	VRU Slop Tank	Valve	LL		No
1080	MR to VRU	Conct*	LL	ENV	No
1081	MR to VRU	Valve	LL	ENV	No
1082	MR to VRU	Valve	LL	ENV	No
1083	MR to VRU	Valve	LL	ENV	No
1084	MR to VRU	Valve	LL	ENV	No
1085	MR to VRU	Valve	LL	ENV	No
1086	MR to VRU	Valve	LL	ENV	No
1087	MR to VRU	Valve	LL	ENV	No
1088	TANK 12	Conct*	LL	ENV	No
1090	TANK 12	Pump	LL	ENV	No
1091	TANK 12	Conct*	LL	ENV	No
1092	TANK 12	Valve	LL	ENV	No
1093	TANK 12	Valve	LL	ENV	No
1094	TANK 12	Valve	LL	ENV	No
1095	TANK 12	Valve	LL	ENV	No
1096	TANK 12	Valve	LL	ENV	No
1097	TANK 12	Conct*	LL	ENV	No
1098	TANK 12	Valve	LL	ENV	No
1099	TANK 12	Valve	LL	ENV	No

Radian ID	Subtype	Size	Screening Value	Comments
1077	Vent	1"	340000.0	tank vent
1078	Threaded	1"	0.0	
1079	Gate	1"	2.0	
1080	Flange	2"	0.0	not = lcm
1081	Globe	3"	0.0	
1082	Globe	3"	0.5	
1083	Globe	3"	0.5	
1084	Globe	3"	1.5	
1085	Globe	3"	0.0	
1086	Globe	3"	2.5	
1087	Globe	3"	0.0	
1088	Threaded	1/2"	0.0	
1090	Horz Cent		0.0	
1091	Tubing	3/8"	0.0	
1092	Globe	3"	35.0	
1093	Ball	1/2"	0.0	
1094	Ball	1/2"	0.0	
1095	Gate	1/2"	0.0	
1096	Globe	3"	0.0	
1097	Union	1"	55.0	
1098	Globe	1"	0.0	
1099	Globe	3"	65.0	

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
1100	TANK 12	Conct*	LL	ENV	No	Flange	4"	0	not = 1cm
1101	TANK 12	Conct*	LL	ENV	No	Threaded	1/2"	0	
1102	TANK 12	Conct*	LL	ENV	No	Flange	8"	0	
1103	TANK 12	Conct*	LL	ENV	No	Threaded	1/2"	0	
1104	TANK 12	Valve	LL	ENV	Yes	Globe	4"	0	
1105	TANK 12	Valve	LL	ENV	Yes	Globe	4"	10	
1106	TANK 12	Valve	LL	ENV	Yes	Globe	10"	250	
1107	TANK 12	Valve	LL	ENV	Yes	Globe	1"	350	
1108	TANK 12	Valve	LL	ENV	Yes	Globe	1"	25	
1109	TANK 12	Valve	LL	ENV	Yes	Globe	8"	140	
1110	TANK 12	Pump	LL	ENV	Yes	Horz Cent	1/2"	0	pump on
1111	TANK 12	Valve	LL	ENV	Yes	Globe	1"	0	
1112	TANK 12	Valve	LL	ENV	Yes	Globe	1"	2	
1113	TANK 12	Valve	LL	ENV	Yes	Globe	1"	0	
1114	TANK 12	Other	LL	ENV	Yes	PRV	1"	4500	
1115	TANK 12	Conct*	LL	ENV	No	Threaded	1"	0	
1116	TANK 12	Conct*	LL	ENV	No	Threaded	1"	0	
1117	TANK 12	Valve	LL	ENV	No	Globe	12"	0	
1118	TANK 12	Valve	LL	ENV	No	Globe	4"	0	
1119	TANK 12	Valve	LL	ENV	No	Butterfly	12"	0	
1120	TANK 12	Valve	LL	ENV	No	Globe	1/2"	0	
1121	TANK 12	Conct*	LL	ENV	No	Tubing	3/8"	0	
1122	TANK 12	Valve	LL	ENV	No	Globe	4"	1000	
1123	TANK 12	Valve	LL	ENV	No	Globe	3"	0	
1124	TANK 12	Valve	LL	ENV	No	Ball	2"	0	
1125	TANK 12	Valve	LL	ENV	No	Ball	2"	0	
1126	TANK 12	Valve	LL	ENV	No	Ball	1/2"	0	
1127	TANK 12	OEL	LL	ENV	No	1/2"	1/2"	0	
1128	TANK 12	OEL	LL	ENV	No	Ball	2"	0	
1129	TANK 12	Valve	LL	ENV	No	Ball	2"	0	
1130	TANK 12	Valve	LL	ENV	No	Ball	2"	0	
1131	TANK 12	Pump	LL	ENV	No	Horz Cent	2"	0	
1132	TANK 12	Valve	LL	ENV	No	Ball	2"	0	
1133	TANK 12	Valve	LL	ENV	No	Ball	2"	0	
1134	TANK 12	Valve	LL	ENV	No	Plug	2"	0	
1135	TANK 12	Valve	LL	ENV	No	Globe	2"	0	
1136	TANK 12	Conct*	LL	ENV	No	Threaded	2"	0	
1137	TANK 12	Conct*	LL	ENV	No	Threaded	2"	0	
1138	TANK 12	Conct*	LL	ENV	No	Threaded	2"	0	
1139	TANK 12	Conct*	LL	ENV	No	Threaded	2"	0	
1140	TANK 12	Conct*	LL	ENV	No	Flange	8"	0	
1141	TANK 11	Pump	LL	ENV	No	Horz Cent	8"	0	
1142	TANK 11	Valve	LL	ENV	No	Globe	1/2"	26	
1143	TANK 11	Valve	LL	ENV	No	Globe	1/2"	0	
1144	TANK 11	Conct*	LL	ENV	No	Plug	10"	26	
1145	TANK 11	Valve	LL	ENV	Yes	Globe	10"	5	
1146	TANK 11	Valve	LL	ENV	Yes	Globe	1/2"	0	
1147	TANK 11	Conct*	LL	ENV	Yes	Flange	8"	0	not = 1cm

Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
1148	TANK 11	Valve	LL	ENV	Yes	Globe	8"	7.0	
1149	TANK 11	Pump	LL	ENV	Yes	Horz Cent	8"	4000.0	pump on
1150	TANK 11	Conct*	LL	ENV	Yes	Threaded	1/2"	0.0	
1151	TANK 11	Valve	LL	ENV	Yes	Gate	1"	0.0	
1152	TANK 11	Valve	LL	ENV	Yes	Gate	1"	12.0	
1153	TANK 11	Conct*	LL	ENV	Yes	Plug	1/2"	0.0	
1154	TANK 11	Other	LL	ENV	Yes	PRV	1"	0.0	
1155	TANK 11	Conct*	LL	ENV	No	Union	1"	0.0	
1156	TANK 11	Conct*	LL	ENV	No	Tubing	3/8"	0.0	
1157	TANK 11	Conct*	LL	ENV	No	Plug	1/2"	0.0	
1158	TANK 11	Valve	LL	ENV	No	Ball	1/2"	0.0	
1159	TANK 11	Valve	LL	ENV	No	Butterfly	12"	0.0	
1160	TANK 11	Valve	LL	ENV	No	Gate	1/2"	0.0	
1161	TANK 11	Other	LL	ENV	No	PRV	1/2"	7.0	
1162	TANK 11	Valve	LL	ENV	No	Gate	1/2"	0.0	
1163	TANK 11	Valve	LL	ENV	No	Globe	4"	0.0	
1164	TANK 11	Valve	LL	ENV	No	Globe	4"	0.0	
1165	TANK 11	Valve	LL	ENV	No	Globe	3"	5.5	inacc
1166	TANK 11	Valve	LL	ENV	No	Globe	2"	0.0	inacc
1167	TANK 11	Valve	LL	ENV	No	Plug	2"	0.0	inacc
1168	TANK 11	Conct*	LL	ENV	No	Threaded	2"	0.0	
1169	TANK 11	OEL	LL	ENV	No	1/2"	1/2"	0.0	
1170	TANK 11	OEL	LL	ENV	No	2"	2"	0.0	inacc
1171	TANK 11	Conct*	LL	ENV	No	Threaded	2"	0.0	
1172	TANK 11	Conct*	LL	ENV	No	Plug	1/2"	0.0	
1173	TANK 11	Conct*	LL	ENV	No	Flange	2"	0.0	
1174	TANK 11	Valve	LL	ENV	No	Ball	2"	0.0	
1175	TANK 11	Valve	LL	ENV	No	Plug	2"	0.0	
1176	TANK 11	Pump	LL	ENV	No	Horz Cent	2"	0.0	
1177	TANK 11	Valve	LL	ENV	No	Ball	2"	0.0	
1178	TANK 11	Valve	LL	ENV	No	Ball	2"	0.0	
1179	TANK 11	Valve	LL	ENV	No	Ball	2"	0.0	
1180	TANK 11	Valve	LL	ENV	No	Ball	2"	0.0	
1181	TANK 11	OEL	LL	ENV	No	Ball	1/2"	0.0	inacc
1182	TANK 11	Valve	LL	ENV	No	Butterfly	4"	0.0	
1183	TANK 11	Valve	LL	ENV	No	Ball	2"	0.0	

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Radian ID	Location	Type	Phase	Product	Load	Subtype
1184	TANK 29	Conct*	Gas	VR	No	Plug
1185	TANK 29	Valve	Gas	VR	No	Globe
1186	TANK 29	Valve	Gas	VR	No	Globe
1187	TANK 29	OEL	Gas	VR	No	Vent
1188	VRU	Conct*	Gas	VR	No	Flange
1189	TANK 28	Conct*	Gas	VR	No	Threaded
1190	TANK 28	Conct*	Gas	VR	No	Plug
1191	TANK 28	Valve	Gas	VR	No	Globe
1192	TANK 28	Valve	Gas	VR	No	Globe
1193	TANK 28	OEL	Gas	VR	No	Vent
1194	TANK 28 WT	OEL	LL	VR	No	
1195	TANK 28 WT	OEL	LL	VR	No	
1196	TANK 28 WT	Conct*	LL	VR	No	Flange
1197	TANK 28 WT	Conct*	LL	VR	No	Flange
1198	PIPELINE	Conct*	LL	VR	No	Flange
1199	PIPELINE	Conct*	LL		No	Flange
1200	PIPELINE	Conct*	LL		No	Flange
1201	PIPELINE	Conct*	LL		No	Flange
1202	PIPELINE	Conct*	LL		No	Threaded
1203	PIPELINE	Valve	LL		No	Tubing
1204	PIPELINE	Valve	LL		No	Globe
1205	PIPELINE	Other	LL		No	PRV
Radian ID	Size	Screening Value	Comments			
1184	1/2"	7.0				
1185	4"	0.0				
1186	1/2"	0.0				
1187	12"	290.0	tank vent			
1188	10"		inacc - VR line			
1189	2"	0.0				
1190	1/2"	0.0				
1191	1/2"	0.0				
1192	2"	0.0				
1193	12"	4200.0	tank vent			
1194	1"	0.0				
1195	1"	0.0				
1196	4"	0.0				
1197	4"	0.0				
1198	8"	0.0				
1199	8"	0.0	not = 1cm			
1200	8"	0.0	not = 1cm			
1201	2"	0.0				
1202	1"	0.0				
1203	10"	0.0				
1204	1/2"	0.0				
1205	1"	0.0				

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
1206	PIPELINE Valve	LL		No	Globe	1/2"	2.5		
1207	PIPELINE Valve	LL		No	Globe	2"	1.0		
1208	PIPELINE Pump	LL		No	Horz Cent	1/2"	16.0		pump off
1209	PIPELINE Valve	LL		No	Globe	8"	0.5		
1210	PIPELINE Valve	LL		No	Globe	10"	17.0		
1211	PIPELINE Valve	LL		No	Globe	10"	47.0		
1212	PIPELINE Valve	LL		No	Globe	10"	27.0		
1213	PIPELINE Conct*	LL		No	Flange	12"	0.0		
1214	PIPELINE Conct*	LL		No	Flange	12"	0.0		
1215	PIPELINE Valve	LL		No	Flange	12"	2000.0		not = 1cm
1216	PIPELINE Conct*	LL		No	Flange	12"	0.0		
1217	PIPELINE Valve	LL		No	Globe	12"	13.0		
1218	PIPELINE Valve	LL		No	Butterfly 8"	12"	700.0		
1219	PIPELINE Conct*	LL		No	Flange	2"	0.0		not = 1cm
1220	PIPELINE Valve	LL		No	Globe	2"	600.0		
1221	PIPELINE Valve	LL		No	Globe	2"	12.0		
1222	PIPELINE Valve	LL		No	Globe	12"	0.0		
1223	PIPELINE Conct*	LL		No	Flange	12"	0.0		
1224	PIPELINE Valve	LL		No	Globe	1"	0.0		
1225	PIPELINE Valve	LL		No	Globe	1"	0.0		
1226	PIPELINE Valve	LL		No	Globe	12"	1200.0		visibly wet
1227	PIPELINE Conct*	LL		No	Flange	12"	0.0		not = 1cm
1228	PIPELINE Valve	LL		No	Butterfly 12"	12"	0.0		
1229	PIPELINE Conct*	LL		ENV	Threaded	4"	0.0		
1230	PIPELINE Valve	LL		ENV	Globe	4"	0.0		
1231	PIPELINE Valve	LL		No	Butterfly 8"	8"	67.0		
1232	PIPELINE Conct*	LL		No	Threaded	12"	0.0		not = 1cm
1233	PIPELINE Valve	LL		No	Globe	12"	4000.0		
1234	PIPELINE Valve	LL		ENV	Globe	3"	13.0		
1235	PIPELINE Conct*	LL		No	Flange	12"	0.0		not = 1cm
1236	PIPELINE Conct*	LL		Yes	Threaded	1/2"	0.0		
1237	PIPELINE Valve	LL		No	Butterfly 12"	12"	0.0		
1238	PIPELINE Valve	LL		No	Gate	1/2"	0.0		
1239	PIPELINE Conct*	LL		No	Flange	12"	0.0		not = 1cm
1240	PIPELINE Conct*	LL		No	Plug	1/2"	0.0		
1241	PIPELINE Valve	LL		No	Globe	1/2"	0.0		
1242	PIPELINE Valve	LL		No	Globe	10"	0.0		
1243	PIPELINE Valve	LL		No	Gate	1"	17.0		
1244	PIPELINE Conct*	LL		No	Threaded	1"	0.0		
1245	PIPELINE Conct*	LL		No	Flange	12"	0.0		not = 1cm
1246	PIPELINE Conct*	LL		No	Threaded	1"	0.0		
1247	PIPELINE Conct*	LL		No	Threaded	1"	0.0		
1248	PIPELINE Conct*	LL		No	Threaded	1"	0.0		
1249	PIPELINE Conct*	LL		No	Threaded	1"	0.0		
1250	PIPELINE Conct*	LL		No	Flange	12"	0.0		not = 1cm
1251	PIPELINE Conct*	LL		No	Flange	12"	0.0		
1252	PIPELINE Conct*	LL		No	Plug	1/2"	0.0		
1253	PIPELINE Conct*	LL		No	Threaded	1/2"	250.0		

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API Screening Data
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Radian ID	Location	Type	Phase	Product	Load	Subtype
1254	PIPELINE	Conct*	LL		No	Threaded
1255	PIPELINE	Conct*	LL		No	Threaded
1256	PIPELINE	Conct*	LL		No	Threaded
1257	PIPELINE	Conct*	LL		No	Globe
1258	PIPELINE	Conct*	LL		No	Flange
1259	PIPELINE	Conct*	LL		No	Flange
1260	PIPELINE	Conct*	LL		No	Flange
1261	PIPELINE	Conct*	LL		No	Flange
1262	PIPELINE	Valve	LL		No	Threaded
1263	PIPELINE	Valve	LL		No	Gate
1264	PIPELINE	Conct*	LL		No	Flange
1265	PIPELINE	Conct*	LL		No	Flange
1266	PIPELINE	Conct*	LL		No	Flange
1267	PIPELINE	Conct*	LL		No	Gate
1268	PIPELINE	Conct*	LL		No	Gate
1269	PIPELINE	Conct*	LL		No	Gate
1270	PIPELINE	Conct*	LL		No	Gate
1271	PIPELINE	Other	LL		Yes	Gate
1272	PIPELINE	Conct*	LL		Yes	Butterfly
1273	PIPELINE	Conct*	LL		Yes	Gate
1274	PIPELINE	Conct*	LL		Yes	Gate
1275	PIPELINE	Conct*	LL		Yes	Flange

Radian ID	Size	Screening Value	Comments
1276	1/2"	0.0	
1277	1/2"	0.0	
1278	1/2"	0.0	
1279	1/2"	0.0	
1280	12"	0.0	inacc
1281	12"	0.0	not = 1cm
1282	12"	0.0	not = 1cm
1283	10"	0.0	not = 1cm
1284	10"	0.0	not = 1cm
1285	1/2"	4.0	
1286	1/2"	1.0	
1287	8"	0.0	open drip tank underneath
1288	1/2"	0.0	
1289	8"	0.0	not = 1cm
1290	8"	0.0	
1291	1/2"	0.0	
1292	1/2"	0.0	
1293	1/2"	0.0	
1294	8"	0.0	
1295	1"	0.0	
1296	1"	2.0	
1297	12"	0.0	not = 1cm

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Radian ID	Location Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
1298	BLF	Valve	LL	Yes	Butterfly 12"	340.0		
1299	BLF	Valve	LL	Yes	Globe 12"	300.0		
1300	BLF	Valve	LL	Yes	Globe 2"	25.0		
1301	BLF	Valve	LL	No	Gate 1"	9.0		
1302	BLF	Conct*	LL	No	Flange 8"	0.0		
1303	BLF	Conct*	LL	No	Threaded 1"	0.0		
1304	BLF	Valve	LL	No	Butterfly 8"	0.0		
1305	BLF	Valve	LL	No	Butterfly 8"	300.0		
1306	BLF	OEL	LL	No	Gate 1/2"	0.0		
1307	BLF	Valve	LL	No	Gate 1/2"	0.0		
1308	BLF	Valve	LL	No	Gate 1/2"	0.0		inacc
1309	BLF	OEL	LL	No	Gate 1/2"	0.0		
1310	BLF	Valve	LL	No	Globe 1"	0.0		
1311	BLF	Valve	LL	No	Globe 1"	1.0		
1312	BLF	Valve	LL	No	Butterfly 12"	0.0		
1313	BLF	Valve	LL	No	Gate 1/2"	2.0		
1314	BLF	Conct*	LL	No	Threaded 2"	0.0		
1315	BLF	Valve	LL	No	Globe 12"	45.0		
1316	BLF	Valve	LL	No	Globe 2"	10.0		
1317	BLF	Conct*	LL	No	Plug 1"	200.0		
1318	BLF	Valve	LL	No	Gate 1/2"	0.0		
1319	BLF	Conct*	LL	No	Flange 8"	0.0		
1320	BLF	Conct*	LL	No	Flange 12"	0.0		
1321	BLF	Valve	LL	No	Globe 8"	7.5		
1322	BLF	Valve	LL	No	Globe 8"	1.0		
1323	BLF	Valve	LL	No	Globe 1"	2.0		
1324	BLF	Valve	LL	No	Gate 1"	0.0		
1325	BLF	Valve	LL	No	Butterfly 12"	600.0		
1326	BLF	Valve	LL	No	Gate 1/2"	0.0		
1327	BLF	Valve	LL	No	Globe 12"	0.0		
1328	BLF	Valve	LL	No	Gate 2"	65.0		
1329	BLF	Valve	LL	Yes	Globe 4"	0.0		
1330	BLF	Conct*	LL	Yes	Flange 4"	0.0		
1331	BLF	Valve	LL	Yes	Globe 2"	0.0		
1332	BLF	Valve	LL	No	Control 4"	0.0		
1333	BLF	Valve	LL	No	Globe 2"	0.0		
1334	BLF	Valve	LL	No	Control 4"	0.0		
1335	BLF	Valve	LL	No	Globe 2"	0.0		
1336	BLF	Valve	LL	No	Control 2"	0.0		
1337	BP	Valve	LL	No	Control 12"	3.0		
1338	BP	Valve	LL	No	Gate 1/2"	1.0		
1339	BP	Valve	LL	No	Ball 1/2"	0.0		
1340	BP	Valve	LL	No	Gate 1/2"	0.0		
1341	BP	Other	LL	No	PRV 1"	55.0		
1342	BP	Conct*	LL	No	Threaded 1/2"	0.0		
1343	BP	Conct*	LL	No	Union 1/2"	0.0		
1344	BP	Valve	LL	No	Control 12"	0.0		
1345	BP	Valve	LL	No	Gate 1/2"	3.0		

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Radian ID	Location Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
1346	BP	Valve	LL	No	Ball 1/2"	0.0		
1347	BP	Valve	LL	No	Gate 1/2"	2.0		
1348	BP	Other	LL	No	PRV 1"	0.0		
1349	BP	Conct*	LL	No	Threaded 1/2"	0.0		
1350	BP	Conct*	LL	No	Union 1/2"	0.0		
1351	BP	Valve	LL	Yes	Control 12"	0.0		
1352	BP	Valve	LL	Yes	Gate 1/2"	15.0		
1353	BP	Valve	LL	Yes	Gate 1/2"	0.0		
1354	BP	Other	LL	Yes	PRV 1"	0.0		
1355	BP	Conct*	LL	Yes	Threaded 1/2"	0.0		
1356	BP	Conct*	LL	Yes	Threaded 1/2"	0.0		
1357	BP	Pump	LL	No	Horz Cent 2"	400.0		
1358	BP	Conct*	LL	No	Threaded 1/2"	0.0		
1359	BP	Valve	LL	No	Ball 1/2"	0.0		
1360	BP	Valve	LL	No	Ball 3/8"	0.0		
1361	BP	Valve	LL	Yes	Control 2"	0.0		
1362	BP	Valve	LL	Yes	Globe 2"	0.0		not = 2cm
1363	BP	Conct*	LL	No	Flange 2"	0.0		
1364	BP	Valve	LL	No	Globe 2"	0.0		
1365	BP	Valve	LL	No	Control 2"	0.0		
1366	BP	Valve	LL	No	Globe 2"	0.0		
1367	BP	Valve	LL	No	Control 2"	0.5		
1368	BP	Valve	LL	No	Gate 1/2"	0.0		
1369	BP	Valve	LL	Yes	Gate 1/2"	0.0		
1370	BP	Valve	LL	Yes	Gate 1/2"	0.0		
1371	BP	Valve	LL	No	Gate 1/2"	11.0		
1372	BP	Valve	LL	No	Gate 1/2"	0.0		
1373	BP	Conct*	LL	No	Threaded 1/2"	0.0		
1374	PIPELINE	Pump	LL	No	Horz Cent 2"	9000.0		
1375	PIPELINE	Valve	LL	No	Gate 3/8"	0.0		
1376	PIPELINE	Conct*	LL	No	Threaded 3/8"	0.0		
1377	PIPELINE	Valve	LL	No	Gate 1/2"	290.0		
1378	PIPELINE	Conct*	LL	No	Tubing 3/8"	0.0		
1379	PIPELINE	Valve	LL	No	Gate 1/2"	0.0		
1380	PIPELINE	Valve	LL	No	Gate 1/2"	0.0		
1381	PIPELINE	Conct*	LL	No	Threaded 1/2"	0.0		
1382	PIPELINE	Valve	LL	No	Gate 1/2"	50.0		visibly wet
1383	PIPELINE	Valve	LL	No	Globe 12"	3000.0		
1384	PIPELINE	Valve	LL	No	Gate 1/2"	30.0		
1385	PIPELINE	Conct*	LL	No	Threaded 1/2"	0.0		
1386	PIPELINE	Conct*	LL	No	Threaded 1/2"	0.0		
1387	PIPELINE	Conct*	LL	No	Threaded 1/2"	0.0		
1388	PIPELINE	Conct*	LL	No	Threaded 3/4"	0.0		
1389	PIPELINE	Valve	LL	No	Gate 1/2"	0.0		
1390	PIPELINE	Valve	LL	No	Butterfly 12"	0.0		
1391	PIPELINE	Other	LL	No	PRV 1"	0.0		
1392	PIPELINE	Valve	LL	No	Gate 1/2"	0.0		
1393	PIPELINE	Pump	LL	No	Horz Cent 1/2"	3.0		

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
1394	PIPELINE	OEL	LL	No	No	Gate	3/8"	2.0	
1395	PIPELINE	Valve	LL	No	No	Gate	1/2"	0.0	
1396	PIPELINE	Valve	LL	No	No	Gate	1/2"	0.0	
1397	PIPELINE	Valve	LL	No	No	Butterfly	12"	34.0	
1398	PIPELINE	Valve	LL	No	No	Gate	1/2"	0.0	
1399	PIPELINE	Other	LL	No	No	PRV	1"	0.0	
1400	PIPELINE	Valve	LL	No	No	Gate	3/4"	0.0	
1401	PIPELINE	Valve	LL	No	No	Gate	1/2"	3.0	
1402	PIPELINE	Valve	LL	No	No	Gate	1/2"	1.0	
1403	PIPELINE	Valve	LL	No	No	Globe	12"	5000.0	
1404	PIPELINE	Conc*	LL	No	No	Threaded	3/4"	0.0	
1405	PIPELINE	Conc*	LL	No	No	Flange	12"	0.0	
1406	PIPELINE	Conc*	LL	No	No	Plug	3/8"	0.0	
1407	PIPELINE	Conc*	LL	No	No	Threaded	1/2"	0.0	
1408	PIPELINE	Conc*	LL	No	No	Threaded	1/2"	0.0	
1409	PIPELINE	Conc*	LL	No	No	Tubing	3/8"	0.0	
1410	PIPELINE	Conc*	LL	No	No	Union	1/2"	1.0	
1411	PIPELINE	Valve	LL	No	No	Gate	1"	0.0	
1412	PIPELINE	Valve	LL	No	No	Gate	1/2"	0.0	
1413	PIPELINE	Other	LL	No	No	PRV	1"	0.0	
1414	PIPELINE	Valve	LL	No	No	Gate	1/2"	0.0	
1416	PIPELINE	Valve	LL	No	No	Gate	1"	0.0	
1417	PIPELINE	Valve	LL	No	No	Butterfly	12"	0.0	
1418	PIPELINE	Valve	LL	No	No	Gate	1/2"	0.0	
1419	PIPELINE	Other	LL	No	No	PRV	1"	0.0	
1420	PIPELINE	Valve	LL	No	No	Gate	1/2"	0.0	
1421	PIPELINE	Pump	LL	No	No	Horz Cent		7.5	
1422	PIPELINE	Valve	LL	No	No	Gate	1"	12.0	
1423	PIPELINE	Valve	LL	No	No	Gate	1"	3.0	
1424	PIPELINE	Valve	LL	No	No	Gate	1"	0.0	
1425	PIPELINE	Other	LL	No	No	PRV	1"	0.0	
1426	PIPELINE	Valve	LL	No	No	Gate	1"	0.0	
1427	PIPELINE	Valve	LL	No	No	Butterfly	12"	0.0	
1428	PIPELINE	Valve	LL	No	No	Gate	1/2"	0.0	
1429	PIPELINE	Valve	LL	No	No	Gate	1/2"	0.0	
1430	PIPELINE	Valve	LL	No	No	Gate	1/2"	0.0	
1431	PIPELINE	Valve	LL	No	No	Gate	1/2"	0.0	
1432	PIPELINE	Valve	LL	No	No	Gate	1/2"	0.0	
1433	PIPELINE	Valve	LL	No	No	Gate	1/2"	2.0	
1434	PIPELINE	Conc*	LL	No	No	Threaded	1/2"	0.0	
1435	PIPELINE	Valve	LL	No	No	Globe	4"	40.0	
1436	PIPELINE	Valve	LL	No	No	Globe	4"	0.0	
1437	PIPELINE	Conc*	LL	No	No	Threaded	1/2"	0.0	
1438	PIPELINE	Conc*	LL	No	No	Flange	2"	0.0	
1439	PIPELINE	Valve	LL	No	No	Gate	1/2"	2.0	
1440	PIPELINE	Valve	LL	No	No	Gate	1/2"	2.0	
1441	PIPELINE	Valve	LL	No	No	Globe	4"	21.0	
1442	PIPELINE	Valve	LL	No	No	Gate	1"	2.0	

not = lcm

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Radian ID	Location	Type	Phase	Product	Load	Subtype	Size	Screening Value	Comments
1443	PIPELINE	Valve	LL	No	No	Globe	12"	0	
1444	PIPELINE	Conc*	LL	No	No	Union	1/2"	0	
1445	PIPELINE	Conc*	LL	No	No	Flange	2"	0	not = lcm
1446	PIPELINE	Conc*	LL	No	No	Flange	12"	0	
1447	PIPELINE	Valve	LL	No	No	Gate	1/2"	41	
1448	PIPELINE	Valve	LL	No	No	Gate	1/2"	16	
1449	PIPELINE	Valve	LL	No	No	Globe	12"	2500	
1450	PIPELINE	Valve	LL	No	No	Globe	4"	0	
1451	PIPELINE	Valve	LL	No	No	Gate	1"	0	
1452	PIPELINE	Conc*	LL	No	No	Threaded	1/2"	0	
1453	PIPELINE	Conc*	LL	No	No	Flange	12"	0	not = lcm
1454	TANK 25	Valve	LL	Add	Add	Gate	1/2"	0	
1455	TANK 25	Other	LL	Add	Add	PRV	1"	0	
1456	TANK 25	Valve	LL	Add	Add	Gate	1/2"	0	
1457	TANK 25	Valve	LL	Add	Add	Globe	4"	0	
1458	TANK 25	Conc*	LL	Add	Add	Threaded	1/2"	0	
1459	TANK 25	Conc*	LL	Add	Add	Union	1"	0	
1460	TANK 25	Valve	LL	Add	Add	Globe	4"	0	
1461	TANK 25	Valve	LL	Add	Add	Globe	1/2"	0	
1462	TANK 25	Valve	LL	Add	Add	Gate	1"	0	
1463	TANK 25	Valve	LL	Add	Add	Gate	1/2"	0	
1464	TANK 25	Valve	LL	Add	Add	Globe	4"	0	
1465	TANK 25	Valve	LL	Add	Add	Gate	1/2"	0	
1466	TANK 25	Valve	LL	Add	Add	Gate	1/2"	0	
1467	TANK 25	Valve	LL	Add	Add	Ball	1"	0	
1468	TANK 25	Valve	LL	Add	Add	Ball	1"	0	
1469	TANK 25	Conc*	LL	Add	Add	Threaded	1"	0	
1470	TANK 25	Conc*	LL	Add	Add	Threaded	1/2"	0	
1471	TANK 25	Conc*	LL	Add	Add	Threaded	1/2"	0	
1472	TANK 25	Pump	LL	Add	Add	Horz Cent		0	inacc
1473	TANK 25	OEL	LL	Add	Add	Yes	2"	0	
1474	TANK 25	Valve	LL	Add	Add	Gate	2"	0	
1475	TANK 30	Valve	LL	Add	Add	Globe	4"	0	
1476	TANK 30	Other	LL	Add	Add	PRV	1"	0	
1477	TANK 30	Valve	LL	Add	Add	Ball	1/2"	0	
1478	TANK 30	Valve	LL	Add	Add	Ball	1/2"	0	
1479	TANK 30	Valve	LL	Add	Add	Globe	4"	0	
1480	TANK 30	Valve	LL	Add	Add	Ball	1/2"	0	
1481	TANK 30	Valve	LL	Add	Add	Ball	1/2"	0	
1482	TANK 30	Pump	LL	Add	Add	Horz Cent		0	inacc
1483	TANK 30	Valve	LL	Add	Add	Gate	1"	0	
1484	TANK 30	Valve	LL	Add	Add	Gate	2"	0	
1485	TANK 30	Conc*	LL	Add	Add	Threaded	1/2"	0	
1486	TANK 30	Conc*	LL	Add	Add	Threaded	1/2"	0	
1487	TANK 30	Conc*	LL	Add	Add	Flange	1"	0	
1488	TANK 30	Conc*	LL	Add	Add	Union	1"	0	
1489	TANK 30	Conc*	LL	Add	Add	Threaded	1"	0	
1490	SLOP TANK	Valve	LL	RU	No	Butterfly	4"	0	

API Screening Data 255
 Terminal D 08:21 Wednesday, October 21, 1992
 Date=21AUG92
 (continued)

Radian ID	Location	Type	Phase	Product	Load	Subtype	Size
1491	SLOP TANK	Valve	LL		No	Gate	2"
1492	SLOP TANK	Valve	LL		No	Gate	2"
1493	SLOP TANK	Pump	LL		No	Horz Cent	
1494	SLOP TANK	Valve	LL		No	Ball	1/4"
1495	SLOP TANK	OEL	LL		No		3/8"
1496	SLOP TANK	Valve	LL		No	Butterfly	4"
1497	SLOP TANK	Conct*	LL		No	Flange	2"
1498	SLOP TANK	Conct*	LL		No	Threaded	4"
1499	SLOP TANK	Other	LL		No	Cover	24x16
1500	SLOP TANK	Other	LL		No	Cover	24x16
1501	SLOP TANK	Other	LL		No	Cover	24x16
1502	SLOP TANK	OEL	LL		No		3"
Radian ID	Screening Value	Comments					
1491	0.0						
1492	0.0						
1493	0.5						
1494	0.0						
1495	0.0						
1496	0.0						
1497	1.0	not = 1cm					
1498	0.0						
1499	18000.0	separation tank hatch cover 1st stager					
1500	9000.0	2nd stage					
1501	15.0	3rd stage					
1502	1000.0	tank vent					

N = 318

C.2

RAW DATA USED TO ESTIMATE MASS EMISSIONS FROM SCREENING AND BAGGED COMPONENTS

BAGGING RESULTS AND MASS EMISSIONS
TERMINAL "A"

Sample ID	Cmpnt ID	Cmpnt Type	Product	Init	Final	Avg	Bkgnd Conc	OVA	OVA	OVA	Dil Ratio	AVG
				Screen Conc	Screen Conc	Screen Conc		Screen Conc	Init Bag Conc	Final Bag Conc		OVA Bag ppm
A003	A828	OEL	Regular	250	250	250	40	210	450	250	26.7	9345.0
A004	A861	Valve	Regular	3500	1035	2267.5	10	2257.5	200	37	22	2607.0
A005	A952	Valve	Supreme	6100	3000	4550	5	4545	30	50	24.4	976.0
A006	A964	Valve	Supreme	20	20	20	10	10	6	5	24.4	134.2
A007	A954	Valve	Supreme	200	220	210	5	205	12	13	24.4	305.0
A008	A936	Cnct	Regular	180	170	175	3.5	171.5	170	140	10.5	1627.5
A010	A574	Cnct	Varsol	300	250	275	5	270	80	90	10.5	892.5
A011BAD	A112	Cnct	Plus	180	170	175	6	169	120	120	10.5	1260.0
A012MD	A112	Cnct	Plus	500	750	625	3.5	621.5	170	130	10.5	1575.0
A013	A1067	Cnct	VR Line	>100000	>100000	>100000	2.5		>100000	>100000	9.7	>100000
A014	A1437	Pump	VRU	10	10	10	2.5	7.5	16	17	9.5	156.8
A015	A1436	Pump	VRU	7	8	7.5	2.5	5	3.5	3.5	9.5	33.3
A016BAD	A30	Cnct	Supreme	100	100	100	2.5	97.5	225	250	9.5	2256.3
A017	A1169	Valve	Gas Ld Ar	2000	200	1100	4	1096	500	350	9.1	3867.5
A018	A1412	Valve	Gas Ld Ar	2730	2275	2502.5	4	2498.5	7000	7000	9.1	63700.0
A019	A168	Cnct	Reg w/add	40	40	40	2.5	37.5	250	225	8.5	2018.8
A020	A173	Valve	Regular	75	80	77.5	2.5	75	25	22	8.5	199.8
A021	A38	Valve	Supreme	35	38	36.5	2.5	34	12	11	11.9	136.9
A022	A42	Cnct	Plus	350	400	375	2.5	372.5	120	130	11.9	1487.5
A023	A45	Cnct	Supreme	100	100	100	6	94	100	95	11.9	1160.3
A024	A1433	Valve	Regular	120	140	130	6	124	34	26	12.5	375.0
A025	A866	Cnct	Regular	150	140	145	3.5	141.5	24	22	12.5	287.5
A026BAD	A911	Cnct	Regular	30	30	30	2.5	27.5	130	110	12.5	1500.0
A027MD	A911	Cnct	Regular	30	30	30	2.5	27.5	110	110	12.5	1375.0
A028	A886	Valve	Regular	70	80	75	3.5	71.5	30	29	10.9	321.6
A029	A1646	Valve	Plus	2000	2300	2150	2.5	2147.5	140	140	10.9	1526.0
A030	A509	OEL	Interface	2.5	4	3.25	2.5	0.75	2.5	3.5	12.9	38.7
A031	A337	OEL	Supreme	10	10	10	2	8	2.5	2.7	12.9	33.5
A032	A356	Cnct	Regular	2.5	2.5	2.5	2.5	0	1.9	2.6	12.9	29.0
A033	A361	Cnct	Supreme	2.5	2.5	2.5	2.5	0	2.3	2.2	12.9	29.0
A034	A364	Valve	Supreme	160	220	190	2.5	187.5	75	75	9.5	712.5
A035BAD	A289	Valve	Regular	350	90	220	6	214	31	30	10.1	308.1
A036	A291	Cnct	Supreme	5	5	5	5	0	6.5	9.5	10.1	80.8
A037	A1679	OEL	Regular	2.5	2.5	2.5	2.5	0	2.2	2.3	10.1	22.7
A038	A1502	OEL	Regular	2.8	3	2.9	2.8	0.1	2.7	2.7	10.1	27.3
A039*	A972	OEL	Supreme	2.5	2.5	2.5	2.5	0	1.7	4.8	10.1	32.8
A040MD	A972	OEL	Supreme	2	2.2	2.1	2	0.1	1.7	1.9	10.1	18.2
A041	A1519	OEL	VRU	2.2	2.2	2.2	2.2	0	1.8	2	10.1	19.2
A042	A1523	OEL	VRU	2	2	2	2	0	1.8	1.8	10.1	18.2
A043	A147	Cnct	Supreme	2.5	3	2.75	2.5	0.25	2.5	2.5	10.1	25.3
A044	A92	Cnct	Plus	2.8	2.8	2.8	2.8	0	2.9	3.2	10.1	30.8
A045	A72	Valve	Plus	2.2	2.8	2.5	2.2	0.3	2.5	2.5	12.7	31.8
A046	A181	Valve	Regular	2.3	2.7	2.5	2.3	0.2	2.6	2.3	12.7	31.1
A047	A178	Valve	Regular	2.5	2.7	2.6	2.5	0.1	2.6	2.8	12.7	34.3
A048	A191	Valve	Regular	3	3	3	3	0	3.3	2.9	11.1	34.4
A049	A3	Valve	Plus	3.5	3.8	3.65	3.5	0.15	3.8	3.6	11.1	41.1
A050BAD	A33	Valve	Supreme	3.5	3.5	3.5	3.5	0	3.4	3.4	11.1	37.7
A050MD	A33	Valve	Supreme	3.5	3.3	3.4	3.5	0	3.1	2.9	12.2	36.6
A052*	A193	Pump	Regular	3.5	3.5	3.5	3.5	0	3.2	3.2	11	35.2
A053MD	A193	Pump	Regular	3.5	3.5	3.5	3.5	0	3.2	3.2	11	35.2
A054	A179	Pump	Regular	3.2	3.5	3.35	3.2	0.15	3.6	3.5	11	39.1
A055	A110	Pump	Plus	3.8	4.5	4.15	3.8	0.35	4.5	4.5	12	54.0

BAGGING RESULTS AND MASS EMISSIONS
TERMINAL "A"

BAGGING RESULTS AND MASS EMISSIONS												
TERMINAL "A"								OVA		OVA		AVG
				Init	Final	Avg		OVA	Init	Final		OVA
Sample	Cmpnt	Cmpnt	Product	Screen	Screen	Screen	Bkgnd	Screen	Bag	Bag	Dil	Bag
ID	ID	Type		Conc	Conc	Conc	Conc	Conc	Conc	Conc	Ratio	ppm
=====												
A056*	A80	Pump	Plus	4.5	3.8	4.15	4.5	0	3.5	4.1	12	45.6
A057*	A80	Pump	Plus	4.5	3.8	4.15	4.5	0	4.1	3.7	12	46.8
A058MD	A80	Pump	Plus	4.5	3.8	4.15	4.5	0	3.7	3.2	12	41.4
A059	A1401	OEL	Supreme	60	50	55	4	51	14	9	11.1	127.7
A060	A1317	Ld Arm	VaRegular	140	160	150	4.5	145.5	100	100	11.1	1110.0
A061		Cnct	Regular	50	45	47.5	10	37.5	9	9	11.1	99.9
A062	A1323	VRLine	VR gas	25	19	22	2.5	19.5	170	180	10	1750.0

Notes:

- Xthc = mole fraction of THC = volume % (i.e. 10,000 ppm = 1% = .01 mole fraction)
Xo2 = mole fraction of O2
Xn2 = mole fraction of N2
- MD stands for method duplicate (tent reconstructed). These are used as separate data points.
BAD means that the data is invalid because of excessive variation in the initial/final screening values or a leak in the tent.

Bag I016 Initial/Final OVA values for the bag, corrected 10/1/92 by Ron Ricks. (Bad run anyway, highly vari

FOOTNOTE REGARDING HEXANE RESPONSE CORRECTION FACTOR

The Byron was calibrated using 4 concentrations of propane 10, 100, 1000, and 10,000 ppmv. These samples came from the same vendor. During the work at Site D, the Byron was checked with two samples of hexane from two different vendors, a 100 ppmv sample and a 1000 ppmv sample.

When hexane is read on an instrument calibrated to propane, you expect it to register a flat mass response ppmv, with a slight adjustment for FID mass sensitivities to hexane and propane, which are 1.03 and 0.98 respectively. Thus, 100 ppmv hexane should register as
 $(100\text{ppmv}) * (86.17/44.19) * (1.03/98) = 205\text{ ppmv}$

The Byron reading, however was 152 ppmv. Linearity was checked with a 1000 ppmv sample of hexane (different gas vendor) Subsequent testing of the calibration gas sample that is still in the shop indicates that the problem was with the original series of propane cal gases.

Because there was clearly a systemic bias, an adjustment factor has been incorporated that results in a Byron ppmv value that simulates what it would have been if hexane had been the calibration gas. The correction factor is 205/152 or 1.35 times the reported value

BAGGING R TERMINAL		net Byron	net Byron	Byron Adjusted to					
Sample	THC	THC as	THC as	HEXANE	THC	N2	Init	Final	O2
ID	Byron ppmv	PROPANE ppmv	PROPANE ppmw	Response ppmw	Tracor ppmv	l/min	%O2	%O2	%
A003	6065	6064	9471	12786	524	0.88	0.4	0.4	0.4
A004	550	548	857	1157	6152	13.00	5	4	4.5
A005	980	979	1533	2070	1086	2.13	4	2.4	3.2
A006	8.4	8	13	17	1519	1.95	0.3	1	0.65
A007	135	135	211	285	532	2.54	2.4	0.9	1.65
A008	1039	1039	1633	2204	661	1.99	0.55	0.7	0.625
A010	1018	1018	1597	2156	1571	2.01	0.2	0.2	0.2
A011BAD	1956	1956	3066	4140	1550	2.03	1	1.7	1.35
A012MD	700	700	1100	1486	2482	2.02	0.6	0.6	0.6
A013	7300	7300	11356	15331	1233	2.31	1.5	2.5	2
A014	38	37	59	79	7836	9.58	4.4	4.4	4.4
A015	40	40	62	84	581	9.15	4.3	3.6	3.95
A016BAD	1000	1000	1564	2112	576	11.34	3.2	4.1	3.65
A017	4920	4919	7664	10347	1533	4.70	3.2	3.1	3.15
A018	3883	3882	6049	8167	5430	1.91	3.8	4.2	4
A019	1750	1750	2746	3707	4406	3.19	1	1	1
A020	15	14	23	31	2273	10.02	4.9	3.5	4.2
A021	52	52	82	110	547	2.01	0.4	0.5	0.45
A022	1455	1455	2286	3086	576	2.11	0.4	0.4	0.4
A023	824.5	824	1296	1750	1973	2.07	0.4	0.4	0.4
A024	186	186	292	395	1352	2.03	0.9	0.4	0.65
A025	225	225	354	478	724	2.05	0.1	0.3	0.2
A026BAD	150	150	236	319	763	2.11	0.3	0.4	0.35
A027MD	1200	1200	1886	2546	681	2.11	0.3	0.4	0.35
A028	200	200	314	425	1726	2.29	0.3	1	0.65
A029	1775	1775	2782	3756	707	2.17	0.9	2.6	1.75
A030	2.3	2	4	5		2.24	0.2	0.2	0.2
A031	9.5	9	15	20		1.99	0.3	0.3	0.3
A032	7.9	8	12	17		2.16	0.2	0.3	0.25
A033	11.5	11	18	24		1.91	0.3	0.3	0.3
A034	920	920	1446	1952		2.07	0.5	0.7	0.6
A035BAD	445	445	699	944		2.07	0.6	1.1	0.85
A036	27	27	42	57		2.07	1	0.7	0.85
A037	8.6	9	13	18		2.17	0.5	0.4	0.45
A038	3.7	4	6	8		2.13	0.3	0.3	0.3
A039*	9.9	10	15	21		2.03	0.5	0.7	0.6
A040MD	7.5	7	11	16		2.14	2	1.8	1.9
A041	10.4	10	16	22		2.13	0.4	0.4	0.4
A042	9.1	9	14	19		2.22	0.4	0.4	0.4
A043	9.2	9	14	19		2.28	0.3	0.3	0.3
A044	5.1	5	8	11		2.33	0.3	0.3	0.3
A045	3.4	3	5	7	528	2.21	0.3	0.3	0.3
A046	2.9	3	5	6		2.03	0.3	0.3	0.3
A047	2	2	3	4	536	2.24	0.4	0.4	0.4
A048	6.2	6	10	13	541	2.13	0.3	0.3	0.3
A049	15.5	15	24	33	540	2.34	0.3	0.3	0.3
A050BAD	6.4	6	10	13	549	2.06	0.3	0.3	0.3
A050MD	5.6	6	9	12	538	2.34	0.3	0.3	0.3
A052*	6.4	6	9	12		7.57	3.6	3.2	3.4
A053MD	7.4	7	11	14		7.60	3.2	3.8	3.5
A054	14.5	14	21	29		14.53	4.8	5.2	5
A055	17.4	17	27	36		7.60	1.7	1.2	1.45

BAGGING R TERMINAL	THC Byron	net THC as PROPANE ppmv	net THC as PROPANE ppmw	Byron Adjustd to HEXANE Response ppmw	THC Tracor ppmv	N2 l/min	Init %O2	Final %O2	O2 %
A056*	4.4	4	7	9		7.60	1	1.4	1.2
A057*						7.60	1.4	1.4	1.4
A058MD	8.7	8	13	18	526	7.75	1.6	0.8	1.2
A059	104	103	161	217	536	2.22	4.6	6	5.3
A060	584	583	915	1236	632	2.21	0.7	4	2.35
A061	28.5	28	44	60	528	2.20	0.2	0.8	0.5
A062	869	868	1355	1830		2.09	4.6	6.5	5.55

BAGGING R
TERMINAL

MASS EMISSION RATES

Computation of gas bag MW								
Sample ID	Xthc	Xo2	Xn2	MW	Q m3/hr	Temp deg R	E.R. lb/hr	E.R. lb/yr
A003	6.07E-03	0.004	0.990	28.238	0.05	519	1.82E-03	15.92
A004	5.50E-04	0.045	0.954	28.200	0.99	528	2.97E-03	25.98
A005	9.80E-04	0.032	0.967	28.164	0.15	522	8.13E-04	7.12
A006	8.40E-06	0.007	0.993	28.026	0.12	536	5.24E-06	0.05
A007	1.35E-04	0.017	0.983	28.071	0.17	539	1.19E-04	1.04
A008	1.04E-03	0.006	0.993	28.063	0.12	524	7.02E-04	6.15
A010	1.02E-03	0.002	0.997	28.112	0.12	526	6.78E-04	5.94
A011BAD	1.96E-03	0.014	0.985	28.124	0.13	532		Screen OVA missed the leak point on
A012MD	7.00E-04	0.006	0.993	28.049	0.12	532	4.73E-04	4.14
A013	7.30E-03	0.020	0.973	28.347	0.15	526	6.12E-03	53.60
A014	3.80E-05	0.044	0.956	28.177	0.73	533	1.47E-04	1.29
A015	4.00E-05	0.040	0.960	28.159	0.68	536	1.44E-04	1.26
A016BAD	1.00E-03	0.037	0.963	28.183	0.82	543		High variability in screen ppm & hig
A017	4.92E-03	0.032	0.964	28.306	0.33	536	8.77E-03	76.80
A018	3.88E-03	0.040	0.956	28.302	0.14	533	2.96E-03	25.95
A019	1.75E-03	0.010	0.988	28.104	0.20	510	1.99E-03	17.40
A020	1.50E-05	0.042	0.958	28.169	0.75	523	6.00E-05	0.53
A021	5.20E-05	0.005	0.995	28.020	0.12	523	3.53E-05	0.31
A022	1.46E-03	0.004	0.995	28.068	0.13	532	1.01E-03	8.89
A023	8.25E-04	0.004	0.995	28.048	0.13	524	5.72E-04	5.01
A024	1.86E-04	0.007	0.993	28.033	0.13	518	1.29E-04	1.13
A025	2.25E-04	0.002	0.998	28.016	0.12	527	1.53E-04	1.34
A026BAD	1.50E-04	0.004	0.996	28.020	0.13	538		Leak in bag
A027MD	1.20E-03	0.004	0.995	28.058	0.13	538	8.28E-04	7.25
A028	2.00E-04	0.007	0.993	28.033	0.14	531	1.54E-04	1.35
A029	1.78E-03	0.018	0.981	28.134	0.14	526	1.38E-03	12.06
A030	2.30E-06	0.002	0.998	28.008	0.14	507	1.75E-06	0.02
A031	9.50E-06	0.003	0.997	28.012	0.12	517	6.39E-06	0.06
A032	7.90E-06	0.003	0.997	28.010	0.13	520	5.71E-06	0.05
A033	1.15E-05	0.003	0.997	28.012	0.12	525	7.33E-06	0.06
A034	9.20E-04	0.006	0.993	28.059	0.13	525	6.45E-04	5.65
A035BAD	4.45E-04	0.009	0.991	28.050	0.13	531		Initial/Final OVA screen unacceptabl
A036	2.70E-05	0.009	0.991	28.035	0.13	525	1.90E-05	0.17
A037	8.60E-06	0.005	0.995	28.018	0.13	515	6.37E-06	0.06
A038	3.70E-06	0.003	0.997	28.012	0.13	513	2.66E-06	0.02
A039*	9.90E-06	0.006	0.994	28.024	0.13	516	6.89E-06	0.06
A040MD	7.50E-06	0.019	0.981	28.076	0.14	519	5.72E-06	0.05
A041	1.04E-05	0.004	0.996	28.016	0.13	528	7.37E-06	0.06
A042	9.10E-06	0.004	0.996	28.016	0.14	530	6.69E-06	0.06
A043	9.20E-06	0.003	0.997	28.012	0.14	529	6.94E-06	0.06
A044	5.10E-06	0.003	0.997	28.012	0.14	526	3.92E-06	0.03
A045	3.40E-06	0.003	0.997	28.012	0.13	519	2.52E-06	0.02
A046	2.90E-06	0.003	0.997	28.012	0.12	523	1.95E-06	0.02
A047	2.00E-06	0.004	0.996	28.016	0.14	530	1.45E-06	0.01
A048	6.20E-06	0.003	0.997	28.012	0.13	533	4.32E-06	0.04
A049	1.55E-05	0.003	0.997	28.013	0.14	539	1.17E-05	0.10
A050BAD	6.40E-06	0.003	0.997	28.012	0.13	534		Dup A051 was a better sample.
A050MD	5.60E-06	0.003	0.997	28.012	0.14	533	4.27E-06	0.04
A052*	6.40E-06	0.034	0.966	28.136	0.54	532	1.71E-05	0.15
A053MD	7.40E-06	0.035	0.965	28.140	0.55	532	2.02E-05	0.18
A054	1.45E-05	0.050	0.950	28.201	1.14	540	8.38E-05	0.73
A055	1.74E-05	0.015	0.985	28.059	0.49	543	4.45E-05	0.39

Used as default zero

Method dup of A039

BAGGING R

TERMINAL

MASS EMISSION RATES

Computation of gas bag MW								
Sample	-----				Q	Temp	E.R.	E.R.
ID	Xthc	Xo2	Xn2	MW	m3/hr	deg R	lb/hr	lb/yr
=====								
A056*	4.40E-06	0.012	0.988	28.048	0.48	544	1.06E-05	0.09
A057*		0.014	0.986	28.056	0.49	544		No Byron Data
A058MD	8.70E-06	0.012	0.988	28.048	0.49	544	2.20E-05	0.19 Method dup of A057
A059	1.04E-04	0.053	0.947	28.216	0.18	526	1.00E-04	0.88
A060	5.84E-04	0.024	0.976	28.115	0.15	527	4.76E-04	4.17
A061	2.85E-05	0.005	0.995	28.021	0.14	528	2.08E-05	0.18
A062	8.69E-04	0.056	0.944	28.254	0.17	533	8.01E-04	7.01

BAGGING RESULTS AND MASS EMISSIONS
TERMINAL "B"

SOURCE DESCRIPTION AND OVA RESULTS

Smpl ID	Cmpnt ID	Cmpnt Type	Product	Init. Screen	Final Screen	Avg. Screen	Bkgrnd ppm	Avg OVA Screen Conc	Init Bag Conc	Final Bag Conc	Avg OVA Bag Conc
B 65	B279	Other(PRVEC-P		80	80	80	7	73	160	160	160
B 66	B287	OEL	Supreme	140	160	150	8	142	1200	1220	1210
B 67	B276	Valve	Supreme	3000	3500	3250	7	3243	600	600	600
B 68	B260	OEL	Supreme	100	100	100	7	93	2000	2000	2000
B 69	B1422	Pump	VR	25	25	25	5	20	130	130	130
B 70	B1432	Valve	VR	400	200	300	4.5	295.5	84.5	84.5	84.5
B 71	B1477	Pump	VR	50	50	50	7	43	3250	2990	3120
B 72 *	B1525	OEL	VR	160	200	180	4.5	175.5	520	650	585
B 73 SD	B1525	OEL	VR	300	300	300	4	296	286	286	286
B 74	B1487	Conct	VR	700	700	700	30	670	234	234	234
B 75	B022	Valve	Regular	25	25	25	3	22	180	190	185
B 76	B013	Conct	Regular	1000	1000	1000	3	997	10000	10100	10050
B 77	B004	Valve	Regular	25	25	25	3	22	200	220	210
B 78	B219	Conct	Regular	25	30	27.5	4.5	23	180	190	185
B 79	B039	OEL	Regular	500	500	500	5	495	2500	2000	2250
B 80	B057	Valve	Regular	120	110	115	6	109	500	550	525
B 81	B053	Valve	Regular	25	25	25	7	18	280	280	280
B 82	B054	Valve	Regular	50	50	50	5	45	160	160	160
B 83	B071	Valve	Regular	120	125	122.5	6.5	116	260	280	270
B 84	B092	OEL	Regular	1200	1200	1200	14	1186	4600	4000	4300
B 85 *	B108	Conct	Regular	110	98	104	8	96	800	800	800
B 86 SD	B108	Conct	Regular	120	120	120	8	112	700	740	720
B 87	B077	Valve	Regular	200	180	190	9	181	500	560	530
B 88	B094	Valve	Regular	35	40	37.5	9	28.5	400	400	400
B 89	B146	Conct	Premium	400	400	400	8	392	300	320	310
B 90	B157	Valve	Premium	60	75	67.5	8	59.5	360	360	360
B 92	B118	Valve	Premium	600	600	600	12	588	373	324	348.5
B 93	B119	Valve	Premium	120	140	130	11	119	243	275	259
B 94	B245	Valve	Supreme	700	700	700	9	691	324	324	324
B 95 *	B260	OEL	Supreme	1000	1100	1050	11	1039	3240	3240	3240
B 96 SD	B260	OEL	Supreme	1000	1000	1000	10	990	4860	4374	4617
B 97	B237	Valve	Supreme	140	140	140	8	132	1052	1134	1093
B 98	B531	Conct	VR	1000	900	950	10	940	6480	6480	6480
B 99	B479	Valve	Unid Gas	60	65	62.5	10	52.5	334	351	342.5
B100	B1436	Conct	VR	50	50	50	20	30	1482	1670	1576
B101	B570	Hatch	VR	1000	1000	1000	30	970	1002	1002	1002
B102	B568	Hatch	VR	>100000	>100000	>100000	40	>100000	117000	150300	133650
B103	B1538	Conct	VR	500	550	525	14	511	2338	2338	2338
B104	B1528	Conct	VR	60	70	65	20	45	1169	1085.5	1127.25
B105	B534	Conct	VR gas	60	50	55	25	30	417	484	450.5
B106 *	B370	Valve	Regular	140	110	125	9	116	364	364	364
B107 SD	B370	Valve	Regular	70	70	70	9	61	455	520	487.5
B108	B351	OEL	Regular	8000	8000	8000	8	7992	>100000	>100000	>100000
B109	B370	Valve	Regular	500	500	500	3.5	496.5	375	435	405
B110	B393	Pump	Clear UL	50	50	50	4	46	600	525	562.5
B111	B433	OEL	Regular	500	600	550	4.5	545.5	150	150	150
B112	B615	Ld. Arm VVR gas		>100000	>100000	>100000	4	>100000	150	150	150
B113	B615	Ld. Arm VVR gas		100	100	100	30	70	150	150	150
B114	B617	Load Arm Regular		40	35	37.5	4.5	33	180	180	180
B115	B646	Conct	Premium	1000	100	550	16	534	420	180	300
B116	B704	Valve	Premium	15	15	15	3.5	11.5	67	67	67
B117 *	B742	Load Arm Regular		80	80	80	5	75	80	80	80

BAGGING RESULTS AND MASS EMISSIONS
TERMINAL "B"

SOURCE DESCRIPTION AND OVA RESULTS

Smp1	Cmpnt	Cmpnt	Product	Init.	Final	Avg.	Bkgrnd	Avg OVA	Init	Final	Avg OVA
ID	ID	Type		Screen	Screen	Screen	ppm	Screen	Bag	Bag	Bag
								Conc	Conc	Conc	Conc
B118 SD	B742	Load Arm	Regular	80	80	80	4	76	75	82	78.5
B119	B1002	Conct	Regular	80	100	90	3	87	600	600	600
B120	B984	Conct	VR gas	>100000	>100000	>100000	3	>100000	15000	12000	13500
B121	B984	Conct	VR gas	80	700	390	3	387	1200	6750	3975
B122	B1066	Conct	Premium	60	60	60	10	50	105	105	105
B123	B1073	Conct	Premium	40	35	37.5	3	34.5	50	55	52.5
B124	B1539	Conct	Premium	45	40	42.5	7.5	35	150	120	135
B125	B1083	Load Arm	Premium	25	25	25	7	18	140	160	150
B126	B1082	Load Arm	Regular	50	50	50	5	45	300	200	250
B127	B1540	Conct	Regular	50	60	55	9	46	2400	2500	2450
B128	B1225	Conct	Premium	50	50	50	9	41	4000	3600	3800
B129	B1272	Conct	Premium	35	60	47.5	5	42.5	1400	10000	5700
B130	B1249	Conct	Clear	30	30	30	7	23	2000	3000	2500
B131	B1507	Hatch	VR	>100000	>100000	>100000	5	>100000	>100000	>100000	>100000
B132 *	D.ZERO	Valve	Premium	3	2.5	2.75	2.5	0.25	22	22	22
B133 SD	D.ZERO	Valve	Premium	2	2	2	2	0	22	22	22
B134	D.ZERO	Valve	Premium	2	1.6	1.8	1.8	0	19.8	19.8	19.8
B135	D.ZERO	Valve	Premium	1.6	1.8	1.7	1.6	0.1	19.8	19.8	19.8
B136	D.ZERO	Conct	Premium	1.6	2	1.8	1.6	0.2	22	22	22
B137	D.ZERO	Conct	Premium	2.5	2	2.25	2	0.25	23.1	23.1	23.1
B138	D.ZERO	Conct	Premium	2	2.2	2.1	2	0.1	22	24.2	23.1
B139	D.ZERO	Pump	Premium	3	3	3	3	0	38.5	38.1	38.3
B140	D.ZERO	Pump	Clear	3	2.5	2.75	3	0	33	38.5	35.75
B141	D.ZERO	Valve	Regular	2	2.5	2.25	3	0	27.5	28.6	28.05
B142	D.ZERO	Conct	Regular	3	2.5	2.75	2.5	0.25	28.6	28.6	28.6
B143 *	D.ZERO	OEL	Premium	4.5	3.5	4	3	1	25.2	22.5	23.85
B144 SD	D.ZERO	OEL	Premium	3.5	5	4.25	3.5	0.75	31.5	31.5	31.5
B145	D.ZERO	OEL	Premium	3.5	3.2	3.35	3	0.35	27	28.8	27.9
B146	D.ZERO	Pump	Premium	3	2.8	2.9	3	0	27	25.7	26.35
B147	D.ZERO	Pump	Regular	2.7	3	2.85	3	0	126	81	103.5
B148	D.ZERO	Pump	Regular	3.5	3.8	3.65	3.5	0.15	63	67.5	65.25
B149	D.ZERO	Conct	Regular	3.5	4.5	4	3.5	0.5	36	40.5	38.25
B150	D.ZERO	OEL	Regular	7	7	7	5	2	45.9	49.5	47.7
B151	D.ZERO	Valve	OilyWater	8	7.5	7.75	3.5	4.25	21	24.5	22.75
B152	D.ZERO	Conct	Premium	3.5	3.5	3.5	3.5	0	24.5	24.5	24.5
B153	D.ZERO	Conct	Premium	3.5	3.5	3.5	3.5	0	24.5	21	22.75

FOOTNOTE REGARDING HEXANE RESPONSE CORRECTION FACTOR

The Byron was calibrated using 4 concentrations of propane 10, 100, 1000, and 10,000 ppmv. These samples came from the same vendor. During the work at Site D, the Byron was checked with two samples of hexane from two different vendors, a 100 ppmv sample and a 1000 ppmv sample.

When hexane is read on an instrument calibrated to propane, you expect it to register a flat mass response ppmv, with a slight adjustment for FID mass sensitivities to hexane and propane, which are 1.03 and 0.98 respectively. Thus, 100 ppmv hexane should register as $(100\text{ppmv}) \times (86.17/44.19) \times (1.03/98) = 205\text{ ppmv}$. The Byron reading, however was 152 ppmv. Linearity was checked with a 1000 ppmv sample of hexane (different gas vendor). Subsequent testing of the calibration gas sample that is still in the shop indicates that the problem was with the original series of propane cal gases.

Because there was clearly a systemic bias, an adjustment factor has been incorporated that results in a Byron ppmv value that simulates what it would have been if hexane had been the calibration gas. The correction factor is 205/152 or 1.35 times the reported value.

BAGGING		net		net		Byron						
TERMINA		Byron		Byron		Adjustd to		N2		N2		
	THC	THC as	THC as	HEXANE	THC	Initial	Final	Avg N2			Avg O2	
Smp1	Byron	PROPANE	PROPANE	Response	Tracor	Flow	Flow	Flow	Initial	Final	Conc	
ID	ppmv	ppmv	ppmw	ppmw	ppmw	ml/min	ml/min	l/min	%O2	%O2	%	
=====												
B 65	14	14	21	29		2105	2098	2.10	0.2	0.15	0.175	
B 66	936	936	1471	1985		2051	2056	2.05	0.7	0.4	0.55	
B 67	284	284	447	603		10050	9917	9.98	0.4	0.4	0.4	
B 68	1851	1851	2903	3919		2021	1993	2.01	1.5	0.5	1	
B 69	11	10	15	20		15200	15200	15.20	4.5	4.5	4.5	
B 70	7	7	12	16		1937	1989	1.96	0.1	0.1	0.1	
B 71	1855	1853	2895	3908		2039	2019	2.03	4.5	5	4.75	
B 72 *	34	34	53	71		2179	2089	2.13	1.5	0.15	0.825	
B 73 SD	114	114	179	242		2064	2081	2.07	0.3	0.3	0.3	
B 74	141	141	222	299		2148	2104	2.13	0.1	0.1	0.1	
B 75	47	47	73	99		2118	2149	2.13	0.9	0.6	0.75	
B 76	3200	3200	5014	6768		1998	1957	1.98	0.8	0.2	0.5	
B 77	20	19	30	40		15200	15200	15.20	4	4	4	
B 78	54	54	85	114		2016	1971	1.99	0.1	0.1	0.1	
B 79	2145	2145	3362	4539		1709	1670	1.69	1.8	0.4	1.1	
B 80	178	178	280	378		1967	1996	1.98	0.2	0.1	0.15	
B 81	35	35	55	74		1970	1951	1.96	0.3	0.1	0.2	
B 82	24	23	37	50		10050	10050	10.05	0.7	0.6	0.65	
B 83	20	19	29	40		15200	15200	15.20	4.5	2	3.25	
B 84	3064	3062	4790	6467		1608	1600	1.60	3	0.5	1.75	
B 85 *	219	219	345	465		1722	1775	1.75	0.1	0.1	0.1	
B 86 SD	233	233	367	495		1671	1602	1.64	0.1	0.2	0.15	
B 87	79	77	121	164		3133	3143	3.14	3.5	2	2.75	
B 88	59	58	92	124		1861	1921	1.89	1	0.5	0.75	
B 89	80	79	123	166		10050	10050	10.05	5	3	4	
B 90	59	58	91	123		1649	1608	1.63	2	1.1	1.55	
B 92	74	73	115	155		2008	1987	2.00	1	3	2	
B 93	79	77	121	164		2947	2925	2.94	4.9	0.1	2.5	
B 94	82	81	127	171		4293	4260	4.28	5	0.3	2.65	
B 95 *	4183	4182	6538	8826		1346	1403	1.37	1.5	0.7	1.1	
B 96 SD	8075	8075	12566	16964		1456	1365	1.41	0.3	0.5	0.4	
B 97	310	307	479	647		2218	2179	2.20	4	9.5	6.75	
B 98	2614	2614	4100	5535		1989	1973	1.98	1.5	0.5	1	
B 99	NO DATA	NO DATA	NO DATA	NO DATA	2345	1927	1906	1.92	0.5	0.2	0.35	
B100	990	990	1557	2102		1878	1863	1.87	0.1	0.1	0.1	
B101	30	27	42	57		2956	2944	2.95	4	0.5	2.25	
B102	OFFSCALE	OFFSCALE	OFFSCALE	OFFSCALE	44128	2769	2785	2.78	5	16	10.5	
B103	326	326	513	693		1958	1845	1.90	0.1	0.1	0.1	
B104	81	79	125	168		2168	2163	2.17	0.1	2.5	1.3	
B105	54	54	84	114		2260	2316	2.29	0.1	0.1	0.1	
B106 *	181	180	283	382		2295	2137	2.22	2.5	1.5	2	
B107 SD	201	199	312	422		1857	1794	1.83	3.5	4	3.75	
B108	NO DATA	NO DATA	NO DATA	NO DATA	254228	1922	1872	1.90	3	0.5	1.75	
B109	371	371	584	788		2132	2126	2.13	0.7	0.1	0.4	
B110	1383	1382	2168	2927		15200	15200	15.20	4	3.5	3.75	
B111	25	25	39	53		3619	3506	3.56	0.1	0.1	0.1	
B112	439	439	690	932		3197	3145	3.17	2	0.2	1.1	
B113	50	48	76	102		10050	10050	10.05	1	2	1.5	
B114	35	34	54	72		2873	2925	2.90	5	4	4.5	
B115	74	70	109	148		3083	3076	3.08	5	5	5	
B116	12	12	20	26		2445	2396	2.42	0.1	0.1	0.1	
B117 *	11	10	15	21		2822	2818	2.82	4.5	1.8	3.15	

BAGGING TERMINA		net Byron	net Byron	Byron Adjusted to		N2	N2	Avg N2			Avg O2
Smp1	THC	THC as	THC as	HEXANE	THC	Initial	Final	Flow	Initial	Final	Conc
ID	Byron	PROPANE	PROPANE	Response	Tracor	Flow	Flow	l/min	%O2	%O2	%
	ppmv	ppmv	ppmw	ppmw	ppmw	ml/min	ml/min				
B118 SD	12	11	17	23		3129	3116	3.12	4.5	4.5	4.5
B119	191	190	298	403		1577	1577	1.58	1	5	3
B120	OFFSCALE	OFFSCALE	OFFSCALE	OFFSCALE	3203	1577	1542	1.56	1	0.7	0.85
B121	NO DATA	NO DATA	NO DATA	NO DATA	28352	1434	1428	1.43	0.7	0.5	0.6
B122	13	13	20	27		10050	10050	10.05	0.5	0.2	0.35
B123	7	6	10	14		15200	15200	15.20	0.1	0.1	0.1
B124	20	20	32	43		1411	1411	1.41	0.5	0.1	0.3
B125	16	14	22	30		2541	2523	2.53	5	2	3.5
B126	71	70	111	149		2211	2197	2.20	5	1	3
B127	15	13	21	28		2287	2277	2.28	5	3.5	4.25
B128	1000	1000	1572	2122		1742	1742	1.74	0.2	0.3	0.25
B129	162	162	255	344		1655	1655	1.66	0.1	0.1	0.1
B130	70	70	110	148		1567	1567	1.57	0.5	0.1	0.3
B131	>10000	>10000	>15700	>21000	20206	10050	10050	10.05	3	7	5
B132 *	6	6	9	13		883	868	0.88	4	3	3.5
B133 SD	7	6	10	13		904	913	0.91	4.8	4	4.4
B134	6	6	9	12		1238	1234	1.24	3	0.4	1.7
B135	5	5	8	11		1268	1240	1.25	0.1	0.1	0.1
B136	6	6	9	12		1431	1433	1.43	0.1	0.1	0.1
B137	6	5	9	12		1758	1722	1.74	0.1	0.1	0.1
B138	5	5	8	11		1234	1247	1.24	0.1	0.1	0.1
B139	7	7	10	14		15200	15200	15.20	5	1	3
B140	5	4	6	9		15200	15200	15.20	8	8	8
B141	6	6	10	13		2385	2310	2.35	2	0.7	1.35
B142	5	5	8	11		1706	1707	1.71	0.2	0.2	0.2
B143 *	6	6	9	13		1240	1221	1.23	0.1	0.1	0.1
B144 SD	3	3	5	7		1309	1298	1.30	0.1	0.1	0.1
B145	7	7	10	14		1279	1262	1.27	5	0.1	2.55
B146	8	8	12	17		10050	10050	10.05	5	1.5	3.25
B147	40	39	62	84		10050	10050	10.05	4	0.4	2.2
B148	35	33	52	70		10050	10050	10.05	4	14	9
B149	8	8	12	16		1316	1277	1.30	0.3	0.2	0.25
B150	10	10	16	22		1257	1216	1.24	0.1	0.1	0.1
B151	7	6	10	14		1908	1879	1.89	4.5	0.5	2.5
B152	6	6	9	13		1573	1561	1.57	0.1	0.1	0.1
B153	7	7	11	14		10050	10050	10.05	0.5	1.2	0.85

BAGGING
TERMINA

MASS EMISSION RATE

Smp1 ID	Calculation of net MW in bag				Q m3/hr	Bag Temp deg R	MASS EMISSION RATE	
	Xthc	Xo2	Xn2	MW			E.R. lb/hr	E.R. lb/yr
B 65	1.4E-05	0.002	0.998	28.01	0.13	555	9.00E-06	0.08
B 66	9.4E-04	0.006	0.994	28.06	0.13	550	6.20E-04	5.43
B 67	2.8E-04	0.004	0.996	28.03	0.61	545	9.16E-04	8.02
B 68	1.9E-03	0.010	0.988	28.11	0.13	542	1.24E-03	10.89
B 69	1.1E-05	0.045	0.955	28.18	1.16	566	5.62E-05	0.49
B 70	7.4E-06	0.001	0.999	28.00	0.12	539	4.66E-06	0.04
B 71	1.9E-03	0.048	0.951	28.23	0.16	572	1.47E-03	12.86
B 72 *	3.4E-05	0.008	0.992	28.03	0.13	537	2.40E-05	0.21
B 73 SD	1.1E-04	0.003	0.997	28.01	0.13	536		Sample Duplicate of B072
B 74	1.4E-04	0.001	0.999	28.01	0.13	552	9.42E-05	0.82
B 75	4.7E-05	0.008	0.992	28.03	0.13	531	3.36E-05	0.29
B 76	3.2E-03	0.005	0.992	28.15	0.12	526	2.13E-03	18.65
B 77	2.0E-05	0.040	0.960	28.16	1.13	540	1.14E-04	1.00
B 78	5.4E-05	0.001	0.999	28.01	0.12	552	3.37E-05	0.30
B 79	2.1E-03	0.011	0.987	28.13	0.11	561	1.18E-03	10.31
B 80	1.8E-04	0.002	0.998	28.01	0.12	555	1.11E-04	0.97
B 81	3.5E-05	0.002	0.998	28.01	0.12	549	2.17E-05	0.19
B 82	2.4E-05	0.006	0.993	28.03	0.62	546	7.66E-05	0.67
B 83	2.0E-05	0.033	0.967	28.13	1.08	540	1.08E-04	0.95
B 84	3.1E-03	0.018	0.979	28.19	0.10	549	1.69E-03	14.77
B 85 *	2.2E-04	0.001	0.999	28.01	0.11	552	1.20E-04	0.49
B 86 SD	2.3E-04	0.002	0.998	28.02	0.10	554		Sample duplicate of B085
B 87	7.9E-05	0.028	0.972	28.11	0.22	558	8.64E-05	0.76
B 88	5.9E-05	0.008	0.992	28.03	0.12	554	3.56E-05	0.31
B 89	8.0E-05	0.040	0.960	28.16	0.74	550	3.06E-04	2.68
B 90	5.9E-05	0.016	0.984	28.06	0.11	558	3.16E-05	0.28
B 92	7.4E-05	0.020	0.980	28.08	0.13	525	5.32E-05	0.47
B 93	7.9E-05	0.025	0.975	28.10	0.20	528	8.42E-05	0.74
B 94	8.2E-05	0.027	0.973	28.11	0.29	533	1.28E-04	1.12
B 95 *	4.2E-03	0.011	0.985	28.21	0.09	550	1.91E-03	12.03
B 96 SD	8.1E-03	0.004	0.988	28.34	0.09	555		Sample duplicate of B095
B 97	3.1E-04	0.068	0.932	28.28	0.19	545	3.16E-04	2.77
B 98	2.6E-03	0.010	0.987	28.11	0.12	561	1.67E-03	14.66
B 99	2.3E-03	0.004	0.994	28.11	0.12	530	7.03E-04	6.16 Emission rate computed from Tracor THC value.
B100	9.9E-04	0.001	0.998	28.03	0.11	527	6.10E-04	5.34
B101	3.0E-05	0.023	0.977	28.09	0.20	530	2.90E-05	0.25
B102	4.4E-02	0.105	0.851	29.61	0.33	559	3.77E-02	330.04 Emission rate computed from Tracor THC value.
B103	3.3E-04	0.001	0.999	28.01	0.11	555	1.94E-04	1.70
B104	8.1E-05	0.013	0.987	28.05	0.14	550	5.75E-05	0.50
B105	5.4E-05	0.001	0.999	28.01	0.14	557	3.82E-05	0.33
B106 *	1.8E-04	0.020	0.980	28.09	0.15	556	1.37E-04	0.58
B107 SD	2.0E-04	0.038	0.962	28.16	0.13	548		Sample duplicate of B106
B108	2.5E-01	0.018	0.728	38.22	0.12	527	1.11E-01	969.87 Emission rate computed from Tracor THC value.
B109	3.7E-04	0.004	0.996	28.03	0.13	525	2.65E-04	2.32
B110	1.4E-03	0.038	0.961	28.11	1.11	548		Not usable for mass estimate, pump came on du
B111	2.5E-05	0.001	0.999	28.00	0.21	544	2.84E-05	0.25
B112	4.4E-04	0.011	0.989	28.06	0.20	547	4.64E-04	4.07
B113	5.0E-05	0.015	0.985	28.06	0.65	550	1.64E-04	1.44
B114	3.5E-05	0.045	0.955	28.18	0.22	549	3.97E-05	0.35
B115	7.4E-05	0.050	0.950	28.20	0.24	545		Initial/final screening ratio unacceptable.
B116	1.2E-05	0.001	0.999	28.00	0.15	527	9.87E-06	0.09
B117 *	1.1E-05	0.032	0.968	28.13	0.20	529	1.07E-05	0.06

BAGGING							MASS EMISSION RATE		
TERMINA		Calculation of net MW in bag				Bag	-----		
Smp1		-----				Temp	E.R.	E.R.	
ID		Xthc	Xo2	Xn2	MW	m3/hr	deg R	lb/hr	lb/yr
=====									
B118	SD	1.2E-05	0.045	0.955	28.18	0.24	531		Sample duplicate of B117
B119		1.9E-04	0.030	0.970	28.13	0.11	537	1.13E-04	0.99
B120		3.2E-03	0.009	0.988	28.12	0.10	538	7.89E-04	6.92 Emission rate computed from Tracor THC value.
B121		2.8E-02	0.006	0.966	28.79	0.09	538	6.49E-03	56.81 Emission rate computed from Tracor THC value.
B122		1.3E-05	0.004	0.996	28.01	0.61	544	4.16E-05	0.36
B123		6.5E-06	0.001	0.999	28.00	0.92	537	3.19E-05	0.28
B124		2.0E-05	0.003	0.997	28.01	0.09	539	9.22E-06	0.08
B125		1.6E-05	0.035	0.965	28.14	0.18	532	1.41E-05	0.12
B126		7.1E-05	0.030	0.970	28.12	0.15	533	5.87E-05	0.51
B127		1.5E-05	0.043	0.957	28.17	0.17	537	1.23E-05	0.11
B128		1.0E-03	0.003	0.997	28.05	0.11	537	5.67E-04	4.97
B129		1.6E-04	0.001	0.999	28.01	0.10	538	8.65E-05	0.76
B130		7.0E-05	0.003	0.997	28.01	0.10	539	3.55E-05	0.31
B131		1.0E-02	0.050	0.940	28.47	0.79	552	3.99E-02	349.43 Emission rate computed from Tracor THC value.
B132 *		6.4E-06	0.035	0.965	28.14	0.06	533	2.04E-06	0.01
B133	SD	6.5E-06	0.044	0.956	28.18	0.07	530		Sample duplicate of B132
B134		6.0E-06	0.017	0.983	28.07	0.08	546	2.49E-06	0.02
B135		5.2E-06	0.001	0.999	28.00	0.08	542	2.09E-06	0.02
B136		5.8E-06	0.001	0.999	28.00	0.09	551	2.61E-06	0.02
B137		5.5E-06	0.001	0.999	28.00	0.10	553	3.00E-06	0.03
B138		5.1E-06	0.001	0.999	28.00	0.07	565	1.94E-06	0.02
B139		7.0E-06	0.030	0.970	28.12	1.06	552	3.65E-05	0.32
B140		5.3E-06	0.080	0.920	28.32	1.47	556	3.17E-05	0.28
B141		6.3E-06	0.014	0.986	28.05	0.15	545	4.86E-06	0.04
B142		5.0E-06	0.002	0.998	28.01	0.10	540	2.74E-06	0.02
B143 *		6.0E-06	0.001	0.999	28.00	0.07	531	2.41E-06	0.01
B144	SD	3.3E-06	0.001	0.999	28.00	0.08	533		Sample duplicate of B143
B145		7.0E-06	0.026	0.974	28.10	0.09	536	3.09E-06	0.03
B146		8.4E-06	0.033	0.967	28.13	0.71	560	2.91E-05	0.25
B147		4.0E-05	0.022	0.978	28.09	0.67	554	1.38E-04	1.21
B148		3.5E-05	0.090	0.910	28.36	1.06	562		High O2 in bag, unacceptable for mass estimat
B149		7.6E-06	0.003	0.997	28.01	0.08	557	3.08E-06	0.03
B150		1.0E-05	0.001	0.999	28.00	0.07	557	3.96E-06	0.03
B151		6.8E-06	0.025	0.975	28.10	0.13	524	4.52E-06	0.04
B152		5.9E-06	0.001	0.999	28.00	0.09	526	3.04E-06	0.03
B153		6.9E-06	0.009	0.991	28.03	0.63	528	2.32E-05	0.20

BAGGING RESULTS AND MASS EMISSIONS
TERMINAL "D"

BAGGING RESULTS AND MASS EMISSIONS							Avg OVA				
TERMINAL "D"							Screen Conc				
							Corrected				
							for				
Smpl	Cmpnt	Cmpnt	Product	Init.	Final	Avg.	Bkgrnd	Bkgrnd	Init	Final	Avg OVA
ID	Code	#	Type	Screen	Screen	Screen	ppm	ppm	Bag	Bag	Bag
=====											
D 1	ACCUR	Valve	Water	3.5		3.5	3.5	0			1122
D 2	1149	Pump	Sup Reg	9900	8000	8950	4.5	8945.5	825	825	825
D 3	357	Pump	VRU	3000	6000	4500	12	4488	11900	11050	11475
D 4	403	Pump	VRU	100	160	130	5	125	420	210	315
D 5	425	Pump	Reg UL	10000	12000	11000	5	10995	9000	9750	9375
D 6	427	OEL	Reg UL	42000	60000	51000	10	50990	300	180	240
D 7	1077	OEL	Reg UL	>300000	>300000	>300000	6	>300000	210000	180000	195000
D 8	1114	Valve	Sup UL Env	5000	5000	5000	3.5	4996.5	1190	1190	1190
D 9	1028	Valve	Sup UL Env	6000	5000	5500	6	5494	4760	4760	4760
D 10	1077	OEL	Reg UL	136000	119000	127500	25	127475	47600	47600	47600
D 11	1429	Valve	Sup Reg	4000	3700	3850	6	3844	3330	3515	3422.5
D 12 SD	1403	Valve	Sup UL Env	2590	4200	3395	6	3389	3080	3080	3080
D 13 SD	1403	Valve	Sup UL Env	2590	4200	3395	6	3389	3080	3080	3080
D 14 MD	1403	Valve	Sup UL Env	3820	2800	3310	8	3302	2240	2240	2240
D 16	1383	Valve	Reg UL	8000	2900	5450	16	5434	1305	1421	1363
D 17	1374	Pump	Reg UL	8750	5000	6875	7	6868	10500	7875	9187.5
D 18	1421	Pump	Sup Reg	75	30	52.5	7	45.5	390	420	405
D 20	1390	Pump	Sup UL Env	8	8	8	6	2	377	319	348
D 21	1449	Valve	Reg UL	2000	3500	2750	5	2745	1800	1900	1850
D 23	1233	Valve	Sup Reg	9000	9000	9000	6	8994	4000	4125	4062.5
D 24	323	OEL	Reg UL	6	6	6	6	0	9000	9000	9000
D 25	1226	Valve	Sup Reg	10000	11984	10992	11	10981	2380	3640	3010
D 27	1215	Valve	Reg UL	8400	7800	8100	9	8091	1222	1170	1196
D 29 SD	867	Valve	Reg UL	5000	19800	12400	4	12396	1540	1584	1562
D 30 SD	867	Valve	Reg UL	5000	19800	12400	4	12396	1540	1584	1562
D 32 MD	867	Valve	Reg UL	19800	22000	20900	3	20897	2860	2860	2860
D 33	961	Valve	Reg UL	17600	26400	22000	6	21994	4180	4620	4400
D 34 A	1208	Pump	Reg UL	100	100	100	5	95	240	216	228
D 35 B	1208	Pump	Reg UL	25	30	27.5	3	24.5	1155	115.5	635.25
D 36	1499	Hatch Cover	Slop Tk-1	3000	5000	4000	5	3995	540	390	465
D 38	1500	Hatch Cover	Slop Tk-2	5000	1000	3000	9	2991	270	240	255
D 39	315	Load Arm	VRU	>310000	>310000	>310000	10	>310000	>310000	>310000	>310000
D 41	297	Load Arm	Sup UL	50	100	75	5	70	240	300	270
D 42	232	Load Arm	VRU	>400000	>400000	>400000	6	>400000	>400000	>400000	>400000
D 43	216	Load Arm	Sup UL	25	25	25	10	15	154	126	140
D 44 SD	200	Load Arm	Sup Reg	12	15	13.5	3	10.5	168	168	168
D 46 SD	200	Load Arm	Sup Reg	12	15	13.5	3	10.5	168	126	147
D 47 SD	202	Connection	Sup Reg	1000	1200	1100	3.5	1096.5	190	171	180.5
D 49 SD	202	Connection	Sup Reg	1000	1200	1100	3.5	1096.5	190	171	180.5
D 50 MD	202	Connection	Sup Reg	1200	1000	1100	3.5	1096.5	171	190	180.5
D 51	213	Connection	Sup Reg	7000	7000	7000	4	6996	1440	2340	1890
D 52	186	Load Arm	Reg UL	100	100	100	4	96	216	180	198
D 54	71	Valve	VRU	90000	>300000	>300000	5.5	>300000	210000	240000	225000
D 55	54	Load Arm	Sup UL	6	4	5	6	0	182	165	173.5
D 56	39	Load Arm	Sup Reg	7	5	6	3	3	132	132	132
D 57	5	Load Arm	Reg UL	85	80	82.5	3.5	79	279	248	263.5
D 59	155	Load Arm	VRU	7200	24000	15600	5.5	15594.5	48000	72000	60000
D 60	124	Connection	Sup Reg	450	400	425	5	420	336	240	288
D 61	135	Load Arm	Sup UL	45	20	32.5	6	26.5	420	224	322
D 62 MB	N/A			5	5	5	5	0	140	126	133
D 64 SD	117	Load Arm	Sup Reg	13	7	10	4.5	5.5	165	132	148.5

BAGGING RESULTS AND MASS EMISSIONS
TERMINAL "D"

BAGGING RESULTS AND MASS EMISSIONS TERMINAL "D"								Avg OVA Screen Conc Corrected for Init Final Avg OVA Bag Bag Bag Conc Conc Conc				
Smpl ID	Cmpnt Code	Cmpnt #	Type	Product	Init. Screen	Final Screen	Avg. Screen	Bkgrnd ppm	Bkgrnd ppm	Bag Conc	Bag Conc	Bag Conc
D 65	SD	117	Load Arm	Sup Reg	13	7	10	4.5	5.5	165	132	148.5
D 66	MD	117	Load Arm	Sup Reg	7	10	8.5	4	4.5	155	155	155
D 67		99	Load Arm	Reg UL	7	12	9.5	3.5	6	238	238	238
D 68		285	Load Arm	Sup Reg	50	52	51	4.5	46.5	165	180	172.5
D 69		271	Load Arm	Reg UL	10	14	12	6	6	153	153	153
D 70		314	Connector	VRU	100	80	90	3.5	86.5	225	225	225
D 73		308	Valve	Sup UL	500	560	530	6	524	215	215	215
D 74	DZ	317	Valve	VRU	7	9	8	7	1	193.5	172	182.75
D 76	DZ	235	Valve	VRU	4	4	4	4	0	108.5	108.5	108.5
D 77	DZ	151	Valve	VRU	6	5	5.5	6	0	238	153	195.5
D 78	DZ	68	Valve	VRU	4	4	4	4	0	136	136	136
D 79	SD/D	344	Valve	VRU	3.5	3.5	3.5	3.5	0	115.5	115.5	115.5
D 80	SD/D	344	Valve	VRU	3.5	3.5	3.5	3.5	0	115.5	115.5	115.5
D 81	MD/D	344	Valve	VRU gas	3.5	3	3.25	3.5	0	105	105	105
D 82	DZ	345	Valve	VRU	3.5	5	4.25	3.5	0.75	108.5	108.5	108.5
D 83	DZ	343	Valve	VRU	4.5	3.5	4	4.5	0	115.5	115.5	115.5
D 84	DZ	346	Valve	VRU	3	3.5	3.25	3	0.25	100.5	108.5	104.5
D 85		1122	Valve	Sup UL Env	4000	4500	4250	3.5	4246.5	528	660	594
D 88		1055	Connection	Sup UL Env	350	300	325	4	321	174	348	261
D 90		1027	Valve	Sup UL Env	2500	3000	2750	6	2744	696	783	739.5
D 91		1025	Connection	Sup UL Env	300	350	325	8	317	143	117	130
D 92		1047	Valve	Sup UL Env	75	80	77.5	3.5	74	188.5	188.5	188.5
D 93	SD	1023	Connection	Sup UL Env	400	500	450	3.5	446.5	264	313.5	288.75
D 94	SD	1023	Connection	Sup UL Env	400	500	450	3.5	446.5	264	313.5	288.75
D 95	MD	1023	Connection	Sup UL Env	500	600	550	8	542	225	225	225
D 96	XT	71	Valve	VRU	>300000	>300000	>300000	4	>300000	87000	>300000	>300000

FOOTNOTE REGARDING HEXANE RESPONSE CORRECTION FACTOR

The Byron was calibrated using 4 concentrations of propane 10, 100, 1000, and 10,000 ppmv. These samples came from the same vendor. During the work at Site D, the Byron was checked with two samples of hexane from two different vendors, a 100 ppmv sample and a 1000 ppmv sample.

When hexane is read on an instrument calibrated to propane, you expect it to register a flat mass response ppmv, with a slight adjustment for FID mass sensitivities to hexane and propane, which are 1.03 and 0.98 respectively. Thus, 100 ppmv hexane should register as (100ppmv) * (86.17/44.19) * (1.03/98) = 205 ppmv The Byron reading, however was 152 ppmv. Linearity was checked with a 1000 ppmv sample of hexane (different gas vendor) Subsequent testing of the calibration gas sample that is still in the shop indicates that the problem was with the original series of propane cal gases.

Because there was clearly a systemic bias, an adjustment factor has been incorporated that results in a Byron ppmv value that simulates what it would have been if hexane had been the calibration gas. The correction factor is 205/152 or 1.35 times the reported value

BAGGI

TERMI

Smp1 ID	Recorded		net		net		Adjustd to		Initial Flow ml/min	Final Flow ml/min	Avg N2 Flow l/min	Initial %O2	Final %O2	Volume Fraction	
	THC as	THC as	THC as	THC as	THC as	THC as	THC as	THC as						Avg O2	THC
	PROPANE ppmv	PROPANE ppmv	PROPANE ppmv	PROPANE ppmv	PROPANE ppmv	PROPANE ppmv	PROPANE ppmv	PROPANE ppmv						Conc %	(Byron) Xthc
D 1											1.11			3.6	0.00E+00
D 2	518	517	809	1092					3738	3773	3.76	5.2	2.5	3.85	5.18E-04
D 3	NA	NA	NA	NA	55002				2990	2990	2.99	4	2	3	NA
D 4	64	63	98	133					2070	1818	1.94	4.5	5	4.75	6.40E-05
D 5	9874	9874	15152	20455					1180	1165	1.17	0.4	1	0.7	9.87E-03
D 6	143	143	225	304					1091	938	1.01	0.3	0.3	0.3	1.43E-04
D 7	5353	5352	8256	11146	94597				2184	2184	2.18	5	5	5	5.35E-03
D 8	989	989	1550	2093					1857	1801	1.83	1.5	1.2	1.35	9.89E-04
D 9	5402	5401	8348	11270					2134	2095	2.11	4.6	2.5	3.55	5.40E-03
D 10	9363	9357	14300	19306					1697	1668	1.68	4.5	4.6	4.55	9.36E-03
D 11	4505	4505	6989	9435					2567	4044	3.31	4	1	2.5	4.51E-03
D 12	4235	4234	6581	8884					4290	4275	4.28	3	0.4	1.7	4.23E-03
D 13	4848	4847	7522	10155					4290	4275	4.28	3	0.4	1.7	4.85E-03
D 14	4253	4252	6599	8908					4305	4603	4.45	5	0.5	2.75	4.25E-03
D 16	2252	2249	3505	4731					4154	4275	4.21	4.5	2.6	3.55	2.25E-03
D 17	2098	2096	3262	4403	77471				2440	2440	2.44	4.5	5	4.75	2.10E-03
D 18	262	261	411	555					2165	2089	2.13	1.3	0.5	0.9	2.62E-04
D 20	72	71	110	149					2068	2042	2.06	4.5	2.4	3.45	7.15E-05
D 21	1087	1086	1696	2289					5500	5500	5.50	5	2.8	3.9	1.09E-03
D 23	2798	2798	4364	5891					4526	4245	4.39	2.9	0.7	1.8	2.80E-03
D 24	2592	2592	NA	NA					NA	NA	NA	NA	NA	NA	2.59E-03
D 25	2473	2472	3855	5204					3651	3306	3.48	4.5	0.5	2.5	2.47E-03
D 27	979	977	1528	2063					4275	4160	4.22	4.5	2	3.25	9.79E-04
D 29	1283	1283	2005	2707					3474	3420	3.45	5	0.8	2.9	1.28E-03
D 30	318	317	497	671					3474	3420	3.45	5	0.8	2.9	3.18E-04
D 32	325	325	509	687	9182				4212	4212	4.21	5	2	3.5	3.25E-04
D 33	523	522	817	1103	24209				4620	5043	4.83	5	2.5	3.75	5.23E-04
D 34	99	98	153	206					1963	1715	1.84	4	3.6	3.8	9.85E-05
D 35	16	16	25	34					2130	2080	2.11	3.3	2.2	2.75	1.64E-05
D 36	37	37	57	77					2159	2110	2.13	4.5	2	3.25	3.73E-05
D 38	90	89	139	188					2244	2106	2.18	4.5	1.8	3.15	9.00E-05
D 39	>10000	>10000	>10000	>10000	252126				2152	2182	2.17	2.2	4	3.1	0.00E+00
D 41	213	213	334	451					2311	2430	2.37	2	1.1	1.55	2.13E-04
D 42	>>10000	>>10000	>>10000	>>10000	250958				2008	1955	1.98	4.8	4	4.4	0.00E+00
D 43	109	107	167	226					2941	2910	2.93	5	4	4.5	1.09E-04
D 44	162	161	251	338					3527	3527	3.53	4.8	10	7.4	1.62E-04
D 46	115	114	178	240					3527	3527	3.53	4.8	7	5.9	1.15E-04
D 47	143	143	225	225					2032	1983	2.01	0.5	0.5	0.5	1.43E-04
D 49	202	202	318	429					2032	1983	2.01	0.5	0.5	0.5	2.02E-04
D 50	200	200	315	425					2146	2005	2.08	0.4	0.5	0.45	2.00E-04
D 51	2180	2180	3411	4605					2146	2146	2.15	0.2	1.2	0.7	2.18E-03
D 52	152	152	238	322					4325	4325	4.33	4	0.25	2.125	1.52E-04
D 54	>10000	>10000	>10000	>10000	308028				2240	2353	2.30	4.2	4.6	4.4	0.00E+00
D 55	118	117	183	248					2684	2674	2.68	4	1.4	2.7	1.18E-04
D 56	7	6	9	13					2476	2469	2.47	5	2.8	3.9	6.60E-06
D 57	63	63	98	132					2480	2398	2.44	4	1.4	2.7	6.30E-05
D 59	NA	NA	NA	NA	256228				2356	2335	2.35	2.1	2.8	2.45	NA
D 60	405	405	637	859					2339	2216	2.28	0.5	0.5	0.5	4.05E-04
D 61	71	70	110	148					2465	2403	2.43	5	1.2	3.1	7.10E-05
D 62	4	4	6	8					2190	2146	2.17	4.2	1.5	2.85	4.30E-06
D 64	27	27	42	56					2976	2911	2.94	4.5	0.7	2.6	2.72E-05

BAGGI

TERMI

SmpI ID	Recorded	net	net	Adjustd to	THC	Initial	Final	Avg N2	Initial	Final	Volume	
	THC as PROPANE ppmv	THC as PROPANE ppmv	THC as PROPANE ppmw	HEXANE Response ppmw	Tracor ppmw	Flow ml/min	Flow ml/min	Flow l/min	%O2	%O2	Avg O2 Conc %	Fraction THC (Byron) Xthc
D 65	26	26	40	54		2976	2911	2.94	4.5	0.7	2.6	2.62E-05
D 66	23	23	35	48		3083	3024	3.05	4.5	0.7	2.6	2.30E-05
D 67	36	36	56	76		3119	2963	3.04	4	1.8	2.9	3.62E-05
D 68	83	82	129	174		3074	3014	3.04	4.4	1.6	3	8.28E-05
D 69	21	20	32	43		2947	2988	2.97	4.4	1.4	2.9	2.11E-05
D 70	0	0	0	0	113	1597	1589	1.59	0.5	1	0.75	2.00E-07
D 73	28	28	43	59		2026	2007	2.02	0.7	0.7	0.7	2.78E-05
D 74	8	8	12	16		1985	1878	1.93	1.2	0.5	0.85	7.90E-06
D 76	7	7	10	14		1890	1877	1.88	1	1.3	1.15	6.80E-06
D 77	7	6	10	14		1943	1929	1.94	2	1	1.5	6.90E-06
D 78	26	26	41	55		1952	1975	1.96	2	0.7	1.35	2.61E-05
D 79	7	7	11	15		1832	1925	1.88	1	1.5	1.25	7.30E-06
D 80	7	7	11	15		1832	1925	1.88	1	1.5	1.25	7.20E-06
D 81	7	7	11	15		2073	2100	2.09	2	2	2	7.40E-06
D 82	7	7	10	14		1870	1885	1.88	2	2	2	6.90E-06
D 83	4	4	6	8		2134	2178	2.16	1	1	1	4.00E-06
D 84	6	5	9	12		2751	2770	2.76	4.6	2.5	3.55	6.00E-06
D 85	659	658	1030	1390		4050	3459	3.75	4	2.5	3.25	6.59E-04
D 88	171	171	268	362		1031	999	1.02	2.2	1.5	1.85	1.71E-04
D 90	830	829	1301	1756		1851	1849	1.85	2.2	0.9	1.55	8.30E-04
D 91	70	70	110	148		947	951	0.95	0.9	0.7	0.8	7.01E-05
D 92	72	72	113	152		1975	1984	1.98	2.2	0.9	1.55	7.20E-05
D 93	168	168	265	357		1770	1661	1.72	0.8	0.7	0.75	1.68E-04
D 94	166	166	261	352		1770	1661	1.72	0.8	0.7	0.75	1.66E-04
D 95	169	169	265	358		1734	1740	1.74	0.6	0.6	0.6	1.69E-04
D 96	10332	10331	15783	21307		1541	1556	1.55	3.2	3	3.1	1.03E-02

BAGGI		Volume		Air & N2		MASS EMISSION RATE		
TERMI	Fraction	Fraction	Flow Rate					
	O2	N2	thru Bag					
Smp1			Bag	Q	Temp	E.R.	E.R.	
ID	Xo2	Xn2	Gas	m3/hr	deg R	lb/hr	lb/yr	
=====								
D 1	0.036	0.964			545			
D 2	0.039	0.961	28.19	0.28	538	0.0008	6.70	
D 3	0.030	NA	NA	0.21	539	0.0291	254.48	
D 4	0.048	0.952	28.19	0.15	540			
D 5	0.007	0.983	28.74	0.07	532	0.0039	34.10	
D 6	0.003	0.997	28.02	0.06	533			
D 7	0.050	0.945	28.59	0.17	554	0.0048	41.94	
D 8	0.014	0.986	28.13	0.12	551	0.0006	5.31	
D 9	0.036	0.959	28.53	0.15	546	0.0043	38.09	
D 10	0.046	0.945	28.86	0.13	539	0.0064	56.43	
D 11	0.025	0.970	28.42	0.23	554	0.0053	46.17	
D 12	0.017	0.979	28.37	0.28	554	0.0062	53.89	
D 13	0.017	0.978	28.42	0.28	554			
D 14	0.028	0.968	28.42	0.31	560	0.0067	58.94	
D 16	0.036	0.962	28.30	0.30	556	0.0035	31.08	
D 17	0.048	0.950	28.34	0.19	561	0.0020	17.69	
D 18	0.009	0.991	28.05	0.13	539	0.0002	1.63	
D 20	0.035	0.965	28.14	0.15	543	0.0001	0.48	
D 21	0.039	0.960	28.23	0.41	553	0.0023	20.07	
D 23	0.018	0.979	28.27	0.29	559	0.0042	36.36	
D 24	NA	NA	NA	NA	533			
D 25	0.025	0.973	28.28	0.24	536	0.0031	27.58	
D 27	0.033	0.967	28.20	0.30	538	0.0016	13.73	
D 29	0.029	0.970	28.21	0.24	548			
D 30	0.029	0.971	28.14	0.24	548			
D 32	0.035	0.965	28.16	0.30	550	0.0005	4.51	
D 33	0.038	0.962	28.19	0.35	549	0.0010	8.44	
D 34	0.038	0.962	28.16	0.13	558	0.0001	0.59	
D 35	0.028	0.972	28.11	0.15	534	0.0000	0.11	
D 36	0.033	0.967	28.13	0.15	541	0.0000	0.26	
D 38	0.032	0.968	28.13	0.15	552	0.0001	0.62	
D 39	0.031	0.969	28.12	0.15	540	0.0970	849.32	
D 41	0.016	0.984	28.08	0.15	540	0.0002	1.53	
D 42	0.044	0.956	28.18	0.15	540	0.0952	834.32	
D 43	0.045	0.955	28.19	0.22	541	0.0001	1.12	
D 44	0.074	0.926	28.31	0.33	542	0.0003	2.45	
D 46	0.059	0.941	28.24	0.29	542			
D 47	0.005	0.995	28.03	0.12	530	0.0001	0.62	
D 49	0.005	0.995	28.03	0.12	530			
D 50	0.005	0.995	28.03	0.13	528	0.0001	1.22	
D 51	0.007	0.991	28.18	0.13	529	0.0016	13.84	
D 52	0.021	0.979	28.10	0.29	530	0.0002	2.08	
D 54	0.044	0.956	28.18	0.17	548	0.1335	1169.52	
D 55	0.027	0.973	28.12	0.18	550	0.0001	0.99	
D 56	0.039	0.961	28.16	0.18	546	0.0000	0.05	
D 57	0.027	0.973	28.11	0.17	531	0.0001	0.50	
D 59	0.025	NA	NA	0.16	534	0.1040	910.86	
D 60	0.005	0.995	28.05	0.14	531	0.0003	2.69	
D 61	0.031	0.969	28.13	0.17	533	0.0001	0.57	
D 62	0.029	0.971	28.11	0.15	535	0.0000	0.03	
D 64	0.026	0.974	28.11	0.20	537	0.0000	0.25	

BAGGI		Air & N2					
TERMI	Volume	Volume	Flow Rate		MASS EMISSION RATE		
	Fraction	Fraction	thru Bag				
	O2	N2	Bag	Q	Temp	E.R.	E.R.
Smp1			Gas	m3/hr	deg R	lb/hr	lb/yr
ID	Xo2	Xn2	MW				
D 65	0.026	0.974	28.11	0.20	537		Sample Dup of D064
D 66	0.026	0.974	28.11	0.21	537	0.0000	0.22
D 67	0.029	0.971	28.12	0.21	541	0.0000	0.35
D 68	0.030	0.970	28.13	0.21	541	0.0001	0.82
D 69	0.029	0.971	28.12	0.21	543	0.0000	0.19
D 70	0.008	0.992	28.03	0.10	540	0.0000	0.00 Poor agreement between Byron and OVA regarding bag con
D 73	0.007	0.993	28.03	0.13	523	0.0000	0.17 Byron ppmv corrected per RVLewis FAX 10/1/92
D 74	0.009	0.991	28.03	0.12	530	0.0000	0.04
D 76	0.012	0.988	28.05	0.12	524	0.0000	0.04
D 77	0.015	0.985	28.06	0.13	524	0.0000	0.04
D 78	0.014	0.986	28.06	0.13	532	0.0000	0.15
D 79	0.013	0.987	28.05	0.12	533	0.0000	0.04
D 80	0.013	0.987	28.05	0.12	533		Sample Dup of D079
D 81	0.020	0.980	28.08	0.14	535	0.0000	0.05
D 82	0.020	0.980	28.08	0.12	543	0.0000	0.04
D 83	0.010	0.990	28.04	0.14	534	0.0000	0.02
D 84	0.036	0.964	28.14	0.20	540	0.0000	0.05
D 85	0.033	0.967	28.18	0.27	545	0.0009	8.12
D 88	0.019	0.981	28.09	0.07	523	0.0001	0.55
D 90	0.016	0.984	28.12	0.12	524	0.0005	4.79
D 91	0.008	0.992	28.04	0.06	522	0.0000	0.20
D 92	0.016	0.984	28.07	0.13	525	0.0001	0.44
D 93	0.008	0.992	28.04	0.11	527	0.0001	0.86
D 94	0.008	0.992	28.04	0.11	527		Sample Dup of D093
D 95	0.006	0.994	28.04	0.11	527	0.0001	0.87
D 96	0.031	0.959	28.87	0.11	530	0.0061	53.59

APPENDIX D

DETAILED INFORMATION ON QUALITY CONTROL RESULTS

D1.0 BAG SAMPLES NOT USED

Table D-1 identifies the bag samples that were not used in the determination of default zero emission factors and emission correlation equation development and explains the reasoning for excluding these samples. Most of these reasons were related to the QC objectives outlined in the Quality Assurance Project Plan and repeated in Section 3.5 of this report. The reasons for excluding a bag from analysis were generally as follows:

- Higher than acceptable O₂ readings (above 5%).
- Higher than acceptable variability in initial versus final screening values (generally much higher than a factor of 2 variability).
- Leaking bags.
- Nitrogen flow forcing hydrocarbons back into component (open vents).

Some of the components were originally measured at low oxygen readings before the sample was taken but by the time the test was completed the oxygen amount had increased substantially indicating that a leak in the tent had occurred while testing.

The great majority of the bag samples that were used in the development of default zero emission factors and emission correlation equations had initial versus final screening values that differed by less than 20%. In a few select cases, for high emission rate components, the variability permitted was up to a factor of two (or 100%). Furthermore, the variability for gas loading arm valves exceeded this factor of two in most cases. The screening values for gas loading arm valves varied dramatically based on the number and timing of trucks in the terminal while bagging. Highly variable screening values appear to be a consistent characteristic of gas loading arm valves. In later testing, the sampling period was extended to get better averaging. Bag samples from these components were not deleted based on high variability in order to have sufficient gas loading arm valves to analyze.

Table D-1

Bag Samples Not Used

Sample #	Reason for Deletion
A011	Initial screening missed point of highest emission
A016	High variability of screening values
A026	Bag had a leak
A035	High variability of initial vs. final screening values (varied by a factor of 4)
A054	High O2 (5%); high N2 flow rate for a default zero component
A057	High O2 (up to 8%); not enough sample taken
B110	Pump came on during sample collection - screened with pump off
B115	High variability of initial vs. final screening values (varied by a factor of 10)
B148	High O2 (up to 14%)
D004	Bag appears to have leaked (35 minute sample collection time and inconsistent THC readings from OVA with bag in place compared to Byron and Tracor GC results)
D006	Nitrogen flow too high for this open-ended line, apparently sending nitrogen into vent on vessel (statistical outlier with low bagged mass emissions compared with very high screening rate)
D022	High O2 (up to 10%)
D024	Nitrogen flow into vent; nitrogen flow rate not measured
D029	High variability of initial vs. final screening values (varied by a factor of 4)
D030	High variability of initial vs. final screening values (varied by a factor of 4)
D045	High O2 (up to 10%)
D070	Statistical outlier; Byron total hydrocarbon readings were more than two orders of magnitude lower than both the OVA with the bag in place or the Tracor™ readings
D071	High variability of initial vs. final screening values (varied by a factor of 5)
D087	Not enough sample collected? (field notes say very small bag - too much nitrogen flow)

A few of the Tedlar™ bags developed leaks while in the field. Samples taken with these leaking bags could have had ambient air contamination or dilution and were not used in this analysis. In two instances it appears that nitrogen flow into tents connected to vents (open-ended lines from certain process vessels) actually entered the process vessel. These were not conventional open-ended lines from which leakage is controlled by an upstream block valve. These were vents leading straight to the vapor space of storage tanks or other atmospheric pressure vessels. Without a block valve to prevent a backflow, the hydrocarbon vapors that were being emitted prior to the bagging were forced back into the process vessel by the nitrogen.

In only one case (sample D070) was a bag sample discarded without a QC or physical explanation of the problem with the sample. After plotting up the mass emission correlation with the screening value for this component it was determined that it was a statistical outlier. Further review showed that the total hydrocarbons reported from the Byron 301 were more than two orders of magnitude lower than the total hydrocarbons reported from the OVA with the tent in place and the Tracor GC readings. It is not known why the Byron 301 results were so low, but it appears that this Byron reading was not correct and the sample was not used in this analysis.

D2.0 BYRON TOTAL HYDROCARBON ANALYSIS RESULTS

The accuracy of the Byron 301 was determined by evaluating multiple concentration level calibration curves and daily QC checks using methane and propane. The methane calibration curves were all within QA/QC objectives for correlation coefficients indicating excellent accuracy.

The percent recovery of the methane concentrations analyzed were within 80-120% of the true value for 87% of the samples analyzed, indicating good accuracy. The percent recovery of the propane samples needs some additional explanation. The propane calibration gas cylinders appear to have been incorrectly labeled by the vendor (with the exception noted for Site B). The cylinders came from the same vendor and were apparently generated from a controlled dilution of gas from the same source, as the four samples produced linear responses from the FID.

During the Site D study, checks with 100 and 1,000 ppmv hexane calibration gases from two separate vendors suggested that concentrations of the propane calibration gases were all approximately 35% higher than the label values. Subsequent testing against another propane calibration gas in the Radian lab in Austin confirmed that the propane calibration gas within 4% of the value indicated by the hexane calibration gases. With the understanding that the propane standards were consistently in error (with the exception discussed for Site B), the results of these accuracy tests show very good accuracy. The consistent error was accounted for in all test results.

D2.1 SITE A

Six different multiple concentration level calibration curves were performed using methane, and 14 using propane. The linearity of the calibration curves was evaluated using the correlation coefficient, which should be greater than or equal to 0.995. The correlation coefficients were all greater than 0.995, indicating changes in the instrument response were systematically associated with changes in gas concentration for both methane and propane.

The percent recovery of the concentrations analyzed provides a measure of the analytical accuracy, and should be between 80-120% of the true value. There were 17 methane data points to evaluate. The average percent recovery was 117%, with only four of the recoveries outside of the acceptable range (one high response on 3/11, two on 3/12 and one on 3/13). The average percent recovery of the 38 propane data points was 102%, with only six of the recoveries outside of the acceptable range (low responses on 3/11, 3/12, and 3/16, one high response on 3/23, and two on 3/24).

D2.2 SITE B

Four different multiple concentration level calibration curves were performed using methane, and 11 using propane. The correlation coefficients were all greater than 0.995, indicating the instrument responded in a linear manner to different gas concentrations of both methane and propane.

There were 10 methane data points to evaluate. The average percent recovery for methane was 100%. All of the recoveries were within the acceptable range.

The average percent recovery of the 29 propane data points was 92%. All of the low responses were caused by using a mid-level standard which was from a different vendor than the other standards. Without the odd standard, the percent recovery for Site B propane samples was 100 percent. In reality, this odd-standard was the only standard that had the concentration labeled accurately. The incorrectly labeled remaining standards were generated from a controlled dilution of gas from the same source. However, because three gas cylinders were consistent and this mid-level standard was different, it was replaced with the same source as the others and the concentration was also incorrectly labeled.

D2.3 SITE D

Nine different multiple concentration level calibration curves were performed using both methane and propane. The correlation coefficients were all greater than 0.995, indicating changes in the instrument responded in a linear manner to different gas concentrations of both methane and propane.

There were 28 methane data points to evaluate. The average percent recovery was 102%, with only three of the recoveries outside of the acceptable range (one low response on 8/22 and two high responses on 8/29). The average percent recovery of the 49 propane data points was 103%, with only seven of the recoveries outside of the acceptable range (low response on 9/2, one high response on 8/25, two on 8/28, two on 8/29, and one on 9/1).

D3.0 GC/FID (TRACOR GC) ANALYSIS OF SPECIFIC HYDROCARBONS

Several different types of QC samples and checks, including calibrations using multiple concentration levels and daily analysis of QC standards were performed and evaluated to measure the accuracy of the data produced. The results of these accuracy checks are presented in Subsections D3.1, D3.2, and D3.3 for Sites A, B, and D, respectively. Results of laboratory duplicate sample analysis were used to evaluate precision. These results are presented in Subsection D3.4.

D3.1 SITE A

D3.1.1 Conclusion

The QC information suggests that the vapor data from Site A started out to be reasonably accurate and became progressively worse throughout the testing period. The data produced using the latter calibration curves (from 3/18 to 3/27) are not as quantitatively accurate as are the previous data (3/13 - 3/18). For both liquid and vapor analyses, though the strict QA/QC accuracy criterion were not always met, the data appear to be usable both because of the qualitative accuracy and general quantitative accuracy exhibited. Perhaps the degradation of quantitative accuracy occurred by contamination of the Tracor GC over time. All of these data are still used in the evaluation presented in Section 5.7. However, Tracor GC results presented for Site A need to be used with caution.

D3.1.2 Calibrations

The linearity of the three-point calibration curve was evaluated using the correlation coefficient, which had as a QA/QC objective to be greater than or equal to 0.995. Tables D-2 and D-3 list the correlation coefficients obtained for the Site A Tracor GC liquid and vapor data, respectively.

D3.1.2.1 Liquid Data

Two liquid calibration curves were prepared. The correlation coefficients from the first indicate the calibrations were acceptable (criterion was met) for all compounds except

Table D-2

**QC Results for Specific Hydrocarbons by
GC/FID Analysis for Liquids
Site A**

Compound	Correlation Coefficient for Liquid Calibration on 3/18/92	Correlation Coefficient for Liquid Calibration on 3/27/92
n-hexane	0.99949	0.99592
iC8/MTBE	0.99961	0.96445
Benzene	0.99772	0.98541
Toluene	0.99853	0.99503
Ethyl Benzene	0.99959	0.99232
p-xylene	0.99387	0.98836
m-xylene	0.99959	0.99937
Cumene	0.99930	0.99108
o-xylene	0.99931	0.99022

Table D-3

**QC Results for Specific Hydrocarbons by
GC/FID Analysis for Vapors
Site A**

Compound	Correlation Coefficient for Vapor Calibration on 3/13/92	Correlation Coefficient for Vapor Calibration on 3/17/92	Correlation Coefficient for Vapor Calibration on 3/18/92	Correlation Coefficient for Vapor Calibration on 3/25/92
n-hexane	0.998	0.964	1.000	0.994
iC8/MTBE	0.966	0.966	0.993	0.984
Benzene	0.996	0.996	0.985	0.977
Toluene	0.993	0.993	0.999	0.900
Ethyl Benzene	0.999	0.999	0.989	0.955
p-xylene	0.999	0.999	0.988	0.999
m-xylene	0.999	0.999	0.995	0.990
Cumene	0.999	0.999	0.994	0.984
o-xylene	0.996	0.996	0.994	0.943

p-xylene, and therefore, data analyzed from 3/18 to 3/20 were probably fairly accurate (except for four compounds on 3/20; see % drift discussion, below). For the second calibration, the correlation coefficient for the majority of compounds did not meet the strict QA/QC criterion. Therefore, for data analyzed on 3/27, quantitation was not likely to be as accurate as previous data.

D3.1.2.2 Vapor Data

Four different vapor calibration curves were prepared. The correlation coefficients for the first two (3/13 and 3/17) were generally acceptable (criterion was met for most compounds), the exceptions are for n-hexane, iC8/MTBE and toluene. Therefore, vapor data collected from 3/13-3/17 for these three compounds may not be as quantitatively accurate as that for the remaining compounds. Correlation coefficients from the last two calibration curves (3/18 and 3/25) indicated a lack of linear response for the majority of compounds. Therefore, vapor data generated on the Tracor from 3/18 to 3/27 should be interpreted as quantitative estimates, though qualitatively accurate.

D3.1.3 QC Standards — Percent Drift

Results from analysis of the calibration check, or QC, standards were used to calculate the percent drift. The percent drift measures the amount of change in the instrument response to a known standard, and should be within $\pm 35\%$ according to the QAPP. For instances when this criterion was not met, the instrument response to compounds varied from the response when the instrument was calibrated by more than $\pm 35\%$, and therefore, associated data are more appropriately only used as quantitative estimates.

3.1.3.1 Liquid Data

The liquid percent drift results met the acceptance criteria approximately 70% of the time. The most notable day of "instrument instability" was 3/20. The compounds most frequently affected were iC8/MTBE, m-xylene, cumene, and benzene. The percent drift information indicates results for the former three compounds are likely to be biased low and those for benzene are likely to be biased high.

D3.1.3.2 Vapor Data

The percent drift results met the acceptance criteria approximately 75% of the time. Most notable days of "instrument instability" were 3/16 and 3/25. The compounds most frequently affected are n-hexane, iC8/MTBE, benzene and toluene. The percent drift information indicates results for the former three compounds are likely to be biased low and those for toluene are likely to be biased high for approximately half of the days samples were analyzed.

3.1.4 Laboratory Precision Checks

Analytical precision is measured by the Relative Percent Difference (RPD) between QC sample (calibration check) duplicates. The acceptance criteria is for an RPD of less than 50% for 80% of the calibrated compounds for intra-day duplicates (duplicates analyzed on the same day). In instances where intra-day duplicates were not available, inter-day duplicates (duplicates analyzed on different days) were used. The variability exhibited by the inter-day pairs is expected to be greater. RPDs up to 100% for inter-day comparisons are acceptable for GC analyses.

3.1.4.1 Liquid Data

Daily liquid QC samples were not analyzed in duplicate. Therefore, the laboratory precision was assessed by comparing the two pairs of inter-day QC sample results. RPDs for all compounds for both pairs were less than 50%, except for one RPD of 96% for benzene. These results indicate the liquid data is reproducible. The RPDs are summarized in Table D-4.

D3.1.4.2 Vapor Data

QC samples (calibration checks) of the same concentrations were analyzed in duplicate on two of the nine days vapor samples were analyzed. In addition, an inter-day comparison of responses was also made from QC sample results in two instances. The analytical precision for the intra-day duplicates met this objective in both instances. The inter-day variability was generally acceptable as well. All RPDs were less than 50%, except for those between

Table D-4

**Relative Percent Difference (RPD
of Hydrocarbons Analyzed - Liquid Data
Site A**

Date	RPD Range	Compounds Not Meeting Inter-day Criterion
3/19 - 3/20 (Standard 1)	0-50%	None
3/19 - 3/20 (Standard 2)	15-96%	None

the n-hexane and iC8/MTBE pairs, which were both less than 100%. Overall, the precision data suggests that the results are reproducible. The RPDs are summarized in Table D-5.

D3.2 SITE B

D3.2.1 Conclusion

The QC information suggests that the quantitative accuracy of both the liquid and vapor data from Site B are in question. Though qualitative identification was acceptable, the QC data from this site indicates the concentrations reported should be used as estimates. In particular, all of the liquid data and the vapor data from 4/28/92 analyses should be considered primarily qualitative. All of these data are still used in the evaluation presented in Section 5.7. Clearly, these Tracor GC results for Site B need to be used with caution.

D3.2.2 Calibrations

The linearity of the three-point calibration curve was evaluated using the correlation coefficient, which should be greater than or equal to 0.995.

D3.2.2.1 Liquid Data

One liquid calibration curve was prepared. Only the correlation coefficients for n-hexane and benzene met the strict QA/QC objective. Therefore, liquid Tracor GC data from Site B should be used as estimates only. Tables D-6 and D-7 list the correlation coefficients obtained for the Site B Tracor GC liquid data.

D3.2.2.2 Vapor Data

Three different calibration curves were prepared, one on 4/21/92, one on 4/23/92 and the third on 4/23/92. For the first vapor calibration curve, the correlation coefficients for benzene, toluene, and m-xylene were all less than 0.995, indicating vapor data for these three compounds may not be as quantitatively accurate as that for the remaining compounds. For the remaining two vapor calibration curves, only the n-hexane correlation

Table D-5

**Relative Percent Differenct (RPD
of Hydrocarbons Analyzed - Vapor Data
Site D**

Date	RPD Range	Compounds Not Meeting Intra-day Criterion
3/18/92	0-46%	None
3/19/92	5-30%	None
3/13/92 - 3/16/92	4-80%	n-hexane iC8/MTBE
3/25/92 - 3/26/92	6-83%	n-hexane iC8/MTBE

Table D-6

**QC Results for Specific Hydrocarbons
by GC/FID Analysis for Liquids
Site B**

Compound	Correlation Coefficient for Liquid Calibration on 5/4/92
n-hexane	0.99984
isooctane	0.98585
MTBE	0.98723
Benzene	0.99865
Toluene	0.99073
Ethyl Benzene	0.99065
p-xylene	0.98699
m-xylene	0.98658
Cumene	0.99358
o-xylene	0.99256

Table D-7

**QC Results for Specific Hydrocarbons
by GC/FID Analysis for Vapors
Site B**

Compound	Correlation Coefficient for Vapor Calibration on 4/21/92	Correlation Coefficient for Vapor Calibration on 4/23/92	Correlation Coefficient for Vapor Calibration on 4/30/92
n-hexane	1.000	0.961	0.9995
iC8/MTBE	1.000	0.9897	0.9833
Benzene	0.961	0.9871	0.9916
Toluene	0.979	0.9762	0.9711
Ethyl Benzene	0.998	0.9868	0.942
p-xylene	0.998	0.9907	0.9942
m-xylene	0.991	0.9571	0.9949
Cumene	0.997	0.9827	0.9829
o-xylene	0.997	0.9911	0.9871

coefficient from the 4/30/92 calibration met the objective. Therefore, vapor data generated on the Tracor from 4/23 to 5/4/92 should be used as quantitative estimates only.

D3.2.3 QC Standards - Percent Drift

D3.2.3.1 Liquid Data

The percent drift results did not meet the acceptance criteria (i.e., were outside of $\pm 35\%$) for eight of the ten compounds from the calibration check performed on 5/4. These results indicate that except for benzene and MTBE, all liquid results are likely to be biased low. This degree of bias does not render the data unusable as long as the results are interpreted with this bias in mind.

3.2.3.2 Vapor Data

Seventeen data points are available for percent drift for most compounds. (Calibration checks were performed in duplicate on most days). Approximately 70% of the percent drift results met the acceptance criteria of $\pm 35\%$, indicating the instrument response exhibited some degree of instability. The average percent recoveries for the nine compounds ranged from 83-131%. (Percent recovery is inversely related to percent drift; e.g., if the percent drift was -35%, the percent recovery of the compound based on the recovery used to obtain the response factor calibration is 135%). The fairly stable average percent recoveries indicate the accuracy of the data is generally acceptable, and that overall, the data is usable.

D3.2.4 Laboratory Precision Checks

D3.2.4.1 Liquid Data

QC information for only one day was reported (5/4). The QC check was not performed in duplicate; therefore, precision data are not available.

D3.2.4.2 Vapor Data

QC samples were analyzed in duplicate on five of the eleven days vapor samples were analyzed. Analytical precision for the vapor data is measured by the Relative Percent Difference (RPD) between the daily duplicates. An RPD of less than 50% for 80% of the calibrated compounds is considered precise. Though the analytical precision did not meet this strict objective on 4/28 and 4/29, data associated with RPDs as high as 100% (i.e., results agree within a factor of three) are still considered to be acceptable. The RPDs are summarized in Table D-8.

D3.3 SITE D

D3.3.1 Conclusion

The QC information suggests that the analytical accuracy of the liquid data is quite good. The calibration curve was linear, the instrument response was stable, and the agreement between the QC checks from one day to the next was acceptable.

The vapor data is not quite as accurate. The original vapor calibration (8/22/92) for the majority of compounds showed systematic agreement with changes in gas concentration. However, the correlation coefficients for the second vapor calibration (9/1/92) did not meet the strict criterion for the majority of compounds. This suggests the data produced using the latter calibration curve may not be as quantitatively accurate as are the previous data. The stability of the instrument response was generally acceptable for this matrix. The precision exhibited by the duplicate daily QC checks indicates that while the vapor data are somewhat variable, the overall agreement is acceptable. All of the Tracor GC data are used in the evaluation presented in Section 5.7.

D3.3.2 Calibrations

The linearity of the three-point calibration curve was evaluated using the correlation coefficient, which should be greater than or equal to 0.995. Table D-9 lists the correlation coefficients obtained for the Site D Tracor GC liquid and vapor data, and demonstrates that

Table D-8

**Relative Percent Difference (RPD)
of Hydrocarbons Analyzed
Site D**

Date	RPD Range	Compounds Not Meeting Criterion
4/23/92	9-49%	None
4/24/92	13-65%	benzene
4/25/92	3-41%	None
4/28/92	5-126%	benzene toluene ethyl benzene cumene xylene
4/29/92	0-109%	benzene toluene m-xylene

Table D-9

**QC Results for Specific Hydrocarbons
by GC/FID Analysis for Liquids and Vapors
Site D**

Compound	Correlation Coefficient for Liquid Calibration	Correlation Coefficient for Vapor Calibration on 8/22/92	Correlation Coefficient for Vapor Calibration on 9/1/92
n-hexane	0.99990	0.991	0.994
iC8/MTBE	0.99989	0.997	0.990
Benzene	0.99670	0.997	0.945*
Toluene	0.99860	1.000	0.996
Ethyl Benzene	0.99979	0.999	0.990
p-xylene	0.99860	0.998	0.975
m-xylene	0.99975	0.993	0.990
Cumene	0.99968	0.992	0.975
o-xylene	0.99933	0.998	0.981

* Original (8/22/92) benzene response factor used.

for liquid data, the calibration curve was linear for all nine compounds, indicating accurate quantitation of each species. For vapor data, two different calibration curves were prepared, one on 8/22/92 and the second on 9/1/92. For the first vapor calibration curve, the correlation coefficients for n-hexane, m-xylene and cumene were all less than 0.995, indicating vapor data for these three compounds may not be quantitatively accurate. Note that for all three components, the correlation coefficient is greater than 0.991. For the second vapor calibration curve, only the toluene correlation coefficient met the objective. Therefore, vapor data generated on the Tracor GC from 9/1 to 9/2/92 for the eight remaining compounds may not be quantitatively accurate. However, only two samples used in the evaluation shown in Section 5.7 are impacted by these QC results (D085 and D088).

D3.3.3 QC Standards - Percent Drift

D3.3.3.1 Liquid Data

The majority of percent drift results were less than $\pm 20\%$, indicating the instrument response was stable and results were accurate. The $+37.8\%$ drift for n-hexane on September 2, 1992 was the only time the strict objective of $\pm 35\%$ was not met, indicating the n-hexane results from September 2 may be biased slightly low (the percent recovery of the original area obtained is 62.2%). The only sample of these used in the evaluation shown in Section 5.7 affected by this result is D088.

D3.3.3.2 Vapor Data

The majority of percent drift results were less than $\pm 35\%$, indicating the stability of the instrument was acceptable. Responses for iC8/MTBE on 8/24, p-xylene and cumene on 8/26 indicate the associated results are likely to be biased slightly low, and responses for m- and o-xylenes on 8/27, m-xylene and benzene on 8/29 indicate the associated results are likely to be biased slightly high.

D3.3.4 Laboratory Precision Checks

D3.3.4.1 Liquid Data

Though duplicate QC samples were not analyzed for liquid data, analytical precision can be measured based on the coefficient of variation (CV) between the four mid-level QC samples. CVs < 20% indicate good precision. The CVs for each of the nine compounds met this criterion and are summarized on Table D-10.

D3.3.4.2 Vapor Data

QC samples were analyzed in duplicate on seven of the nine days vapor samples were analyzed. Analytical precision for the vapor data is measured by the Relative Percent Difference (RPD) between the daily duplicates. An RPD of less than 50% for 80% of the calibrated compounds is considered precise. Though the analytical precision did not meet this objective on 8/28 and 8/29, data associated with RPDs as high as 100% (i.e., results agree within a factor of three) are still considered to be acceptable. The RPDs are summarized in Table D-11 and in almost all cases are below 100%, indicating they are acceptable.

D3.4 TRACOR GC LABORATORY DUPLICATE ANALYSIS

D3.4.1 Liquid Data Analysis

For gas chromatography methods involving speciation (i.e., Tracor GC analysis), data associated with RPDs of less than or equal to 50% (i.e., results agree within a factor of two) are considered precise. Depending on the sample collection and analytical method used, data associated with RPDs as high as 100% (i.e., results agree within a factor of three) are still considered to be acceptable through reproducing the results obtained could be difficult. RPDs of greater than 100% indicate the results from at least one member of the duplicate pair may be inaccurate.

Table D-10**Coefficient of Variation (CV)
for Hydrocarbons Analyzed
Site D**

Compound	CV
n-hexane	15%
iC8/MTBE	12%
Benzene	8%
Toluene	11%
Ethyl Benzene	6%
p-xylene	7%
m-xylene	5%
Cumene	6%
o-xylene	10%

Table D-11

**Relative Percent Difference (RPD)
of Hydrocarbons Analyzed
Site D**

Date	RPD Range	Compounds Not Meeting Criterion
8/22/92	0-49%	None
8/25/92	0-23%	None
8/26/92	5-66%	p-xylene m-xylene cumene o-xylene
8/27/92	2-58%	iC8/MTBE
8/28/92	39-64%	n-hexane toluene ethyl benzene p-xylene cumene
8/29/92	11-103%	n-hexane iC8/tBME benzene toluene
9/2/92	2-61%	iC8/tBME

One duplicate liquid sample was collected and analyzed at Site B and 15 at Site D. (Duplicate liquid samples were not collected at Site A.) The RPDs from the pairs of total speciated results from both sites are less than 50%, indicating the Tracor GC results for indicate good overall liquid samples are acceptable. Sample specific RPDs are presented in Table D-12.

The following site-specific discussions each include a comparison of the benzene, toluene, ethyl benzene, and xylene (BTEX) RPDs as well as a comparison of the total concentrations of speciated compounds which includes all aliphatics, alkenes and aromatics (BTEX compounds). The BTEX comparison is included to provide an indication of the precision obtained for individual compounds.

D3.4.1.1 Site B

The BTEX and total speciated liquid sample duplicate data suggest that while the total speciated concentrations agree, the results for the aromatic compounds benzene and m-xylene may be difficult to reproduce.

Table D-12
Tracor GC Laboratory Duplicate Sample Analysis
Liquid Samples (PPM)

Site	Sample	Benzene	Toluene	Ethyl Benzene	p-Xylene	m-Xylene	o-Xylene	Total	% RPD	% RPD	% RPD	% RPD	% RPD
		% RPD	% RPD	% RPD	% RPD	% RPD	% RPD	% RPD	% RPD	% RPD	% RPD	% RPD	% RPD
B	B012	1,693	1,653	10	10	54	10	13,190	0%	0%	65%	10	48%
		5,508	2,150	10	10	106	10	21,473	0%	0%	65%	10	48%
D	D015B	13,226	106,885	17,165	14,739	29,743	17,530	533,748	9%	9%	9%	15%	16%
	D015C	14,480	117,320	18,937	16,196	32,451	20,279	625,271	9%	9%	9%	15%	16%
	D019B	18,600	54,900	12,900	11,600	25,700	16,400	535,157	23%	22%	19%	21%	12%
	D019C	14,700	46,200	10,600	9,310	21,300	13,300	474,213	17%	20%	19%	21%	12%
	D026B	17,040	50,840	12,200	11,000	24,600	15,700	447,182	8%	5%	4%	5%	14%
	D026C	17,600	54,990	12,800	11,500	25,600	16,500	514,778	8%	5%	4%	5%	14%
	D028B	20,100	35,170	8,770	8,090	19,700	12,400	482,328	9%	27%	34%	19%	20%
	D028C	18,400	30,800	6,700	5,740	15,500	10,300	395,638	13%	27%	34%	19%	20%
	D031B	21,700	35,400	8,570	8,250	18,500	11,700	432,236	30%	28%	25%	43%	5%
	D031C	16,040	47,100	11,400	10,600	25,900	18,100	411,438	30%	28%	25%	43%	5%
	D037B	15,604	46,851	11,536	10,910	25,949	16,735	291,542	17%	26%	30%	11%	12%
	D037C	13,142	40,376	8,902	8,046	21,044	15,057	259,065	17%	26%	30%	11%	12%
	D040B	13,969	43,900	10,800	10,300	24,400	18,100	274,558	11%	6%	6%	11%	8%
	D040C	15,613	46,348	11,470	10,922	25,641	20,130	297,647	11%	6%	6%	11%	8%
	D048B	19,221	52,743	12,645	11,162	25,868	18,174	462,332	5%	6%	5%	11%	8%
	D048C	20,151	55,024	12,925	11,499	26,038	18,193	493,312	4%	2%	3%	0%	6%
	D053B	24,632	34,940	8,736	9,180	18,095	12,950	470,211	4%	2%	3%	0%	6%
	D053C	17,903	30,704	6,908	6,709	15,403	10,314	440,536	32%	23%	31%	23%	7%
	D058B	17,938	32,195	7,599	8,069	15,188	11,876	431,327	6%	8%	7%	1%	9%
	D058C	23,005	34,934	8,207	8,650	16,846	11,957	472,469	25%	8%	7%	1%	9%
	D063B	15,019	100,821	15,143	14,492	24,495	15,351	419,666	15,019	47%	56%	53%	17%
	D063C	9,297	64,453	8,800	8,163	14,408	8,884	354,447	9,297	47%	56%	53%	17%
	D072B	15,564	115,348	18,019	17,476	29,058	18,586	565,697	15,564	6%	1%	3%	4%
	D072C	14,603	113,032	17,600	17,296	28,671	18,046	542,312	6%	2%	1%	3%	4%
	D075B	16,517	127,029	19,898	19,269	32,167	20,362	651,688	16,517	0%	2%	0%	7%
	D075C	16,569	121,681	19,502	18,923	31,588	20,414	607,133	16,569	0%	2%	0%	7%
	D086B	15,481	112,995	17,858	17,397	29,383	18,537	552,247	15,481	2%	3%	1%	2%
	D086C	15,210	113,153	17,745	17,459	28,553	18,412	543,781	15,210	2%	3%	1%	2%
	D089B	16,579	119,626	19,350	17,222	28,753	18,145	564,266	16,579	7%	3%	3%	9%
	D089C	15,461	112,102	18,708	16,687	27,860	17,558	515,356	15,461	7%	3%	3%	9%
	Average	% RPDs:	15%	12%	14%	16%	14%	14%	15%	14%	14%	14%	10%

D3-20

RPD = Relative Percent Difference
NC = Not Calculated

D3.4.1.2 Site D

The average RPD of 10% for the total speciated results indicates excellent agreement was obtained. The average RPDs for the BTEX compounds ranged from 14 to 16%, also indicating excellent agreement.

D3.4.2 Vapor Data Analysis

One duplicate vapor sample pair was collected and analyzed from Site A, and seven each from Sites B and D. Except for one pair from Site B, all the RPDs from the pairs of total speciated results are less than 50%, indicating the GC/FID results for vapor samples are acceptable. Sample specific RPDs are presented in Table D-13.

As with the discussion of duplicate liquid samples, the following site-specific discussions each include a BTEX comparison to provide an indication of the precision obtained for individual compounds and for total speciated results.

D3.4.2.1 Site A

The only compound detected in both members of this duplicate pair was p-xylene. The RPD of 37% indicates good agreement between the results.

D3.4.2.2 Site B

The average RPD of 21% for the total speciated results indicates good overall agreement was obtained. The average RPDs for the BTEX compounds ranged from 17 to 32%, also indicating good agreement, overall. The exceptions include the total speciated results from sample B151 and its duplicate (RPD of 67%). As previously noted, an RPD between 50 and 100% is considered acceptable, though the results may be difficult to reproduce. The majority of variability for this sample pair is due to lack of agreement between the aliphatic compound results (RPD of 175%, not shown in Table D-13) and between the toluene results (RPD 147%). In addition, greater than expected variability was exhibited by the o-xylene duplicate sample pair from B098 (RPD = 117%), though agreement between the total speciated results was not significantly affected for this duplicate pair.

Table D-13

Tracor GC Laboratory Duplicate Sample Analysis Vapor Samples (PPMV)

Site	Sample	Benzene	Toluene	Ethyl Benzene	p-Xylene	m-Xylene	o-Xylene	Total Speciated	% RPD
		% RPD	% RPD	% RPD	% RPD	% RPD	% RPD	% RPD	% RPD
A	A-003	0	0	0	1002.6	0	0	1002.6	
		NC	0	0	1445.3	0	0	1445.3	37%
B	B071	5,452.00	362.00	0.00	0.00	0.00	85.60	5,935.70	4%
	B072	5,635.00	386.00	0.00	0.00	0.00	105.00	6,158.30	20%
	B084	454.00	0.00	0.00	0.00	0.00	27.80	489.94	31%
	B098	337.00	0.00	0.00	0.00	0.00	37.90	380.28	25%
	B111	220.00	598.00	219.00	224.00	417.00	194.00	2,855.80	8%
	B128	228.00	616.00	226.00	219.00	449.00	210.00	2,900.40	39%
	B151	38.50	74.40	58.00	0.00	139.00	61.00	1,131.30	0%
		28.00	74.70	38.00	0.00	80.00	16.10	761.40	8%
		3.12	49.00	34.10	0.00	75.30	34.90	203.21	8%
		2.82	44.00	33.20	0.00	83.70	32.30	203.27	10%
		386.00	2,074.00	502.00	491.00	761.00	281.00	8,094.00	10%
		309.00	2,084.00	421.00	327.00	712.00	260.00	7,310.00	67%
		13.10	30.10	0.00	0.00	0.00	0.00	44.63	21%
		17.50	4.57	0.00	0.00	0.00	0.00	22.29	32%
Site B Average	% RPDs	18%	28%	17%	21%	19%			

RPD = Relative Percent Difference
NC = Not Calculated

Table D-13

(Continued)

Site	Sample	Benzene	Toluene	Ethyl Benzene	p-Xylene	m-Xylene	o-Xylene	% RPD	Total Speciated	% RPD
		% RPD	% RPD	% RPD	% RPD	% RPD	% RPD	% RPD	% RPD	% RPD
D	D002	0.0	10.2	46.0	0.0	33.0	0.0	0.0	310	
	D002DUP	5.6	21.0	8.1	0.0	33.0	0%	12.0	247	23%
	D003	61.0	222.0	0.0	0.0	91.0	0.0	0.0	10,818	
	D003DUP	48.0	184.0	0.0	0.0	90.0	1%	0.0	8,138	28%
	D006	0.0	24.5	0.0	0.0	29.1	10.9	0.0	70	
	D006DUP	0.0	21.5	0.0	0.0	26.0	11%	8.2	61	14%
	D020	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6	
	D020DUP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6	1%
	D036	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15	
	D036DUP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18	17%
	D090	16.4	91.6	3.0	0.0	86.1	3.4	0.0	429	
	D090DUP	17.3	95.8	17.8	0.0	65.4	27%	24.6	447	4%
	D095	0.0	13.4	0.0	0.0	3.3	0.0	0.0	42	
	D095DUP	0.0	6.5	0.0	0.0	0.8	120%	0.0	45	6%
Site D Average	% RPDs	15%	35%	141%	NC	32%	90%			13%

(Low conc. - Signal to noise low)

RPD = Relative Percent Difference
 NC = Not Calculated

D3.4.2.3 Site D

The average RPD of 13% for the total speciated results indicates excellent overall agreement was obtained. The average RPDs for benzene, toluene, and m-xylene were all less than 50%, also indicating good agreement. The RPD for the o-xylene and ethyl benzene results from the D090 pair (RPDs of 151% and 141%, respectively) indicate the results for these two compounds from at least one of these samples may be inaccurate. However, the RPD of 4% for the D090 total speciated results pair indicates the precision for the overall concentration reported was not adversely affected.

D4.0 METHOD AND SAMPLE DUPLICATE RESULTS

Method, sample, and laboratory duplicates were collected for total hydrocarbon bagging results. The sampling tent is dismantled and rebuilt between tests for method duplicates. For sample duplicates, a second bag is pulled from the same tent arrangement. Laboratory duplicates are when one field sample is analyzed in duplicate in the laboratory. Method and sample duplicates were used in determining precision for the OVA and Byron. Laboratory duplicates were used to determine precision of the Tracor GC. Four method duplicate pairs were collected and analyzed at Site A, and seven at Site D. Seven sample duplicate pairs were collected at both Sites B and D. One laboratory duplicate liquid sample pair was collected and analyzed at Site B, and 15 at Site D. In addition, one laboratory duplicate vapor sample pair was collected and analyzed from Site A, and seven each from Sites B and D.

Method and sampling duplicates can have sampling variability, analytical variability, and component variability. Component variability occurs when the component itself leaks differently between sampling events (a common occurrence for components with fugitive emissions).

D4.1 BYRON AND OVA TOTAL HYDROCARBON QC ANALYSIS RESULTS

For the Byron and OVA, data associated with RPDs between 50% and 100% are considered to be precise. The average RPDs are all less than 50%, indicating that overall, the precision is acceptable. There are some individual exceptions however. Sample specific RPDs are presented in Tables D-14 through D-16.

Method and sample duplicates were both collected at Site D. A comparison of that data, as well as the data from the other two sites indicates approximately the same degree of precision was obtained for method duplicates as for sample duplicates. Therefore, it is possible that the variability exhibited is largely a function of the sample collection and analysis process, and that the reconstruction of the tent does not have as much effect on the precision of the results.

Table D-14

Hydrocarbon Bagging Results for Site A Method Duplicates

Sample	Avg OVA		Byron	
	Bag Conc. (ppm)	% RPD	Adjusted to HEXANE Response (ppmw)	% RPD
A011	1260.0		4140	
A012	1575.0	22%	1486	94%
A039	32.8		21	
A040	18.2	57%	16	29%
A052	35.2		12	
A053	35.2	0%	14	16%
A057	46.8			
A058	41.4	12%	18	NC
Average RPDs		23%		46%

RPD = Relative Percent Difference

NC = Not Calculated

Table D-15**Hydrocarbon Bagging Results
for Site B Sample Duplicates**

Sample	Avg OVA Bag		Byron Adjustd to HEXANE	
	Conc. (ppm)	% RPD	Response (ppmw)	% RPD
B072	585		71	
B073	286	69%	242	109%
B085	800		465	
B086	720	11%	495	6%
B095	3240		8826	
B096	4617	35%	16964	63%
B106	364		382	
B107	487.5	29%	422	10%
B117	80		21	
B118	78.5	2%	23	11%
B132	22		13	
B133	22	0%	13	1%
B143	23.85		13	
B144	31.5	28%	7	58%
Average RPDs		25%		37%

RPD = Relative Percent Difference

Table D-16

Hydrocarbon Bagging Results for Site D Method and Sample Duplicates

Sample	Code	Avg OVA Bag Conc (ppm)	MD % RPD	SD % RPD	Byron Adjusted to HEXANE Response Bag (ppmw)	MD % RPD	SD % RPD
D7		195000			11146		
D10	MD	47600	122%		19306	54%	
D12	SD	3080			8884		
D13	SD	3080		0%	10155		13%
D14	MD	2240	32%		8908	13%	
D29	SD	1562			277		
D30	SD	1562		0%	671		83%
D32	MD	2860	59%		687	2%	
D44	SD	168			338		
D46	SD	147		13%	240		34%
D47	SD	180.5			225		
D49	SD	180.5		0%	429		62%
D50	MD	180.5	0%		425	1%	
D64	SD	148.5			56		
D65	SD	148.5		0%	54		4%
D66	MD	155	4%		48	13%	
D79	SD	115.5			15		
D80	SD	115.5		0%	15		1%
D81	MD	105	10%		15	1%	
D93	SD	288.75			357		
D94	SD	288.75		0%	352		1%
D95	MD	225	25%		358	2%	
Average RPDs			36%	2%		12%	28%

RPD = Relative Percent Difference

MD = Method duplicate. The test was dismantled and rebuilt between tests.

SD = Sample duplicate. A second bag was pulled from the same test setup.

D4.1.1 Site A

The average RPDs of 23% and 46% for OVA and THC (Byron) concentrations, respectively, indicate good overall agreement was obtained. RPDs for each OVA and Byron results pair were less than 100%, indicating the results are reproducible.

D4.1.2 Site B

The average RPDs of 25% and 37% for OVA and THC (Byron) concentrations, respectively, indicate good overall agreement was obtained. The exception is the Byron results from the B072/B073 pair (RPD of 109%). The OVA RPD of 69% was also higher than that for the other samples at this site. The general lack of agreement for results between this pair indicate results for at least one member of the pair may be inaccurate.

D4.1.3 Site D

D4.1.3.1 Method Duplicates

The average RPDs of 36% and 12% for OVA and THC (Byron) concentrations, respectively, indicate good overall agreement was obtained. The exception is the OVA results from the D7/D10 pair (RPD of 122%). The Byron of 54% was also higher than that for the other samples at this site. The general lack of agreement for results between this pair indicate results for at least one member of the pair may be inaccurate or have high source variability. Please note that different from other method duplicates, the sample pair D7 and D10 were collected on different days, thereby increasing the chance of obtaining variable data.

D4.1.3.2 Sample Duplicates

The average RPDs of 2% and 28% for OVA and THC (Byron) concentrations, respectively, indicate good overall agreement was obtained. RPDs for each OVA and Byron results pair were less than 100%, indicating the results are reproducible.

APPENDIX E
INDEPENDENT AUDIT RESULTS



**Contract No. 68D10104
Work Assignment No. 17**

TRIP REPORT

Date of Visit: April 21-24, 1992

Prepared for:

**Emission Measurement Branch
U.S. Environmental Protection Agency
Research Triangle Park, North Carolina 27711**

**EMB Work Assignment Manager: K. William Grimley
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WESTON Project No. 6709-01-17

MAY 1992



TRIP REPORT

1.0 SUMMARY

A site visit and test observation were performed on 21 April through 24 April 1992 as per EPA Work Assignment No. 17.

The purpose of the trip was to observe the fugitive emissions test work (bagging) being performed by the Radian Corporation (RADIAN) for the American Petroleum Institute (API). RADIAN, under contract with API, is developing emission factors to define the emissions from bulk transfer/loading terminals. The original scope of work included screening of three (3) facilities and bagging at two (2) of those facilities.

In general, the program is being performed by an experienced and competent field team who, within the framework of the test program as it is being performed, should produce good data. There are, however, some aspects of the program that may require clarification. For example, load arms appear to be a major source of fugitive emissions by virtue of the liquid gasoline lost during each disconnection of the load coupling. This occurs literally hundreds of times per day and, therefore, this component category is important and requires adequate characterization. Another area of concern is the use of tygon silicone rubber tubing for VOC sampling. Tygon is generally not used for VOC type sampling because it can absorb some VOC's. These technical concerns and some QAP departures are discussed in the body of this report.

Concerning the program schedule and performance, it is currently anticipated that testing at the [redacted] will be completed by 5 May 1992. Operations will then be relocated [redacted]. As of 23 April, Radian will be performing bagging at a third facility starting in mid to late May. Bagging will be performed at a third facility for at least two reasons. First, 60 not 80 bags were collected in [redacted] and second, the bulk of the components screened so far have screening values less than 500 ppmv. It is expected that the



older facility may yield more components in the higher emission levels. Bagging at the third facility will also facilitate observation by EPA personnel of the load arm leakage, correction of protocol departures and the other technical concerns identified in this report.

1.1 TEST POPULATION

The sampling matrix being used for this program divides the screening data for bagging into seven (7) emissions levels. The levels are as follows:

Emission Level	Concentration Range
1	0
2	1 - 99
3	100 - 499
4	500 - 999
5	1,000 - 9,999
6	10,000 - 99,999
7	> 100,000

Section 5 Page 4 of the Quality Assurance Plan (QAP) discusses how the bagging data will be treated.

Section 3 Page 1 discusses the screening population and states that a maximum of 1,500 components per site will be screened. It is not clear from the QAP or from the site visit whether this value represents the maximum number of screenings per facility or the maximum number of screenings per component category.



2.0 SAMPLING APPROACH

2.1 TEST TEAM

For screening and bagging, RADIANT is using two-man test teams. Screening is being performed by a technician and the field team leader. Bagging is being performed by the field team leader responsible for sample collection and an analyst responsible for all on-site analyses. Continuity in the data and effort is provided by the dedicated personnel. The field team leader and analyst are dedicated to the project and will perform most or all of the screening and bagging at all three facilities included in the study. RADIANT's bagging team was staffed by Messrs. Dave Ranum and Ken Houston. Mr. Ranum served as the field team leader and Mr. Houston was the analyst. Mr. Bob Schiller was the facility contact. Mr. Schiller was not on site during the observation period. The WESTON observer was Mr. Tom Bernstiel.

2.2 BAGGING

As mentioned, the field team leader alone is responsible for identifying candidates for bagging and bag sample collection. Bag samples are collected at a rate of approximately one per hour. While this approach is relatively slow, it should produce good quality data as one experienced person will theoretically be collecting all samples. The only potential negative aspect of this approach is that the two team members might be preoccupied to a degree that may not facilitate observation at the facility or in the on-site interpretation of data that might aid in tailoring or fine tuning the test program.

2.2.1 Bagging Quality Control

Besides normal procedures for OVA and rotameter calibrations, two quality control procedures specific to bagging studies are being implemented. The test protocol discusses the release of methane at a known rate and subsequent sample collection and analysis. This release and capture



determination, according to the protocol will be performed once per site. At the Southgate facility, this determination was performed on 21 April 1992. Good results were reported but the test was not observed by WESTON. In the opinion of the observer, one release and capture determination per site represents the bare minimum for sampling accuracy. Since methane is the compound released, sample analysis is fast and analytical backlog is not created. It is desirable to perform release and capture experiments at more than one emission rate, generally, a high and low level which would mean 2-3 samples per site for a total of 4-6 release and capture samples. This would not add significant additional work as the release and capture experiments can be performed from a single component using different release rates or methane concentrations.

The second bagging specific quality control step being taken is duplicate bagging or re-bagging. In re-bagging a component is evaluated, the bag is then removed then re-installed and a second sample collection is performed. This procedure is used to define the sampling precision. In this program, RADIANT reports the duplicate or re-bagging will be performed on every tenth component evaluated. With approximately 80 bags collected per site, 10 percent or 8 rebaggings per site is expected and should well define sampling precision. One rebagging was observed by WESTON.

As discussed in the QAP, RADIANT is using the blow-through technique for fugitive emissions measurement and is using nitrogen as the purge gas. The OVA Model 108 is the portable analyzer being used for screening and mass emissions work. The instrument requires a minimum of 14 percent oxygen in order to function properly. For mass emissions testing, measurements are performed from the nitrogen gas stream using a dilution probe. The dilution is a standard OVA attachment that provides a 10:1 sample dilution with charcoal filtered air. When performing mass emission work, the dilution probe is calibrated daily using methane. When screening, the dilution probe extends the upper range of an OVA 108 from 10,000 ppm to 100,000 ppm as methane.



2.3 SAMPLE ANALYSIS

Samples are being analyzed on-site in a portable office unit well suited for the purpose. The gas chromatographic column being used for the analysis is a Supelcowax 10 wide bore capillary column. A temperature program analysis is being used to obtain the desired degree of separation. The program starts at 40°C and ramps to 275°C at 10°C per minute and runs for 44 minutes. The analytical instrument being used is a Tracor Model 540 gas chromatograph. The QAP indicated that a different make and model GC would be used, however, the actual field GC is acceptable.

The gas chromatograph is calibrated using a 10 component mix of the target compounds. The target compounds are: cumene, O, M and P xylene, ethylbenzene, toluene, iso-octane, benzene, N-hexane and tertiary butyl ether. The certified gas standard is contained in an XL size cylinder and each component concentration is approximately 200 ppmv. Standard curves are produced by preparing syringe dilutions of the certified gas standard and then injecting them into the 0.25 cc sample loop. During the site visit reproduction problems with the mid-level standard were observed on 22 April 1992. Standard response for the morning and evening injections were approximately 50 percent different. Response for the mid-level standard injection on the morning of 23 April 1992 was in agreement with the evening injection of 22 April. Whether a step change occurred in the standard response or simply a bad injection cannot be determined as the results for standards were not completely reduced and not readily available. In the final report gas chromatographic standard data and sample analysis precision data should be evaluated.

3.0 QUALITY ASSURANCE PLAN DEVIATIONS

During the test observation deviations from the QAP were identified in the sampling and analytical procedures being implemented at the facility. The items are presented in the following sections with a QAP reference and a comment where appropriate.



3.1 SCREENING

- Section 2, Page 3 states that screening of the target components would be performed under load and no-load conditions.

When screening, the operational condition was noted but screening at two different conditions was not performed. Overall, the impact of this should not be significant.

3.2 BAGGING

- Section 3, Page 8 and Table 3-4 Page 9 state that oxygen concentration inside the bags that enclose the target component will be equilibrated to 0.5%. The oxygen value inside the bags was greater than 0.5% in approximately one-half of the 12 baggings observed. Apparently, the operational value is 5.0% for fieldwork and this can be seen on the field data sheets.

The impact of this cannot be evaluated at this time. When the data is summarized, the impact might be evaluated by comparing the oxygen levels of components in similar emissions levels. This may indicate if a bias exists.

- Section 3 Page 8 and Table 3-4 state that two Tedlar® bag samples will be collected from each component bagged. Observations indicate that only one Tedlar bag sample was collected per component. This is not a problem as long as all analytical work can be performed from one bag and that bag does not leak. One sample was lost due to a leaky bag on 21 April 1992.



- Section 3 Page 8 states that 80 bags will be collected per site for a total of 160. Information collected during the observation indicates that 60 bags were collected at the first test site. The test team leader was not clear as to whether additional bags would be collected at the present facility or if a third facility would be evaluated. On 23 April, I was informed that bagging would be performed at a third facility in the northeast.
- Section 3, Page 10 shows a figure of a typical bagging set-up. It is noteworthy that transfer lines between the tent and sample pump and between the pump and sample bag were tygon. Tygon is of silicone rubber construction. This type of line is generally not used for organic sampling because it absorbs some VOCs. Teflon® lines would be preferable in this application.

3.2 ANALYSIS

- Section 3, Page 12 states that a Shimadzu GC Mini-2 would be used for the sample analysis. On-site, a Tracor 540 was being used for sample analysis. The Shimadzu and Tracor are similarly equipped units and this is not a source of concern.
- Section 3 Page 15 states that all samples and calibrations will be introduced to the analyzers from bags for consistency. For the gas chromatographic analysis standards were introduced from a syringe and samples were introduced from the bags.
- Section 2, Page 15 says that bulk samples will be sent off site for analysis. Discussions with the analyst indicates that the liquid sample analysis is being performed on-site. The timing of liquid and gas analysis is not known but no liquid analyses were observed. The potential problem here is first, cross



contamination of samples and second, using instrument time for work originally scheduled for off-site analysis. This approach reduces the number of bag sample injections possible. The reduced number of duplicate sample injections could be significant if the level of precision determined from the 16 duplicate (1 every 10) sample injections planned is not satisfactory.

4.0 TECHNICAL EXCHANGE

This section outlines technical discussions between the WESTON observer and the RADIANT test team on-site.

4.1 LOAD ARM EMISSIONS

During the site visit, time was spent observing the loading process. Whenever a truck to load arm connection is broken, liquid gasoline falls to the ground. The amount varies from several drops (~0.5 cc) to approximately 5 cc. These estimates are based on observations and actual liquid collections into a roasting pan and subsequent measurement with a graduated cylinder. Also the face of the actual connector on the load arms often appears wet with gasoline. This occurs because often, when the loading pump shuts off, the gasoline is trapped between the pump and truck in the load arm and lines. These lines can contain 30-40 gallons of gasoline separated from the outside by a single connection that is in a high use area and may be prone to leakage. Certainly, load arms will be major source of leakage from a loading facility.

4.2 DUPLICATE SAMPLE ANALYSIS

The rate of duplicate sample injections reported by the analyst was 1 for each 10 samples. The analytical program being used was a 44-minute analytical program with approximately 10-15 minutes between injections which brings the analytical time per sample to approximately 1 hour. For low concentration samples, the bulk of the compounds are light and eluted early. After



developing a feel for the analysis and observing the trends in the gas chromatographic data, it should be possible to truncate the analysis of low concentration samples after approximately 20-25 minutes. The advantage of this would be that more duplicate sample injections could be made. This point was discussed with the analyst and he in turn was to discuss the issue with his superior.



**Contract No. 68D10104
Work Assignment No. 17**

TEST OBSERVATION REPORT

Date of Visit: August 27-28, 1992

Prepared for:

**Emission Measurement Branch
U.S. Environmental Protection Agency
Research Triangle Park, North Carolina 27711**

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WESTON Project No. 6709-01-17

SEPTEMBER 1992



TRIP REPORT

1.0 SUMMARY

A site visit and test observation were performed on 26 August through 27 August 1992 in support of EPA Work Assignment No. 17. The facility visited was the

The purpose of the trip was to observe the fugitive emissions test work (bagging) being performed by the Radian Corporation (RADIAN) for the American Petroleum Institute (API). RADIAN, under contract with API, is developing emission factors to define the emissions from bulk transfer/loading terminals. This test observation is the second of two performed under this work assignment. The first observation was performed at the facility

A copy of that trip report is attached for reference.

In general, the RADIAN test program is being performed for API by a competent field team who, within the framework of the test program as it is being performed, should produce good data. Specific inquiries made during the course of the initial site visit concerning the use of tygon tubing and load arm characterization were apparently taken into consideration for this second facility. No tygon tubing was observed being used and the field team leader reported that he felt that all needed matrix points for load arms components were available at the facility. With respect to load arms observations, the loading procedure indicated practices and losses similar to those observed at the facility.

Concerning the program schedule and performance, it is currently anticipated the testing at the facility will be completed by late September. Following this project, the RADIAN test crew will undertake a fugitive emissions test program for the Western States Petroleum Association (WSPA). It is interesting to note that for the WSPA project RADIAN plans to adapt a new analytical program. All WSPA project samples in the will be collected in canisters and analyzed off-site in a fixed laboratory in general accordance with EPA Method TO-



14. Further, the field team leader will be a recent hire who is receiving his training at the facility.

1.1 TEST POPULATION

The sampling matrix for screening and bagging is identical data for bagging is identical to that used at the facility. The matrix has seven (7) emissions levels covering the range from 0 to 100,000 ppm.

Section 3 Page 1 of the Quality Assurance Plan (QAP) discusses the screening population and states that a maximum of 1,500 components will be screened. The 1,500 represents the total number of screenings at a given facility. Practically, this means that for components for which there are relatively few components, for example pumps, that all pumps were screened. Conversely, for components present in large numbers like valves and flanges, one in ten of these components were screened. Generally, more than 1,500 components were screened per facility where bagging was performed to ensure that enough components in each emission level were identified.

2.0 SAMPLING APPROACH

The sampling approach observed at was practically identical to that used at The exceptions to this were that a new analyst and sample collection technician were on site in

2.1 TEST TEAM

For screening and bagging, RADIANT is using a three-man test team at the facility in Screening and bagging was performed by the field team leader and a technician. The technician, Mr. Jeff Davis, was a recent RADIANT hire and this was his first field project. The



analyst at _____ was Mr. Rich Lewis who replaced Mr. Ken Houston who was the analyst at _____

My impression is that Mr. Lewis was a more experienced analyst than Mr. Houston, based on the depth of his knowledge revealed in technical conversations. Mr. Dave Ranum was the field team leader at _____ and provided site-to-site continuity in effort and data collection technique.

2.2 BAGGING

At the _____ facility, bagging was performed by the field team leader and a technician. The field team leader alone is responsible for identifying candidates for bagging and bag sample collection. Bag samples are still collected at a rate of approximately one per hour, however, and the crew gets up to speed as the program continues the rate of collection should increase. Also, with the assistance of the technician performing actual bagging, the field team leader was able to meet other on-site considerations like QA and component selection, liquid sample collection, etc.

2.2.1 Bagging Quality Control

Besides normal procedures for OVA and rotameter calibrations, two quality control procedures specific to bagging studies are being implemented. The test protocol discusses the release of methane at a known rate and subsequent sample collection and analysis. This release and capture determination, according to the protocol will be performed once per site and at one concentration level. At the _____ facility, this determination was performed on 25 August 1992. Good results were reported but the test was not observed by WESTON. In the opinion of the observer, one release and capture determination per site represents the bare minimum for demonstrating sampling accuracy. Since methane is the compound released, sample analysis is fast and analytical backlog is not created. It is desirable to perform release and capture experiments at more than one emission rate, generally, a high and low level which would mean 2 to 3 samples per site for a total of 4 to 6 release and capture samples. This would not add significant



additional work as the release and capture experiments can be performed from a single component using different release rates or methane concentrations.

The second bagging specific quality control step being taken is duplicate bagging or re-bagging. In re-bagging a component is evaluated, the bag is then removed then re-installed and a second sample collection is performed. This procedure is used to define the sampling precision. In this program, RADIANT reports duplicate or re-bagging will be performed on every tenth component evaluated. With approximately 80 bags collected per site, 10 percent or 8 rebagging per site is expected and should well define sampling precision. One rebagging was observed by WESTON at the facility.

2.3 SAMPLE ANALYSIS

Sample analysis is identical to that previously observed. Samples were being analyzed on-site in an office area well suited for the purpose. The gas chromatographic column being used for the analysis is a Supelcowax 10 wide bore capillary column. A temperature program analysis is being used to obtain the desired degree of separation. The program starts at 40°C and ramps to 275°C at 10°C per minute and runs for 44 minutes. The analytical instrument being used is a Tracor Model 540 gas chromatograph.

The gas chromatograph is calibrated using a 10 component mix of the target compounds. The target compounds are: cumene, O, M and P xylene, ethylbenzene, toluene, iso-octane, benzene, N-hexane and tertiary butyl ether. The certified gas standard is contained in an XL size cylinder and each component concentration is approximately 200 ppmv. Standard curves are produced by preparing syringe dilutions of the certified gas standard and then injecting them into the 0.25 cc sample loop. The standard being used in was the same standard on-site at At the time of use in the cylinder was approximately six months old with an expected shelf life of one year. In the observer's opinion, a one-year shelf life for a ten-component mix is the upper limit of VOC stability for a complex mixture. Mr. Lewis reported that he has



prepared standards to check the cylinder and was satisfied with the results. Regardless, it is the observer's opinion that response factor data and standard data be critically evaluated in the final report.

The analyst mentioned that there were some analytical problems at related to memory peaks from the teflon sample loop and that he was using blank injections to ensure that no sample loop memory was present. This fact should be considered when the final report is reviewed, but practically, sample loop memory would be a positive bias and would tend to produce emission factors that are biased high.

3.0 QUALITY ASSURANCE PLAN DEVIATIONS

During the test observation deviations from the QAP were identified in the sampling and analytical procedures being implemented at the facility. The items are presented in the following sections with a QAP reference and a comment where appropriate. In general, the deviations were observed at both the facilities.

3.1 SCREENING

- Section 2, Page 3 states that screening of the target components would be performed under load and no-load conditions.

When screening, the operational condition was noted but screening at two different conditions was not performed. Overall, the impact of this should not be significant.



3.2 BAGGING

- Section 3, Page 8 and Table 3-4 Page 9 state that oxygen concentration inside the bags that enclose the target component will be equilibrated to 0.5%. The oxygen concentration inside the bags was greater than 0.5% in approximately one-half of the 12 baggings observed. Apparently, the operational value is 5.0% for fieldwork and this can be seen on the field data sheets.

The impact of this cannot be evaluated at this time. When the data is summarized, the impact might be evaluated by comparing the oxygen levels of components in similar emissions levels. This may indicate if a bias exists.

- Section 3 Page 8 and Table 3-4 state that two Tedlar® bag samples will be collected from each component bagged. Observations indicate that only one Tedlar bag sample was collected per component. This is not a problem as long as all analytical work can be performed from one bag and that bag does not leak.

3.2 ANALYSIS

- Section 3, Page 12 states that a Shimadzu GC Mini-2 would be used for the sample analysis. On-site, a Tracor 540 was being used for sample analysis. The Shimadzu and Tracor are similarly equipped units and this is not a source of concern.
- Section 2, Page 15 says that bulk samples will be sent off site for analysis. Discussions with the analyst indicate that the liquid sample analysis is being performed on-site. The timing of liquid and gas analysis is not known but no liquid analyses were observed. The potential problem here is first, cross contamination of samples and second, using instrument time for work originally



scheduled for off-site analysis. This approach reduces the number of bag sample injections possible. The reduced number of duplicate sample injections could be significant if the level of precision determined from the 16 duplicate (1 every 10) sample injections planned is not satisfactory.

4.0 TECHNICAL EXCHANGE

This section outlines technical discussions between the WESTON observer and the RADIANT test team on-site.

4.1 LOAD ARM EMISSIONS

During the site visit, time was spent observing the loading process. The observations indicated losses and practices similar to those identified at

4.2 DUPLICATE SAMPLE ANALYSIS

The rate of duplicate sample injections reported by the analyst was 1 for each 10 samples. The analytical program being used was a 44-minute analytical program with approximately 10-15 minutes between injections which brings the analytical time per sample to approximately 1 hour. For low concentration samples, the bulk of the compounds are light and eluted early and RADIANT has begun to truncate the analysis at approximately 20-25 minutes, but it is not clear to WESTON if the time saved by truncating the analysis is being used for more duplicate analysis or to facilitate analysis of liquid samples.

Order No. 841-45881



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