



Report:

Mercury Emission Testing at the Clean Harbors Sarnia Facility (July 2019)

Date: August 13, 2019



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EXECUTIVE SUMMARY

ORTECH Consulting Inc. (ORTECH) was requested by Clean Harbors Canada Inc. (Clean Harbors) to conduct a mercury emission testing program at the incineration facility located in Corunna, Ontario.

Mercury emission tests were performed at the Incinerator Exhaust Stack following the procedures outlined in US EPA Method 30B, “*Determination of Total Vapour Phase Mercury Emissions from Coal-Fired Combustion Sources Using Carbon Sorbent Traps*” to determine the amount of total vapour phase mercury present in the gas stream.

The test method states that the recovery spike must be within 50 to 150 percent of the expected mass collected in the traps during sampling. Six pairs of tube samples were collected during one day of testing on July 3, 2019. To ensure that at least one of the spike concentrations would fall within the concentration range requirements of the test method one tube from each of the six pairs of adsorbent tubes were spiked with increasing amounts of mercury, ranging from 100 ng to 2600 ng, by the analytical laboratory prior to commencing the test program.

The results of three of the pairs of tubes, including the spike that best represented the mercury concentration in the stack gas at the time of testing, are reported.

The average combustion gas values for each test period were obtained from the plant continuous emission monitoring (CEM) system. The average oxygen concentration for each test was used to determine the dry reference concentration adjusted to 11% oxygen.

The average mercury emission data from the triplicate total vapour phase mercury tests reported is provided below:

Mercury Parameter	Average
Dry Reference Concentration ($\mu\text{g}/\text{Rm}^3$)*	6.33
Dry Adjusted Concentration ($\mu\text{g}/\text{Rm}^3$)**	5.89

* reference conditions are 25°C and 1 atmosphere

** at 25°C and 1 atmosphere, adjusted to 11% oxygen

During the emission testing program, the powdered activated carbon (PAC) injection rate was 25.2 lb/hr.

1. INTRODUCTION

ORTECH Consulting Inc. (ORTECH) was requested by Clean Harbors Canada Inc. (Clean Harbors) to conduct a mercury emission testing program at the incineration facility located in Corunna, Ontario.

Mercury emission tests were performed at the Incinerator Exhaust Stack following the procedures outlined in US EPA Method 30B to determine the amount of total vapour phase mercury present in the gas stream.

The average combustion gas values for each test period were obtained from the plant continuous emission monitoring (CEM) system. The average oxygen concentration for each test was used to determine the dry reference concentration adjusted to 11% oxygen.

Six pairs of adsorbent tubes were collected during one day of sampling on July 3, 2019. The spike tubes from each test pair were spiked with increasing amounts of mercury, ranging from 100 ng to 2600 ng, prior to commencing the test program to ensure that at least one of the spike concentrations would fall within the concentration range requirements of the test method. The test method states that the recovery spike must be within 50 to 150 percent of the expected mass collected in the traps during sampling. The results of three of the pairs of tubes, including the spike that best represented the mercury concentration in the stack gas at the time of testing, are reported.

All tables referenced herein are included in Appendix 1.

2. SAMPLING LOCATION

The Incinerator Exhaust Stack has an inside diameter of 1.52 meters at the sampling platform and 1.22 meters at the stack exit. The stack height above grade is 68.6 meters.

Mercury sampling was conducted at the breeching connecting the induced draft fan to the stack. Sampling was conducted at a single point in the center of the duct.

Previous testing programs conducted by ORTECH at the Clean Harbors Incinerator Exhaust Stack have shown that there is no stack gas stratification between the breeching connecting the induced draft fan to the stack and the stack sampling platform location.

3. SAMPLING METHODOLOGY

Mercury emission tests were performed following the procedures outlined in US EPA Method 30B, “Determination of Total Vapour Phase Mercury Emissions from Coal-Fired Combustion Sources Using Carbon Sorbent Traps”.

ORTECH used a dual probe assembly so that the mercury traps are positioned 1 to 2 inches apart. Each probe was heated to approximately 135°C to prevent condensation of the stack gas on the sampling media. The mercury traps used for sampling are specially designed for use at wet sources; each tube had an extended section of glass to allow for the heating of the stack gas before it came into contact with the sampling media.

The sampling methodology is briefly described as follows. Each sorbent trap was removed from the clean sorbent trap storage container, the end caps were removed from the traps and the traps were attached to the end of the sampling probe and leak checked. The probe was inserted into the stack and the sample pumps were started. Stack gas was drawn through the traps and into the sampling probe and the sampled gas stream then passed through a series of empty impingers followed by a silica gel trap to remove any remaining traces of moisture prior to the pump and dry gas meter.

A run consisted of paired mercury traps, identified as either A or B, sampled simultaneously. In each tube pair one of either the A or B tube was spiked with a known quantity of mercury. Due to the variability in the mercury concentration in the stack gas and the necessity to have the spiked tubes prepared at least two weeks in advance of the testing program, six pairs of tubes were used for the sampling program to ensure that at least one of the spike concentrations would fall within the concentration range requirements of the test method.

Each test run was sixty minutes in duration at an approximate sampling rate of one liter per minute.

At five minute time increments throughout each test, the following information was measured and recorded for each sampling train:

- Elapsed sampling time
- Dry gas meter volume
- Dry gas meter temperatures
- Control module orifice pressure
- Sampling pump vacuum

At the start and finish of each sampling run the sampling trains were leak-checked. The leakage rate for each train must not exceed 4% of the average sampling rate for the collection period. If a trap pair did not have an acceptable initial leak check, the leak was found and repaired and/or the traps were replaced with a new pair until no leak was discernible. All the leak checks performed for the traps used showed no discernible leak through the test train.

Field testing data sheets for the mercury tests are provided in Appendix 2.

All of the sampling equipment used during the emission testing program was calibrated following the applicable reference method. Equipment calibration data is provided in Appendix 3.

4. ANALYSIS METHODOLOGY

At the end of each successful sampling run, the mercury traps were removed from the test train, capped and placed in their appropriate sample container. Each trap was labeled prior to being shipped to Ohio Lumex for analysis.

The traps were analyzed by thermal decomposition with atomic absorption following the procedures detailed in US EPA Method 7473 (direct thermal desorption with atomic absorption and no gold amalgamation). The method is applicable for total mercury “direct” testing of 40 CFR Part 75 Appendix K and EPA Method 30B sorbent traps.

The analysis is briefly described as follows. The sorbent trap tube end cap is removed; the glass wool plug closest to the appropriate carbon bed is carefully removed and separated from the carbon fraction. The sorbent is transferred into a quartz ladle and then covered with anhydrous sodium carbonate. The ladle is inserted into the heated analyzer thermo catalytic conversion chamber. Mercury is converted from a bound state to the atomic state by thermal decomposition in the furnace and is then detected by atomic absorption. The mercury concentration is measured and recorded using an automated data acquisition system. Both the glass wool plug and the sorbent of each bed are analyzed for the trap and the final mercury mass is the sum of the measurements.

The Ohio Lumex analytical report for total vapour phase mercury is provided in Appendix 4.

5. QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

The analysis of samples for mercury was performed by thermal decomposition with atomic absorption. Specific analytical QC procedures for the mercury analysis are summarized below:

- Calibrations are performed on the day of the analysis.
- Three or more calibration points are used for the calibration curve.
- The field samples analyzed must fall within a calibrated range.
- For each calibration curve, $R^2 \geq 0.99$, and the analyzer response must be within $\pm 10\%$ for each standard used in the calibration.
- Following calibration, a second source standard is analyzed. The measured value of the independently prepared standard must be within $\pm 10\%$ of the expected value.
- A blank analysis is conducted prior to analyzing the samples and must be less than the method detection limit.
- At the end of each set of analysis, a calibration standard is tested which must be within $\pm 10\%$ of the expected value.

Six unspiked mercury traps and six pre-spiked mercury traps were ordered approximately two weeks before the field testing program from Ohio Lumex. The pre-spiked mercury traps were spiked with known quantities of mercury ranging from 100 ng to 2600 ng in order to ensure that at least one of the traps met the spiking criterion stated in the test method. The recovery spike must be within 50 to 150 percent of the expected mass collected in the traps during sampling according to the test method. The spiking levels for the field recovery traps was estimated using mercury emission data from previous testing programs conducted between 2014 and 2018. The pre-spiked mercury trap for Test No. 3 (500 ng) was used for spike recovery determination as the concentration best fit the requirements of the QA/QC criteria. The average mercury collected for Test No. 1, Test No. 3 and Test No. 4 (381 ng) was within $\pm 50\%$ of the Test No. 3 spike concentration. While Test No. 2 would also have met the spike concentration requirement, it appears as though there was an undetected leak due to a crack in the B tube of the Test No. 2 Pair resulting in no mercury collected in this tube, and as a result the test data for Test No. 2 is not reported.

The field spike recovery provides specific verification of the performance of the combined sampling and analytical approach for the test program. Six sets of paired samples, one of each pair which is spiked with a known quantity of mercury, were collected. The samples were analyzed and the spike concentration for Test No. 3 fell within the spike range criterion stated in the test method. The spike recovery for Test No. 3 was 97.4%. US EPA Method 30B requires the spike recovery to be between 85% and 115%.

US EPA Method 30B requires the paired sorbent trap agreement to be $\leq 10\%$ relative deviation for mercury concentrations greater than $1 \mu\text{g}/\text{Rm}^3$ or $\leq 20\%$ relative deviation for mercury concentrations less than $1 \mu\text{g}/\text{Rm}^3$. If the paired trap agreement is greater than the above stated limits the run is not valid. All of the traps collected during the test program had concentrations greater than $1 \mu\text{g}/\text{Rm}^3$. The average dry adjusted mercury concentration ranged from a low of $5.61 \mu\text{g}/\text{Rm}^3$ (Tube Pair No. 4) to a high of $6.12 \mu\text{g}/\text{Rm}^3$ (Tube Pair No. 1) for the three tests reported. The paired trap agreement was 0.3% for Test No. 1, 1.4% for Test No. 3, and 2.4% for Test No. 4.

6. RESULTS

Six mercury test runs were collected during one day of sampling on July 3, 2019. A run consisted of paired mercury traps, identified as either A or B, sampled simultaneously. The spike tubes from each test pair were spiked with increasing amounts of mercury, ranging from 100 ng to 2600 ng, prior to commencing the test program to ensure that at least one of the spike concentrations would fall within the concentration range requirements of the test method. The results for Test No. 1, Test No. 3 and Test No. 4 are reported.

The sampling schedule is summarized in Table 1. This information includes test dates and times for each of the mercury test runs performed. All test times match plant time.

Mercury emission sample analyses for Test No. 1, Test No. 3 and Test No. 4 are provided in Table 2. Mercury was detected in Section 1 of each trap in quantities greater than the method detection limit (0.66 ng) in all of the traps. Mercury was also collected in Section 2 in four of the traps in quantities greater than the method detection limit. However, the amount detected in Section 2 was less than 1% of the mercury collected in Section 1, indicating that there was no breakthrough or potential loss of mercury. US EPA Method 30B states that $\leq 10\%$ of the total mercury collected should be collected in Section 2 for mercury concentrations greater than $1 \mu\text{g}/\text{Rm}^3$ or $\leq 20\%$ of the total mercury collected should be collected in Section 2 for mercury concentrations less than $1 \mu\text{g}/\text{Rm}^3$.

Included in Table 2 are the mercury concentration calculations for Test No. 1, Test No. 3 and Test No. 4. The average oxygen concentration measured by the Clean Harbors CEM system for each test was used to determine the dry reference concentration adjusted to 11% oxygen.

Six unspiked mercury traps and six pre-spiked mercury traps were ordered approximately two weeks before the field testing program from Ohio Lumex. The pre-spiked mercury traps were spiked with known quantities of mercury ranging from 100 ng to 2600 ng in order to ensure that at least one of the traps met the spiking criterion stated in the test method. The pre-spiked mercury trap for Test No. 3 (500 ng) was used for spike recovery determination as the concentration best fit the requirements of the QA/QC criteria. While Test No. 2 would also have met the spike concentration requirement, it appears as though there was an undetected leak due to a crack in the B tube of the Test No. 2 Pair resulting in no mercury collected in this tube, and as a result the test data for Test No. 2 is not reported.

US EPA Method 30B states that it is acceptable to use the field recovery runs as test runs for emission testing as long as they meet the paired trap agreement criteria. The mass of the mercury spike initially present in each of the spiked traps was subtracted from the total mercury collected in Section 1 of the trap. The difference represents the amount of mercury in the stack gas.

The paired trap agreement was 0.3% for Test No. 1, 1.4% for Test No. 3, and 2.4% for Test No. 4. The mercury emission data from the total vapour phase mercury tests is provided below:

Mercury Parameter	Test 1	Test 3	Test 4	Average
Dry Reference Conc. ($\mu\text{g}/\text{Rm}^3$)*	6.51	6.44	6.03	6.33
Dry Adjusted Conc. ($\mu\text{g}/\text{Rm}^3$ **)	6.12	5.95	5.61	5.89

* Reference conditions are 25°C and 1 atmosphere

** At 25°C and 1 atmosphere, adjusted to 11% oxygen

The incinerator exhaust stack mercury concentration limit as stated in Environmental Compliance Approval No. 8-1030-94-006 (formerly Certificate of Approval (Air) No. 8-1030-94-006) is 50 $\mu\text{g}/\text{Rm}^3$ adjusted to 11% oxygen. The mercury concentrations were below this limit during the test program.

The spiked mercury trap recovery calculation is shown in Table 3; the spike recovery for Test No. 3 was 97.4%. US EPA Method 30B requires the spike recovery to be between 85% and 115%.

7. FACILITY PROCESS DATA

Incinerator process data was supplied by Clean Harbors personnel for the emission test periods. The process data is provided in Appendix 5 as average values for each test for the following process parameters:

- incinerator feed rates (rich, lean, emulsion and alkaline streams)
- volumetric flowrates (secondary air and stack gases)
- temperatures (primary zone, secondary zone, spray dryer inlet and outlet, stack gases)
- pressures (burner, spray dryer outlet, baghouse differential)
- combustion gas stack concentrations (CO, HCl, CO₂, H₂O, THC, O₂, SO₂)
- stack gas opacity
- carbon injection rate

During the emission testing program, the average powdered activated carbon (PAC) injection rate was 25.2 lb/hr.

APPENDIX 1

**Data Tables
(2 pages)**

Table 1: Mercury Test Schedule

Test Number	Test Date	Sampling Period		Sampling Time
		Start	Finish	min
1	July 3, 2019	9:35	10:35	60
2	July 3, 2019	10:45	11:45	60
3	July 3, 2019	11:59	12:59	66
4	July 3, 2019	13:10	14:10	60
5	July 3, 2019	14:15	15:15	60
6	July 3, 2019	15:44	16:44	60

Note: All test times match plant time.

Table 2: Mercury Emission Data

Test/Run No.	Tube ID	Mercury Collected			Dry Gas Volume Sampled Rm ^{3*}	Mercury Concentration Dry		Paired Trap Agreement %
		Section 1 ng	Section 2 ng	Total ng		Dry Reference µg/Rm ^{3*}	Dry Adjusted µg/Rm ^{3**}	
1	A ***	405.5	<0.66	406	0.0625	6.49	6.10	-
	B	351.9	<0.66	352	0.0539	6.52	6.13	-
	Average					6.51	6.12	0.3
3	A***	441.4	<0.66	441	0.0695	6.35	5.86	-
	B	368.0	<0.66	368	0.0563	6.54	6.04	-
	Average					6.44	5.95	1.4
4	A	359.4	<0.66	359	0.0610	5.89	5.48	-
	B***	356.0	1.0	357	0.0578	6.17	5.75	-
	Average					6.03	5.61	2.4
Average				381		6.33	5.89	

Note: Concentration data is only reported for three tests as required by US EPA Method 30B

* At 25°C and 1 atmosphere

** At 25°C and 1 atmosphere, adjusted to 11% oxygen

*** Spiked tube, mercury collected corrected for the original spike
(100 ng for Test No. 1, 500 ng for Test No. 3 and 800 ng for Test No. 4).

Table 3: Mercury Spike Tube Recovery

Test No.	Total Collected ng	Spike Tube Volume Sampled Rm ^{3*}	Mercury Concentration ng/Rm ^{3*}	Total Collected ng	Unspike Tube Volume Sampled Rm ^{3*}	Mercury Concentration ng/Rm ^{3*}	Spike Concentration	Spike Recovery
							ng/Rm ^{3*}	%
1	505.5	0.0625	8087	351.9	0.0539	6524	1564	NA
3	941.4	0.0695	13544	368.0	0.0563	6537	7008	97.4
4	1157	0.0578	20011	359.4	0.0610	5888	14123	NA

Note: The spike tubes were spiked with mercury by the analytical laboratory prior to sampling. The original spike concentrations were 100 ng for Test No. 1, 500 ng for Test No. 3 and 800 ng for Test No. 4.

"NA" Not Applicable. Spike recovery was not calculated as spike concentration was outside the range specified in US EPA Method 30B.

APPENDIX 2

**Mercury Field Data Sheets
(7 pages)**

Clean Harbors, Sarnia
Mercury Tube Sampling Train
Sample Volume Corrections

Incinerator Exhaust Stack

Test # - Tube (tube pair field ID)	DGMCF	Initial DGM Reading (L)	Final DGM Reading (L)	Actual Vol. Sampled (L)	Barometric Pressure (in Hg)	Average DGM Pressure del H (in H ₂ O)	Average DGM Temperature (°C)	Corrected Volume (L)*	Corrected Volume (Rm ³)*
T1A OLC076061 (Spiked)	1.014	76.5	140.5	64.0	29.3	0.9	30.5	62.51	0.0625
T1B OLC81000	1.009	13.5	68.6	55.1	29.3	1.4	28.6	53.94	0.0539
T2A OLC080926	1.014	44.1	117.0	72.9	29.3	0.9	33.8	70.46	0.0705
T2B OL500417 (Spiked)	1.009	70.9	133.5	62.6	29.3	1.4	31.8	60.67	0.0607
T3A OL526359 (Spiked)	1.014	53.8	126.0	72.2	29.3	0.9	35.1	69.51	0.0695
T3B OLC080864	1.009	45.1	103.4	58.3	29.3	1.4	33.0	56.30	0.0563
T4A OLC080786	1.014	28.7	92.2	63.5	29.3	0.9	35.6	61.04	0.0610
T4B OL331449 (Spiked)	1.009	5.4	65.3	59.9	29.3	1.4	33.2	57.82	0.0578
T5A OL503169 (Spiked)	1.014	93.6	156.3	62.7	29.3	0.9	37.5	59.88	0.0599
T5B OLC081088	1.009	67.1	129.1	62.0	29.3	1.4	33.9	59.69	0.0597
T6A OLC080849	1.014	58.2	116.3	58.1	29.3	0.9	39.6	55.10	0.0551
T6B OLC075794 (Spiked)	1.009	31.0	85.5	54.5	29.3	1.4	35.0	52.27	0.0523

* dry at 25°C and 1 atmosphere

ORTECH Environmental Mercury Tube Data Sheet

Plant:	Clean Harbors
Plant Location:	Corunna
Test No.:	

Test location:	Stack Breeching
Date:	July 3, 2019
Project No.:	21940

Train A

Tube Identification:	OLC 76061	Spiked	Yes	No
Spike Concentration	100	ng		

Measuring Device	MII
Control Module	12010
Barometer	ENV. CAN.

Barometric Pressure	29.28
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Clock Time	Dry Gas Meter L	Average Meter Temperature °C	Meter Pressure Δ H "H ₂ O	Pump Vacuum "Hg Gauge
0	76.5	27	10.0	5.5
5	81.0	29		
10	86.2	29		
15	91.3	30		
20	96.7	30		
25	102.0	30		
30	107.0	30		
35	112.0	30		
40	118.0	30		
45	124.3	32		
50	129.7	32		
55	134.3	34		
60	140.5	34		

Start Time:	9:35	Initial Leak Check	2.0 LPM@	16 "Hg
Finish Time:	10:35	Final Leak Check	2.0 LPM@	16 "Hg

DGMCF:	0.90: 1.014
Sample Volume:	41.0
Average DGM Temp:	30.4
Average DGM Δ H:	1.4

Train B

Tube Identification:	OLC 0981000	Spiked	Yes	No
Spike Concentration		ng		

Measuring Device	MII
Control Module	COE200198

Clock Time	Dry Gas Meter L	Average Meter Temperature °C	Meter Pressure Δ H "H ₂ O	Pump Vacuum "Hg Gauge
0	13.5	29	1.4	5.5
5	18.0	29		
10	22.5	29		
15	27.0	29		
20	30.8	29		
25	35.5	28		
30	40.0	28		
35	45.0	28		
40	49.7	28		
45	54.5	28		
50	59.4	32		
55	63.7	30		
60	68.0	30		

Start Time:	9:35	Initial Leak Check	2.0 LPM@	15 "Hg
Finish Time:	10:35	Final Leak Check	2.0 LPM@	16 "Hg

DGMCF:	1.009
Sample Volume:	55.1
Average DGM Temp:	28.6
Average DGM Δ H:	1.4

Operator:	D. J. W.
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ORTECH Environmental Mercury Tube Data Sheet

Plant:	Clean Harbors
Plant Location:	Corunna
Test No.:	2

Test location:	Stack Breeching
Date:	July 3, 2019
Project No.:	21940

Train A

Tube Identification:	OLC090926	Spiked	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Spike Concentration	—	ng	

Measuring Device	MII
Control Module	17010
Barometer	ENV. CAN.

Barometric Pressure	29.29
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Clock Time	Dry Gas Meter L	Average Meter Temperature °C	Meter Pressure Δ H "H ₂ O	Pump Vacuum "Hg Gauge
0	44.1	33	1.4	2
5	45.1	33	1.4	2
10	56.0	32	1.4	2
15	62.7	33	1.4	2
20	67.7	33	1.4	2
25	72.7	34	1.4	2
30	81.4	34	1.4	2
35	87.8	34	1.4	2
40	93.8	33	1.4	2
45	100.0	33	1.4	2
50	105.0	33	1.4	2
55	111.9	33	1.4	2
60	117.0	33	1.4	2

Start Time:	1045	Initial Leak Check	2.01 LPM@	16 "Hg	DGMCF:	1.014
Finish Time:	1145	Final Leak Check	2.01 LPM@	17 "Hg	Sample Volume:	72.9
					Average DGM Temp:	33.0
					Average DGM Δ H:	1.4

Train B

Tube Identification:	OL500417	Spiked	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Spike Concentration	750	ng	

Measuring Device	MII
Control Module	20014

Clock Time	Dry Gas Meter L	Average Meter Temperature °C	Meter Pressure Δ H "H ₂ O	Pump Vacuum "Hg Gauge
0	70.9	30	1.4	2
5	75.9	30	1.4	2
10	82.0	30	1.4	2
15	87.4	31	1.4	2
20	92.4	32	1.4	2
25	97.4	32	1.4	2
30	103.3	32	1.4	2
35	108.5	32	1.4	2
40	113.5	32	1.4	2
45	118.9	33	1.4	2
50	123.7	33	1.4	2
55	129.5	33	1.4	2
60	133.5	33	1.4	2

Start Time:	1045	Initial Leak Check	2.01 LPM@	16 "Hg	DGMCF:	1.009
Finish Time:	1145	Final Leak Check	2.01 LPM@	15 "Hg	Sample Volume:	67.6
					Average DGM Temp:	31.0
					Average DGM Δ H:	1.4

Operator:	D. D. Y.
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* LEAK CHECK WAS GOOD BUT TUBE WAS BROKEN
SUSPECT BAD TEST DUE TO THIS AND VACUUM

ORTECH Environmental Mercury Tube Data Sheet

Plant:	Clean Harbors
Plant Location:	Corunna
Test No.:	3

Test location:	Stack Breeching
Date:	July 3, 2019
Project No.:	21940

Train A

Tube Identification:	0LS26359	Spiked	Yes	No
Spike Concentration	500	ng		

Measuring Device	MII
Control Module	12010
Barometer	ENV. CAN.

Barometric Pressure	29.30
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Clock Time	Dry Gas Meter L	Average Meter Temperature °C	Meter Pressure Δ H "H ₂ O	Pump Vacuum "Hg Gauge
0	53.9	35	29.30 29.30 29.30 29.30 29.30 29.30 29.30 29.30 29.30 29.30 29.30 29.30 29.30 29.30	5
5	60.1	35		5
10	65.1	35		5
15	70.1	35		5
20	75.2	35		5
25	80.0	35		5
30	85.0	35		5
35	89.9	35		5
40	94.9	35		5
45	99.9	35		5
50	105.0	35		5
55	109.5	35		5
60	126.0	35		5

Start Time:	1159	Initial Leak Check	2.0 LPM@	16" Hg	DGMCF:	1.04
Finish Time:	1259	Final Leak Check	1.0 LPM@	15" Hg	Sample Volume:	58.3
					Average DGM Temp:	33
					Average DGM Δ H:	1.4

Train B

Tube Identification:	0LCO80889	Spiked	Yes	No
Spike Concentration		ng		

Measuring Device	MII
Control Module	20018

Clock Time	Dry Gas Meter L	Average Meter Temperature °C	Meter Pressure Δ H "H ₂ O	Pump Vacuum "Hg Gauge
0	45.1	33	1.4	5
5	51.2	33	1.4	6.5
10	56.3	33	1.4	7
15	61.3	33	1.4	7
20	66.3	33	1.4	7
25	71.3	33	1.4	7
30	76.2	33	1.4	7
35	81.4	33	1.4	7
40	86.9	33	1.4	7
45	92.5	33	1.4	7
50	97.5	33	1.4	7
55	98.3	33	1.4	7
60	103.4	33	1.4	7

Start Time:	1159	Initial Leak Check	2.0 LPM@	16" Hg	DGMCF:	1.04
Finish Time:	1259	Final Leak Check	1.0 LPM@	15" Hg	Sample Volume:	58.3
					Average DGM Temp:	33
					Average DGM Δ H:	1.4

Operator:	D. O. U. S.
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ORTECH Environmental Mercury Tube Data Sheet

Plant:	Clean Harbors
Plant Location:	Corunna
Test No.:	4

Test location:	Stack Breeching
Date:	July 3, 2019
Project No.:	21940

Train A

Tube Identification:	OLC080786	Spiked	Yes	No
Spike Concentration		ng		

Measuring Device	MII
Control Module	12010
Barometer	ENV. CAN.

Barometric Pressure	29.31
---------------------	-------

Clock Time	Dry Gas Meter L	Average Meter Temperature °C	Meter Pressure Δ H "H ₂ O	Pump Vacuum "Hg Gauge
0	28.7	33	1.9	5
5	35.3	33	1.9	5
10	40.7	33	1.9	5
15	46.0	33	1.9	5
20	51.3	33	1.9	5
25	56.6	33	1.9	5
30	61.9	33	1.9	5
35	67.2	33	1.9	5
40	72.4	33	1.9	5
45	77.7	33	1.9	5
50	82.2	33	1.9	5
55	87.1	33	1.9	5
60	92.2	33	1.9	5

Start Time:	1310	Initial Leak Check	2.0 LPM@	16 "Hg
Finish Time:	1410	Final Leak Check	2.0 LPM@	16 "Hg

DGMCF:	1.019
Sample Volume:	63.5
Average DGM Temp:	33.6
Average DGM Δ H:	1.9

Train B

Tube Identification:	OL331449	Spiked	Yes	No
Spike Concentration	800	ng		

Measuring Device	MII
Control Module	20016

Clock Time	Dry Gas Meter L	Average Meter Temperature °C	Meter Pressure Δ H "H ₂ O	Pump Vacuum "Hg Gauge
0	5.4	33	1.4	5
5	10.2	33	1.4	5
10	15.2	33	1.4	5
15	20.4	33	1.4	5
20	25.4	33	1.4	5
25	30.4	33	1.4	5
30	35.4	33	1.4	5
35	40.4	33	1.4	5
40	45.4	33	1.4	5
45	50.3	33	1.4	5
50	55.7	34	1.4	5
55	60.3	34	1.4	5
60	65.3	34	1.4	5

Start Time:	1310	Initial Leak Check	2.0 LPM@	17 "Hg
Finish Time:	1410	Final Leak Check	2.0 LPM@	16 "Hg

DGMCF:	1.009
Sample Volume:	59.9
Average DGM Temp:	33.2
Average DGM Δ H:	1.4

Operator:	D. J. U.
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ORTECH Environmental Mercury Tube Data Sheet

Plant:	Clean Harbors
Plant Location:	Corunna
Test No.:	5

Test location:	Stack Breaching
Date:	July 3, 2019
Project No.:	21940

Train A

Tube Identification:	OL503169	Spiked	Yes	No
Spike Concentration	1900	ng		

Measuring Device	MII
Control Module	12010
Barometer	ENV. CAN.

Barometric Pressure	29.30
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Clock Time	Dry Gas Meter L	Average Meter Temperature °C	Meter Pressure Δ H "H ₂ O	Pump Vacuum "Hg Gauge
0	93.6	36	0.9	4
5	98.8	36	0.9	4
10	105.6	37	0.9	4
15	109.7	37	0.9	4
20	114.5	37	0.9	4
25	119.7	37	0.9	4
30	124.9	37	0.9	4
35	130.2	37	0.9	4
40	135.4	38	0.9	4
45	140.6	38	0.9	4
50	146.5	39	0.9	4
55	151.5	39	0.9	4
60	156.3	39	0.9	4

Start Time:	1415	Initial Leak Check	2.01 LPM@	17 "Hg	DGMCF:	1.014
Finish Time:	1513	Final Leak Check	2.01 LPM@	15 "Hg	Sample Volume:	62.7
					Average DGM Temp:	37.5
					Average DGM Δ H:	0.9

Train B

Tube Identification:	OLC081088	Spiked	Yes	No
Spike Concentration		ng		

Measuring Device	MII
Control Module	20018

Clock Time	Dry Gas Meter L	Average Meter Temperature °C	Meter Pressure Δ H "H ₂ O	Pump Vacuum "Hg Gauge
0	67.1	23	1.4	4
5	72.1	23	1.4	4
10	77.1	23	1.4	4
15	77.1	23	1.4	4
20	87.6	23	1.4	4
25	92.8	24	1.4	4
30	97.9	24	1.4	4
35	103.1	24	1.4	4
40	108.3	24	1.4	4
45	113.4	25	1.4	4
50	118.3	25	1.4	4
55	123.4	25	1.4	4
60	129.1	25	1.4	4

Start Time:	1415	Initial Leak Check	2.01 LPM@	16 "Hg	DGMCF:	1.009
Finish Time:	1513	Final Leak Check	2.01 LPM@	18 "Hg	Sample Volume:	62.0
					Average DGM Temp:	33.9
					Average DGM Δ H:	1.4

Operator:	[Signature]
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165
102
140

ORTECH Environmental Mercury Tube Data Sheet

Plant:	Clean Harbors
Plant Location:	Corunna
Test No.:	6

Test location:	Stack Breeching
Date:	July 3, 2019
Project No.:	21940

Train A

Tube Identification:	OLC 090849	Spiked	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Spike Concentration		ng	

Measuring Device	MII
Control Module	12010
Barometer	ENV. CAN.

Barometric Pressure	29.29
---------------------	-------

Clock Time	Dry Gas Meter L	Average Meter Temperature °C	Meter Pressure Δ H "H ₂ O	Pump Vacuum "Hg Gauge
0	58.2	38	1.9	5
5	63.0	38	1.9	5.5
10	68.9	38	1.9	6
15	72.72	39	1.9	6
20	77.6	40	1.9	6
25	82.4	40	1.9	6
30	87.3	40	1.9	6
35	92.1	40	1.9	6
40	96.92	40	1.9	6
45	101.8	40	1.9	6
50	106.6	40	1.9	6
55	111.5	40	1.9	6
60	116.3	41	1.9	6

Start Time:	1544	Initial Leak Check	<.01 LPM@ 16" Hg	DGMCF:	1.014
Finish Time:	1644	Final Leak Check	<.01 LPM@ 17" Hg	Sample Volume:	58.1
				Average DGM Temp:	39.6
				Average DGM Δ H:	0.9

Train B

Tube Identification:	OLC 075194	Spiked	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Spike Concentration	2500	ng	

Measuring Device	MII
Control Module	COE 20018

Clock Time	Dry Gas Meter L	Average Meter Temperature °C	Meter Pressure Δ H "H ₂ O	Pump Vacuum "Hg Gauge
0	31.0	35	1.4	5
5	35.5	35	1.4	6.5
10	40.2	35	1.4	7
15	44.6	35	1.4	7
20	49.2	35	1.4	7
25	53.7	35	1.4	7
30	58.2	35	1.4	7
35	62.8	35	1.4	7
40	67.3	35	1.4	7
45	71.9	35	1.4	7
50	76.4	35	1.4	7
55	80.9	35	1.4	7
60	85.5	35	1.4	7

Start Time:	1544	Initial Leak Check	<.01 LPM@ 16" Hg	DGMCF:	1.009
Finish Time:	1644	Final Leak Check	<.01 LPM@ 17" Hg	Sample Volume:	34.5
				Average DGM Temp:	35
				Average DGM Δ H:	1.4

Operator:	D J U G
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APPENDIX 3

**ORTECH Equipment Calibration Data
(4 pages)**

ORTECH Environmental

Dry Gas Meter Calibration Data

Calibration Procedure	03-J004	03-J004
Meter Number	Vost 3	A12010
Date	June 20, 2019	A01463
Barometric Pressure	29.12	COE 20028
System Leak Check	0LPM @ 20.5" Hg	

MII NUMBERS	
DGM	A12010
Gasometer	A01463
Barometer	COE 20028

Calibrated By	JB
Signature	
Reviewed and Accepted By	

$ft^3 = cm^3 \times 1.332$ litres per cm³/28.3168 litres per ft³

$$DGMCF = \frac{V_{std} \text{ ft}^3}{V_{dgm} \text{ ft}^3} \times \frac{T_{dgm} \text{ } ^\circ F + 460}{T_{std} \text{ } ^\circ F + 460} \times \frac{P_{bar} \text{ (in. Hg)}}{(P_{bar} \text{ in. Hg} + DGM \text{ Pressure}/13.6)}$$

Initial	Gasometer Reading		Gasometer Volume	Gasometer Temperature	DGM Reading		DGM Volume	DGM Average Temperature	DGM Pressure	DGM Outlet	DGM Calibration Factor	Time	Flow Rate
	cm	Final			cm	L							
66.10	49.60	16.50	0.776	22.0	1011.67	1034.24	0.797	32.0	0.8	32.0	1.005	24	0.9
49.50	34.90	14.60	0.687	22.0	1034.24	1054.09	0.701	33.0	0.9	33.0	1.014	20	1.0
34.80	20.00	14.80	0.696	22.0	1054.09	1074.07	0.706	34.0	0.9	34.0	1.024	20	1.0


Acceptance Criteria:

Individual values of DGM calibration factor must be within $\pm 1.5\%$ of the average value. If not the calibration must be repeated. Also, the DGMCF average value must be 1.00 ± 0.05 , otherwise the meter must be repaired and/or adjusted as necessary and recalibrated prior to use. (Environment Canada Reference Method EPS 1/RM/8, Section 6)

DGMCF AVERAGE

1 Lpm 1.014

ORTECH Environmental Trendicator Calibration

Calibration Procedure	03-J005
Trendicator Type	Nutech
MII	A12010
Date	June 20, 2019
Calibrated By	JB
Signature	
Reviewed and Accepted By	

Fluke Calibrator Output (COE 20024) (°C)	Tredicator Display Value		Percent Difference (%)
	Before Adjustment (°C)	After Adjustment (°C)	
0	0	NA	0.0
10	10		0.0
20	20		0.0
50	50		0.0
75	75		0.0
100	100		0.0
125	125		0.0
150	150		0.0
200	200		0.0
300	300		0.0
400	400		0.0
500	500		0.0
600	600		0.0

$$\% \text{ Difference} = \frac{(\text{micromite} - \text{after adjustment reading}) \times 100}{\text{micromite}}$$

Acceptance Criteria:


Trendicator display must read within $\pm 1.5\%$ of the micromite value at each output. Otherwise, the Trendicator must be repaired and/or adjusted as necessary, and recalibrated prior to use.

(MOE Source Testing Code, Version #2, Method 5)

ORTECH Environmental
Dry Gas Meter Calibration Data

Calibration Procedure	03-J004
Meter Number	Vost 5
Date	June 20, 2019
Barometric Pressure	29.12
System Leak Check	< 0.005 lpm @ 21 "Hg

MII NUMBERS	
DGM	COE 20018
Gasometer	A01463
Barometer	COE 20028

Calibrated By	JB
Signature	
Reviewed and Accepted By	

ft³ = cm * 1.332 litres per cm/28.3168 litres per ft³

$$DGMCF = \frac{V_{std} \text{ ft}^3}{V_{dgm} \text{ ft}^3} \cdot \frac{T_{dgm} \text{ } ^\circ\text{F} + 460}{T_{std} \text{ } ^\circ\text{F} + 460} \cdot \frac{P_{bar} \text{ (in. Hg)}}{(P_{bar} \text{ in. Hg} + DGM \text{ Pressure}) / 13.6}$$

Initial	Gasometer Reading cm		Gasometer Volume ft ³	Gasometer Temperature °C	DGM Reading L		DGM Volume ft ³	DGM Average Temperature °C	DGM Pressure in. H ₂ O	DGM Outlet °C	DGM Calibration Factor	Time min.	Flow Rate lpm
	Final	cm			Initial	Final							
49.30	33.80	15.50	0.729	21.5	4237.07	4257.51	0.722	24.0	1.4	24.0	1.015	20	1.0
33.80	8.70	25.10	1.181	21.5	4257.51	4290.89	1.179	25.0	1.4	25.0	1.010	32	1.0
48.10	32.50	15.60	0.734	21.5	4290.89	4311.83	0.739	25.0	1.4	25.0	1.001	20	1.0

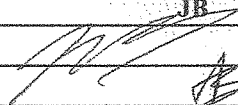
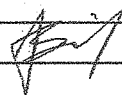
Acceptance Criteria:

Individual values of DGM calibration factor must be within ± 1.5% of the average value. If not the calibration must be repeated. Also, the DGMCF average value must be 1.00 ± 0.05, otherwise the meter must be repaired and/or adjusted as necessary and recalibrated prior to use. (Environment Canada Reference Method EPS 1/RM/8, Section 6)

DGMCF AVERAGE

1 Lpm 1.009

ORTECH Environmental Trendicator Calibration

Calibration Procedure	03-J005
Trendicator Type	Jenco 765
MII	COE 20018
Date	June 20, 2019
Calibrated By	JB
Signature	
Reviewed and Accepted By	

Fluke Calibrator Output (COE 20024) (°C)	Trendicator Display Value		Percent Difference (%)
	Before Adjustment (°C)	After Adjustment (°C)	
0	0	NA	0.0
10	10		0.0
20	20		0.0
50	50		0.0
75	75		0.0
100	100		0.0
125	125		0.0
150	150		0.0
200	200		0.0
300	300		0.0
400	400		0.0
500	500		0.0
600	600		0.0

$$\% \text{ Difference} = \frac{(\text{micromite} - \text{after adjustment reading}) \times 100}{\text{micromite}}$$

Acceptance Criteria:

Trendicator display must read within $\pm 1.5\%$ of the micromite value at each output. Otherwise, the Trendicator must be repaired and/or adjusted as necessary, and recalibrated prior to use. (MOE Source Testing Code, Version #2, Method 5)

APPENDIX 4

**Mercury Analytical Report
(1 page)**

Sorbent Trap Analysis Report

Date | 7/15/19
 Analyst[s] | Anna Batyreva
 Project | 2018310
 Turnaround | standard

Company | ORTECH
 Contact | Rob Whitten
 Phone | 647-519-5972
 Email | rwhitten@ortech.ca

Method | EPA 7473
 Method Uncertainty | ± 10%
 MDL | 0.66ng
 LOQ | 5ng

Trap ID	Pre-Filter Mass [ng]	AGS Mass [ng]	Section 1 Mass [ng]	Section 2 Mass [ng]	Total Mass [ng] ¹	Section 3 Mass [ng]	Spike Level [ng]	Breakthrough [%] ²	Spike Recovery [%] ³	Source	Notes	Affected Section
OLC076061	1A		505.5	0.4	505.9		100	0.1%		T1		
OLC081000	1B		351.9	0.4	352.3			0.1%		T1		
OLC080926	2A		400.0	0.0	400.0			0.0%		T2		
OL500417	2B		245.7	0.0	245.7		250	0.0%		T2		
OL526359	3A		941.4	0.3	941.7		500	0.0%		T3		
OLC080864	3B		368.0	0.0	368.0			0.0%		T3		
OLC080786	4A		359.4	0.2	359.6			0.1%		T4		
OL331449	4B		1156	1.0	1157		800	0.1%		T4		
OLC081088	5B		317.9	0.8	318.7			0.3%		T5		
OL503169	5A		1725	1.1	1726		1400	0.1%		T5		
OLC080849	6A		262.3	0.0	262.3			0.0%		T6		
OLC075794	6B		2660	10.8	2671		2600	0.4%		T6		

¹ Total Mass = PF+AGS+S1+S2

² Breakthrough = S2 / [PF+AGS+S1]

³ For PS12B only Spike Recovery = S3 / Spike Level

⁴ Data invalidation qualifier - refer to notes



APPENDIX 5

**Clean Harbors Process Data
(18 pages)**

\$Date	\$Time	CO	HCl	CO2	H2O	THC	O2	Opacity	SO2
		PPM	PPM	%	%	PPM	%	%	PPM
		AT-205CORR	AT-213A	AT-213B	AT-213C	AT-259CORR	AT-261	AT-263	AT-264
2019-07-03	9:35:00	41.9	15.5	6.3	47.14	32.6	10.15	0	787.1
2019-07-03	9:36:00	44.0	15.3	6.3	47.04	31.5	10.35	0	773.3
2019-07-03	9:37:00	43.5	15.0	6.3	46.66	33.6	10.43	0	760.7
2019-07-03	9:38:00	44.3	14.9	6.2	46.28	36.9	10.63	0	745.5
2019-07-03	9:39:00	43.3	14.7	6.3	46.77	33.8	10.51	0	767.2
2019-07-03	9:40:00	42.5	14.8	6.4	47.16	36.0	10.24	0	788.7
2019-07-03	9:41:00	39.6	15.4	6.4	47.08	30.8	10.09	0	801.2
2019-07-03	9:42:00	36.1	15.2	6.3	46.67	35.5	10.25	0	782.9
2019-07-03	9:43:00	38.8	15.8	6.3	46.87	30.1	10.23	0	785.0
2019-07-03	9:44:00	40.7	16.0	6.3	46.63	35.5	10.19	0	775.1
2019-07-03	9:45:00	44.9	16.9	6.3	46.65	29.7	10.26	0	770.1
2019-07-03	9:46:00	43.8	16.3	6.3	46.58	34.7	10.40	0	761.9
2019-07-03	9:47:00	41.9	15.1	6.3	46.44	32.6	10.60	0	762.0
2019-07-03	9:48:00	42.1	16.3	6.3	46.71	36.7	10.38	0	781.8
2019-07-03	9:49:00	42.1	16.0	6.4	46.97	30.1	10.22	0	787.3
2019-07-03	9:50:00	39.2	15.1	6.3	46.71	33.2	10.23	0	773.0
2019-07-03	9:51:00	40.2	15.3	6.3	46.74	31.6	10.38	0	763.2
2019-07-03	9:52:00	40.5	15.9	6.3	47.01	32.9	10.37	0	771.9
2019-07-03	9:53:00	44.0	15.7	6.3	46.70	36.1	10.40	0	762.5
2019-07-03	9:54:00	47.0	15.5	6.3	46.63	32.9	10.48	0	764.9
2019-07-03	9:55:00	45.7	15.2	6.3	46.39	34.7	10.61	0	757.7
2019-07-03	9:56:00	44.3	15.4	6.3	46.77	33.9	10.57	0	768.4
2019-07-03	9:57:00	43.4	15.9	6.3	47.06	41.7	10.43	0	773.6
2019-07-03	9:58:00	44.6	15.8	6.3	46.94	32.6	10.24	0	791.1
2019-07-03	9:59:00	42.9	15.9	6.3	46.50	34.8	10.23	0	790.9
2019-07-03	10:00:00	40.5	15.6	6.3	46.71	30.1	10.19	0	784.6
2019-07-03	10:01:00	42.7	15.5	6.3	46.64	34.2	10.20	0	778.4
2019-07-03	10:02:00	48.0	16.8	6.3	46.98	31.7	10.35	0	785.0
2019-07-03	10:03:00	46.9	16.7	6.3	46.74	38.2	10.39	0	779.5
2019-07-03	10:04:00	47.3	15.9	6.3	46.38	32.6	10.40	0	779.3
2019-07-03	10:05:00	44.5	15.4	6.3	46.84	36.9	10.21	0	791.2
2019-07-03	10:06:00	45.1	14.7	6.4	46.98	35.4	10.19	0	795.3
2019-07-03	10:07:00	45.1	13.9	6.4	46.97	35.9	10.08	0	807.7
2019-07-03	10:08:00	45.1	14.7	6.3	47.02	35.5	10.17	0	807.7
2019-07-03	10:09:00	41.5	15.5	6.4	47.01	30.6	10.02	0	817.6
2019-07-03	10:10:00	42.2	14.8	6.3	46.66	31.3	10.09	0	791.8
2019-07-03	10:11:00	48.0	14.4	6.2	46.48	34.6	10.57	0	733.0
2019-07-03	10:12:00	53.0	14.6	6.2	46.05	39.6	10.81	0	705.4
2019-07-03	10:13:00	56.4	15.2	6.2	46.39	35.4	10.76	0	728.2
2019-07-03	10:14:00	58.5	15.0	6.3	46.81	35.4	10.49	0	749.5
2019-07-03	10:15:00	56.5	14.8	6.3	46.99	33.6	10.48	0	756.1
2019-07-03	10:16:00	54.1	13.3	6.2	46.53	38.0	10.52	0	747.1
2019-07-03	10:17:00	54.6	14.0	6.3	46.73	31.7	10.42	0	757.4
2019-07-03	10:18:00	56.3	14.3	6.3	46.70	36.3	10.40	0	747.6
2019-07-03	10:19:00	65.6	13.3	6.2	46.46	34.4	10.71	0	726.0
2019-07-03	10:20:00	65.4	12.9	6.2	46.04	38.1	10.82	0	715.8
2019-07-03	10:21:00	65.9	12.9	6.1	45.70	39.8	10.93	0	714.3
2019-07-03	10:22:00	64.4	12.8	6.2	46.19	40.2	10.74	0	740.0
2019-07-03	10:23:00	60.1	12.7	6.3	46.83	37.1	10.42	0	779.4
2019-07-03	10:24:00	54.1	12.8	6.3	46.93	36.4	10.21	0	797.7
2019-07-03	10:25:00	52.7	13.2	6.3	46.92	38.4	10.29	0	795.7
2019-07-03	10:26:00	47.4	13.2	6.4	46.94	34.3	10.11	0	817.7
2019-07-03	10:27:00	47.3	13.3	6.3	46.74	37.9	10.09	0	814.1
2019-07-03	10:28:00	50.7	12.6	6.3	46.65	33.5	10.20	0	798.6
2019-07-03	10:29:00	48.7	11.8	6.2	46.06	35.1	10.41	0	767.0
2019-07-03	10:30:00	50.5	12.1	6.3	46.43	35.4	10.58	0	769.5
2019-07-03	10:31:00	50.8	14.4	6.3	46.91	44.2	10.41	0	779.3
2019-07-03	10:32:00	50.4	14.5	6.3	46.88	32.5	10.22	0	798.2
2019-07-03	10:33:00	50.1	13.1	6.3	46.75	37.4	10.13	0	792.0
2019-07-03	10:34:00	52.2	12.6	6.3	46.99	33.9	10.27	0	782.8
2019-07-03	10:35:00	52.9	13.0	6.3	47.02	38.5	10.18	0	781.0

July 3/2019	Analyzers								
	CO	HCl	CO2	H2O	THC	O2	Opacity	SO2	
Test 3	AT-205	AT-213A	AT-213B	AT-213C	AT-259	AT-261	AT-263	AT-264	
Max	65.9	16.9	6.4	47.16	44.2	10.93	0.0	817.7	
Min	36.1	11.8	6.1	45.70	29.7	10.02	0.0	705.4	
Average	47.8	14.7	6.3	46.71	34.9	10.37	0.0	773.1	
Variance	50.3	1.6	0.0	0.09	9.0	0.04	0	624.2	

\$Date	\$Time	CO	HCl	CO2	H2O	THC	O2	Opacity	SO2
		PPM	PPM	%	%	PPM	%	%	PPM
		AT-205CORR	AT-213A	AT-213B	AT-213C	AT-259CORR	AT-261	AT-263	AT-264
2019-07-03	10:45:00	75.8	12.6	6.2	46.52	39.7	10.54	0	697.7
2019-07-03	10:46:00	80.0	11.3	6.1	45.98	40.7	10.76	0	670.4
2019-07-03	10:47:00	83.0	11.9	6.1	46.16	41.9	10.92	0	673.6
2019-07-03	10:48:00	81.9	12.1	6.2	46.67	47.3	10.77	0	684.4
2019-07-03	10:49:00	81.5	11.2	6.3	46.95	38.0	10.63	0	700.7
2019-07-03	10:50:00	74.2	11.2	6.2	46.64	43.1	10.43	0	701.8
2019-07-03	10:51:00	75.7	11.2	6.2	46.70	38.2	10.55	0	696.7
2019-07-03	10:52:00	77.4	10.7	6.3	46.74	41.9	10.51	0	690.5
2019-07-03	10:53:00	86.6	10.7	6.2	46.45	37.9	10.70	0	668.5
2019-07-03	10:54:00	85.7	10.3	6.2	46.19	41.6	10.73	0	657.3
2019-07-03	10:55:00	86.0	9.5	6.1	45.96	41.8	10.95	0	635.3
2019-07-03	10:56:00	91.2	8.8	6.2	46.35	47.3	10.85	0	636.9
2019-07-03	10:57:00	93.1	9.9	6.2	46.55	53.9	10.79	0	644.4
2019-07-03	10:58:00	87.7	10.8	6.2	46.79	43.5	10.59	0	678.9
2019-07-03	10:59:00	84.8	9.8	6.2	46.66	54.1	10.57	0	686.1
2019-07-03	11:00:00	79.9	9.7	6.3	46.98	40.5	10.27	0	710.9
2019-07-03	11:01:00	82.7	8.9	6.3	46.76	47.7	10.35	0	688.8
2019-07-03	11:02:00	85.3	9.4	6.2	46.65	39.7	10.36	0	681.0
2019-07-03	11:03:00	83.7	10.1	6.2	46.31	43.3	10.59	0	661.7
2019-07-03	11:04:00	82.5	10.3	6.2	46.38	41.2	10.70	0	661.7
2019-07-03	11:05:00	78.7	10.6	6.3	46.66	42.6	10.49	0	665.6
2019-07-03	11:06:00	79.7	10.9	6.3	46.87	35.7	10.47	0	668.0
2019-07-03	11:07:00	70.1	9.8	6.2	46.48	44.4	10.37	0	658.8
2019-07-03	11:08:00	67.8	9.2	6.3	46.71	44.3	10.35	0	677.5
2019-07-03	11:09:00	67.3	9.3	6.3	46.89	40.6	10.12	0	688.7
2019-07-03	11:10:00	72.5	9.5	6.3	46.72	36.7	10.27	0	678.1
2019-07-03	11:11:00	70.5	9.1	6.2	46.46	41.2	10.32	0	667.3
2019-07-03	11:12:00	68.6	9.0	6.2	46.44	43.5	10.55	0	661.5
2019-07-03	11:13:00	70.1	9.2	6.3	46.87	40.8	10.28	0	679.7
2019-07-03	11:14:00	70.3	10.0	6.3	46.91	43.6	10.24	0	679.7
2019-07-03	11:15:00	64.9	10.5	6.3	46.81	39.2	10.22	0	677.4
2019-07-03	11:16:00	66.1	10.2	6.3	46.67	53.4	10.30	0	672.8
2019-07-03	11:17:00	66.3	10.5	6.3	46.88	35.1	10.01	0	697.7
2019-07-03	11:18:00	63.1	10.3	6.3	46.76	38.6	9.93	0	693.3
2019-07-03	11:19:00	66.1	9.6	6.3	46.63	34.4	10.20	0	673.2
2019-07-03	11:20:00	68.4	9.1	6.2	46.33	47.1	10.50	0	655.5
2019-07-03	11:21:00	71.7	9.3	6.2	46.53	39.0	10.57	0	664.5
2019-07-03	11:22:00	72.2	9.7	6.3	47.01	42.6	10.22	0	685.8
2019-07-03	11:23:00	68.3	9.9	6.3	47.05	34.8	10.16	0	687.5
2019-07-03	11:24:00	60.5	10.6	6.3	46.72	45.5	10.16	0	677.4
2019-07-03	11:25:00	62.0	9.9	6.3	46.50	42.3	10.17	0	685.2
2019-07-03	11:26:00	62.5	10.0	6.3	46.76	36.6	10.00	0	692.2
2019-07-03	11:27:00	65.2	10.2	6.3	46.86	35.2	10.27	0	678.1
2019-07-03	11:28:00	64.6	9.7	6.3	46.58	41.2	10.33	0	666.0
2019-07-03	11:29:00	69.3	10.7	6.2	46.26	50.7	10.57	0	652.2
2019-07-03	11:30:00	72.5	10.4	6.3	46.98	39.3	10.24	0	686.7
2019-07-03	11:31:00	68.8	10.0	6.3	47.09	39.7	10.19	0	690.1
2019-07-03	11:32:00	57.7	10.0	6.3	46.54	39.2	10.18	0	681.7
2019-07-03	11:33:00	59.0	10.0	6.3	46.40	43.3	10.27	0	673.7
2019-07-03	11:34:00	62.4	10.9	6.3	47.08	38.1	10.24	0	687.7
2019-07-03	11:35:00	69.3	11.0	6.3	46.98	45.5	10.23	0	680.1
2019-07-03	11:36:00	71.4	11.0	6.3	46.94	33.1	10.26	0	680.1
2019-07-03	11:37:00	65.6	9.2	6.2	46.18	44.8	10.40	0	657.1
2019-07-03	11:38:00	65.6	8.7	6.2	46.01	38.5	10.42	0	655.6
2019-07-03	11:39:00	64.6	9.3	6.3	47.20	44.0	10.23	0	691.1
2019-07-03	11:40:00	60.6	9.0	6.4	47.38	34.6	10.18	0	697.0
2019-07-03	11:41:00	56.0	9.7	6.3	47.02	38.8	10.14	0	687.5
2019-07-03	11:42:00	59.4	9.7	6.3	46.73	38.5	10.35	0	675.7
2019-07-03	11:43:00	59.3	10.3	6.3	46.77	39.0	10.21	0	677.2
2019-07-03	11:44:00	66.5	11.2	6.3	46.86	41.4	10.33	0	673.4
2019-07-03	11:45:00	66.4	11.5	6.3	46.75	37.9	10.22	0	675.4

July 3/2019		Analyzers							
		CO	HCl	CO2	H2O	THC	O2	Opacity	SO2
Test #		AT-205	AT-213A	AT-213B	AT-213C	AT-259	AT-261	AT-263	AT-264
Max	2	93.1	12.6	6.4	47.38	54.1	10.95	0.0	710.9
Min		56.0	8.7	6.1	45.96	33.1	9.93	0.0	635.3
Average		72.0	10.1	6.2	46.67	41.4	10.39	0.0	676.7
Variance		85.0	0.7	0.0	0.09	21.3	0.05	0	243.7

		CO	HCl	CO2	H2O	THC	O2	Opacity	SO2
		PPM	PPM	%	%	PPM	%	%	PPM
\$Date	\$Time	AT-205CORR	AT-213A	AT-213B	AT-213C	AT-259CORR	AT-261	AT-263	AT-264
2019-07-03	11:59:00	63.5	10.8	6.3	46.76	41.8	10.27	0	693.6
2019-07-03	12:00:00	64.5	10.8	6.3	46.90	40.7	10.15	0	693.6
2019-07-03	12:01:00	73.0	9.9	6.3	47.07	48.9	10.28	0	685.2
2019-07-03	12:02:00	74.0	10.2	6.3	47.03	40.9	10.19	0	686.9
2019-07-03	12:03:00	75.8	11.1	6.2	46.66	51.5	10.41	0	670.8
2019-07-03	12:04:00	80.4	10.0	6.3	47.26	44.1	10.28	0	693.5
2019-07-03	12:05:00	80.4	9.8	6.4	47.42	58.1	10.19	0	698.8
2019-07-03	12:06:00	73.3	10.1	6.3	47.02	38.2	9.92	0	701.2
2019-07-03	12:07:00	72.3	10.1	6.3	46.80	48.3	10.02	0	688.2
2019-07-03	12:08:00	74.7	9.8	6.3	46.93	37.7	10.15	0	679.8
2019-07-03	12:09:00	77.9	9.2	6.3	46.90	46.8	10.16	0	668.7
2019-07-03	12:10:00	79.4	9.3	6.3	46.71	40.2	10.21	0	666.3
2019-07-03	12:11:00	78.7	9.1	6.2	46.20	43.8	10.25	0	659.2
2019-07-03	12:12:00	79.0	8.7	6.2	46.15	44.1	10.34	0	653.7
2019-07-03	12:13:00	77.2	9.0	6.3	46.62	53.6	10.20	0	670.1
2019-07-03	12:14:00	78.0	9.4	6.3	46.91	45.7	10.13	0	687.2
2019-07-03	12:15:00	74.4	9.0	6.3	46.92	47.9	9.93	0	712.2
2019-07-03	12:16:00	72.8	8.8	6.3	46.86	43.7	10.15	0	693.5
2019-07-03	12:17:00	71.8	9.1	6.3	47.16	40.4	10.09	0	696.3
2019-07-03	12:18:00	74.5	8.9	6.3	46.82	49.9	10.19	0	679.5
2019-07-03	12:19:00	78.3	9.0	6.3	46.74	39.0	10.13	0	679.5
2019-07-03	12:20:00	77.4	9.4	6.2	46.45	41.4	10.37	0	663.0
2019-07-03	12:21:00	71.2	9.1	6.3	46.83	39.9	10.29	0	679.5
2019-07-03	12:22:00	71.6	9.3	6.3	47.04	54.9	10.26	0	686.5
2019-07-03	12:23:00	74.7	9.9	6.3	47.23	36.0	9.91	0	713.7
2019-07-03	12:24:00	72.0	9.6	6.3	47.10	42.6	9.92	0	713.7
2019-07-03	12:25:00	66.4	9.9	6.3	46.95	35.5	10.08	0	706.2
2019-07-03	12:26:00	66.0	9.4	6.3	46.58	40.0	10.04	0	686.9
2019-07-03	12:27:00	72.7	9.6	6.3	46.71	38.8	10.21	0	682.6
2019-07-03	12:28:00	75.9	9.5	6.3	46.55	46.9	10.37	0	676.4
2019-07-03	12:29:00	77.2	9.2	6.3	46.45	39.6	10.37	0	676.4
2019-07-03	12:30:00	73.3	10.1	6.3	46.71	46.7	10.09	0	692.3
2019-07-03	12:31:00	69.6	10.6	6.3	47.08	41.8	9.98	0	710.3
2019-07-03	12:32:00	67.0	9.5	6.3	47.00	48.5	9.92	0	711.7
2019-07-03	12:33:00	66.9	8.7	6.3	46.91	47.8	10.07	0	702.0
2019-07-03	12:34:00	67.4	9.4	6.3	47.08	37.4	9.95	0	707.5
2019-07-03	12:35:00	71.1	10.7	6.3	47.15	42.1	10.18	0	680.7
2019-07-03	12:36:00	74.3	10.2	6.3	47.27	39.4	10.36	0	676.9
2019-07-03	12:37:00	76.1	9.8	6.3	46.84	52.7	10.57	0	673.8
2019-07-03	12:38:00	75.2	9.8	6.3	47.29	39.6	10.29	0	705.6
2019-07-03	12:39:00	74.5	9.7	6.3	47.24	51.9	10.16	0	704.0
2019-07-03	12:40:00	68.7	10.5	6.3	47.11	33.7	9.90	0	707.9
2019-07-03	12:41:00	64.6	9.8	6.3	46.95	42.8	9.97	0	704.1
2019-07-03	12:42:00	63.2	9.1	6.3	46.89	36.1	10.22	0	694.1
2019-07-03	12:43:00	64.4	9.8	6.3	47.06	39.4	10.19	0	680.4
2019-07-03	12:44:00	71.6	10.4	6.3	46.98	39.5	10.35	0	671.0
2019-07-03	12:45:00	75.3	9.2	6.2	46.30	44.1	10.42	0	654.6
2019-07-03	12:46:00	75.8	8.8	6.2	46.30	46.5	10.46	0	658.7
2019-07-03	12:47:00	75.3	9.4	6.3	46.97	47.7	10.15	0	690.8
2019-07-03	12:48:00	73.9	9.4	6.3	47.01	47.4	10.08	0	694.8
2019-07-03	12:49:00	71.3	9.5	6.3	46.98	40.5	9.93	0	709.0
2019-07-03	12:50:00	65.6	9.2	6.3	46.94	40.8	10.12	0	698.7
2019-07-03	12:51:00	62.8	9.6	6.4	47.20	36.3	10.07	0	701.9
2019-07-03	12:52:00	66.1	9.6	6.3	46.95	40.6	10.21	0	670.1
2019-07-03	12:53:00	71.8	9.5	6.2	46.80	39.3	10.49	0	650.9
2019-07-03	12:54:00	74.5	10.2	6.2	46.29	51.1	10.53	0	649.1
2019-07-03	12:55:00	82.6	10.5	6.3	46.92	39.8	10.32	0	684.8
2019-07-03	12:56:00	82.8	10.0	6.3	47.10	45.0	10.23	0	690.3
2019-07-03	12:57:00	74.1	10.1	6.3	47.03	37.2	10.00	0	696.9
2019-07-03	12:58:00	70.6	10.4	6.3	46.86	46.9	10.06	0	693.7
2019-07-03	12:59:00	67.1	9.5	6.3	46.89	38.2	10.13	0	699.9

July 3/2019	Analyzers							
	CO	HCl	CO2	H2O	THC	O2	Opacity	SO2
Test 3	AT-205	AT-213A	AT-213B	AT-213C	AT-259	AT-261	AT-263	AT-264
Max	82.8	11.1	6.4	47.42	58.1	10.57	0.0	713.7
Min	62.8	8.7	6.2	46.15	33.7	9.90	0.0	649.1
Average	72.7	9.7	6.3	46.88	43.3	10.18	0.0	687.0
Variance	25.0	0.3	0.0	0.08	28.5	0.03	0	287.4

		CO PPM	HCl PPM	CO2 %	H2O %	THC PPM	O2 %	Opacity %	SO2 PPM
\$Date	\$Time	AT-205CORR	AT-213A	AT-213B	AT-213C	AT-259CORR	AT-261	AT-263	AT-264
2019-07-03	13:10:00	77.7	8.6	6.3	46.90	36.6	10.28	0	675.9
2019-07-03	13:11:00	78.3	8.9	6.2	46.58	44.5	10.51	0	657.5
2019-07-03	13:12:00	75.7	9.4	6.3	46.73	40.6	10.47	0	666.6
2019-07-03	13:13:00	76.7	8.4	6.3	46.87	46.8	10.32	0	674.7
2019-07-03	13:14:00	70.8	8.8	6.3	46.89	34.3	10.01	0	692.1
2019-07-03	13:15:00	65.5	8.8	6.3	46.77	38.7	10.03	0	686.3
2019-07-03	13:16:00	64.9	9.2	6.3	46.80	36.3	10.33	0	669.4
2019-07-03	13:17:00	66.5	9.7	6.2	46.38	40.1	10.15	0	659.3
2019-07-03	13:18:00	75.4	9.4	6.2	46.33	38.5	10.26	0	649.6
2019-07-03	13:19:00	82.5	10.1	6.2	46.69	41.1	10.51	0	652.8
2019-07-03	13:20:00	80.9	9.9	6.2	46.71	41.1	10.60	0	650.2
2019-07-03	13:21:00	75.4	9.4	6.3	47.05	42.8	10.43	0	667.5
2019-07-03	13:22:00	71.7	8.9	6.3	46.81	47.5	10.19	0	678.0
2019-07-03	13:23:00	70.3	8.7	6.3	46.85	38.6	10.03	0	684.2
2019-07-03	13:24:00	69.1	8.9	6.3	46.87	42.9	10.21	0	675.4
2019-07-03	13:25:00	68.6	9.2	6.3	47.07	39.9	10.27	0	680.1
2019-07-03	13:26:00	75.1	8.3	6.3	46.97	43.6	10.32	0	662.8
2019-07-03	13:27:00	81.6	9.0	6.2	46.75	39.5	10.49	0	658.2
2019-07-03	13:28:00	80.9	8.8	6.2	46.72	46.2	10.60	0	657.0
2019-07-03	13:29:00	77.3	9.0	6.3	47.13	38.5	10.49	0	671.2
2019-07-03	13:30:00	76.0	9.2	6.3	47.21	48.9	10.31	0	676.8
2019-07-03	13:31:00	73.7	8.0	6.3	46.90	36.0	10.09	0	687.7
2019-07-03	13:32:00	72.6	7.7	6.3	46.66	46.4	10.13	0	682.8
2019-07-03	13:33:00	75.3	7.5	6.3	46.61	38.2	10.34	0	675.9
2019-07-03	13:34:00	74.8	7.3	6.3	46.61	42.4	10.24	0	668.8
2019-07-03	13:35:00	79.3	7.4	6.3	46.86	40.0	10.41	0	662.1
2019-07-03	13:36:00	80.6	7.7	6.2	46.41	39.7	10.39	0	660.2
2019-07-03	13:37:00	77.4	8.0	6.2	46.19	44.0	10.48	0	654.6
2019-07-03	13:38:00	72.5	8.1	6.3	46.64	43.5	10.41	0	673.2
2019-07-03	13:39:00	72.6	8.3	6.3	46.81	65.5	10.14	0	704.8
2019-07-03	13:40:00	73.5	8.4	6.3	47.19	38.8	9.91	0	721.1
2019-07-03	13:41:00	68.5	7.5	6.3	46.98	47.3	10.04	0	718.0
2019-07-03	13:42:00	63.5	7.3	6.3	46.87	37.3	10.04	0	719.6
2019-07-03	13:43:00	63.0	7.8	6.3	46.81	47.9	9.95	0	708.7
2019-07-03	13:44:00	66.6	8.0	6.3	46.89	35.2	10.06	0	706.9
2019-07-03	13:45:00	65.7	7.6	6.3	46.50	40.8	10.15	0	697.2
2019-07-03	13:46:00	62.9	8.5	6.3	47.03	35.4	10.29	0	699.6
2019-07-03	13:47:00	63.4	8.5	6.3	47.30	49.6	10.22	0	699.6
2019-07-03	13:48:00	64.0	8.2	6.4	47.11	45.5	9.98	0	704.0
2019-07-03	13:49:00	63.4	8.5	6.4	46.89	36.6	9.88	0	708.8
2019-07-03	13:50:00	57.9	7.5	6.4	46.83	38.3	10.05	0	698.4
2019-07-03	13:51:00	58.7	8.5	6.3	46.77	40.5	10.01	0	681.2
2019-07-03	13:52:00	65.9	8.8	6.3	46.69	39.8	10.11	0	671.3
2019-07-03	13:53:00	70.9	9.2	6.2	46.50	39.0	10.26	0	660.5
2019-07-03	13:54:00	72.7	8.8	6.2	46.55	42.2	10.41	0	652.4
2019-07-03	13:55:00	72.1	8.4	6.3	46.85	40.6	10.45	0	654.8
2019-07-03	13:56:00	71.7	9.3	6.3	46.97	49.5	10.26	0	658.8
2019-07-03	13:57:00	72.7	9.0	6.3	47.19	40.5	10.12	0	667.9
2019-07-03	13:58:00	76.2	7.0	6.3	47.12	45.9	10.31	0	662.4
2019-07-03	13:59:00	78.0	7.5	6.3	46.99	40.9	10.38	0	664.5
2019-07-03	14:00:00	78.2	8.5	6.3	47.02	45.8	10.24	0	664.4
2019-07-03	14:01:00	83.1	7.8	6.3	47.18	35.7	10.39	0	649.2
2019-07-03	14:02:00	81.2	7.9	6.2	46.56	43.6	10.54	0	635.9
2019-07-03	14:03:00	77.5	8.9	6.2	46.52	42.9	10.66	0	641.6
2019-07-03	14:04:00	76.3	9.4	6.3	46.75	47.6	10.39	0	654.9
2019-07-03	14:05:00	73.1	8.2	6.3	47.06	39.0	10.21	0	675.3
2019-07-03	14:06:00	68.0	7.7	6.3	46.91	42.9	10.21	0	672.1
2019-07-03	14:07:00	65.9	8.0	6.2	46.50	43.0	10.38	0	656.3
2019-07-03	14:08:00	70.6	7.5	6.3	46.89	42.2	10.18	0	667.4
2019-07-03	14:09:00	73.8	8.2	6.3	46.94	44.1	10.25	0	660.6
2019-07-03	14:10:00	72.3	8.4	6.2	46.38	42.5	10.35	0	648.3

July 3/2019	Analyzers							
	CO	HCl	CO2	H2O	THC	O2	Opacity	SO2
Test # 4	AT-205	AT-213A	AT-213B	AT-213C	AT-259	AT-261	AT-263	AT-264
Max	83.1	10.1	6.4	47.30	65.5	10.66	0.0	721.1
Min	57.9	7.0	6.2	46.19	34.3	9.88	0.0	635.9
Average	72.3	8.4	6.3	46.81	42.0	10.26	0.0	673.7
Variance	37.0	0.5	0.0	0.06	24.1	0.03	0	415.2

Date	Time	CO	HCl	CO2	H2O	THC	O2	Opacity	SO2
		PPM	PPM	%	%	PPM	%	%	PPM
\$Date	\$Time	AT-205CORR	AT-213A	AT-213B	AT-213C	AT-259CORR	AT-261	AT-263	AT-264
2019-07-03	14:15:00	70.0	7.0	6.3	46.74	42.5	10.10	0	686.4
2019-07-03	14:16:00	65.7	7.1	6.3	46.77	38.3	10.21	0	686.4
2019-07-03	14:17:00	65.7	6.8	6.3	46.68	48.2	10.16	0	680.0
2019-07-03	14:18:00	74.3	7.7	6.3	46.71	40.4	10.15	0	683.5
2019-07-03	14:19:00	75.0	7.0	6.2	46.45	45.6	10.24	0	679.5
2019-07-03	14:20:00	71.6	7.3	6.3	46.60	44.4	10.38	0	684.3
2019-07-03	14:21:00	70.8	7.8	6.3	46.98	50.6	10.15	0	693.8
2019-07-03	14:22:00	69.1	7.7	6.4	47.10	47.0	9.96	0	709.0
2019-07-03	14:23:00	65.9	7.2	6.3	46.88	39.8	9.81	0	709.0
2019-07-03	14:24:00	62.5	7.1	6.3	46.88	42.1	10.09	0	691.7
2019-07-03	14:25:00	63.4	6.9	6.4	47.13	41.6	10.10	0	691.8
2019-07-03	14:26:00	66.8	7.1	6.3	47.02	48.8	10.18	0	682.6
2019-07-03	14:27:00	73.6	7.3	6.3	46.43	38.9	10.28	0	672.9
2019-07-03	14:28:00	73.7	7.8	6.2	46.41	45.6	10.43	0	667.1
2019-07-03	14:29:00	72.1	7.9	6.3	46.56	40.5	10.38	0	669.5
2019-07-03	14:30:00	70.4	6.8	6.3	46.95	51.7	10.17	0	684.9
2019-07-03	14:31:00	69.4	6.6	6.3	47.00	35.2	9.98	0	698.6
2019-07-03	14:32:00	67.7	6.9	6.3	46.77	39.6	10.09	0	692.7
2019-07-03	14:33:00	65.7	6.8	6.3	46.77	37.1	10.20	0	689.8
2019-07-03	14:34:00	63.9	7.6	6.3	46.88	44.0	10.09	0	687.3
2019-07-03	14:35:00	73.1	6.6	6.3	47.02	38.8	10.21	0	679.4
2019-07-03	14:36:00	69.1	6.7	6.2	46.35	41.0	10.23	0	669.8
2019-07-03	14:37:00	68.6	7.1	6.2	46.18	42.5	10.51	0	653.9
2019-07-03	14:38:00	71.2	7.1	6.3	46.61	45.3	10.38	0	664.4
2019-07-03	14:39:00	72.8	6.8	6.3	47.04	50.8	10.23	0	687.5
2019-07-03	14:40:00	71.8	6.8	6.3	47.16	41.0	10.01	0	700.5
2019-07-03	14:41:00	67.7	7.2	6.3	46.80	48.9	10.12	0	687.9
2019-07-03	14:42:00	64.3	7.6	6.3	46.89	38.6	10.05	0	693.4
2019-07-03	14:43:00	66.4	7.8	6.3	46.78	47.2	10.11	0	685.1
2019-07-03	14:44:00	73.0	8.2	6.2	46.57	38.6	10.22	0	670.9
2019-07-03	14:45:00	75.0	7.6	6.2	46.42	44.5	10.40	0	660.5
2019-07-03	14:46:00	74.6	6.5	6.3	46.85	40.6	10.59	0	666.5
2019-07-03	14:47:00	73.2	7.7	6.4	47.09	54.3	10.23	0	684.6
2019-07-03	14:48:00	72.4	8.0	6.4	47.07	35.7	10.05	0	698.3
2019-07-03	14:49:00	67.8	8.3	6.3	46.81	48.1	10.13	0	692.5
2019-07-03	14:50:00	66.8	7.8	6.3	46.74	37.6	10.20	0	688.1
2019-07-03	14:51:00	64.4	6.9	6.3	46.59	38.1	9.89	0	694.1
2019-07-03	14:52:00	67.1	7.0	6.3	46.58	35.4	10.26	0	665.4
2019-07-03	14:53:00	69.4	6.9	6.2	46.53	45.4	10.51	0	653.8
2019-07-03	14:54:00	76.3	7.5	6.2	46.42	43.2	10.61	0	657.4
2019-07-03	14:55:00	74.8	7.5	6.3	46.74	43.6	10.34	0	674.1
2019-07-03	14:56:00	71.0	8.3	6.3	47.17	37.9	10.24	0	687.5
2019-07-03	14:57:00	64.3	8.1	6.3	46.97	40.8	10.22	0	674.8
2019-07-03	14:58:00	65.4	7.4	6.3	46.76	51.4	10.28	0	674.8
2019-07-03	14:59:00	69.5	6.7	6.3	47.04	38.4	10.04	0	698.8
2019-07-03	15:00:00	70.2	6.8	6.3	46.94	37.0	10.10	0	685.5
2019-07-03	15:01:00	71.5	7.3	6.2	46.54	39.6	10.41	0	647.9
2019-07-03	15:02:00	72.8	7.5	6.2	46.06	46.9	10.53	0	638.4
2019-07-03	15:03:00	77.3	7.9	6.3	46.60	39.2	10.52	0	671.0
2019-07-03	15:04:00	72.0	7.8	6.3	47.21	45.9	10.23	0	694.3
2019-07-03	15:05:00	68.3	7.2	6.3	47.02	37.2	10.09	1.53	697.0
2019-07-03	15:06:00	66.6	6.4	6.3	46.32	49.0	10.17	0	673.8
2019-07-03	15:07:00	68.9	6.0	6.3	46.38	41.8	10.21	0	676.8
2019-07-03	15:08:00	70.2	6.9	6.3	46.83	39.6	9.94	0	696.7
2019-07-03	15:09:00	72.5	7.2	6.3	46.61	34.9	10.06	0	679.9
2019-07-03	15:10:00	76.0	7.7	6.2	46.35	42.9	10.50	0	649.0
2019-07-03	15:11:00	81.0	7.6	6.2	46.55	45.8	10.71	0	654.0
2019-07-03	15:12:00	76.9	7.3	6.3	46.81	40.0	10.39	0	673.4
2019-07-03	15:13:00	70.7	7.5	6.3	46.65	40.5	10.16	0	677.2
2019-07-03	15:14:00	65.2	8.2	6.3	46.58	39.8	10.06	1.52	675.6
2019-07-03	15:15:00	67.7	8.6	6.2	46.44	48.0	10.28	0	665.0

July 3/2019		Analyzers							
		CO	HCl	CO2	H2O	THC	O2	Opacity	SO2
Test #		AT-205	AT-213A	AT-213B	AT-213C	AT-259	AT-261	AT-263	AT-264
Max		81.0	8.6	6.4	47.21	54.3	10.71	1.5	709.0
Min		62.5	6.0	6.2	46.06	34.9	9.81	0.0	638.4
Average		70.1	7.3	6.3	46.73	42.6	10.22	0.1	679.7
Variance		15.8	0.3	0.0	0.07	22.0	0.03	0.07498	233.3

		CO PPM	HCl PPM	CO2 %	H2O %	THC PPM	O2 %	Opacity %	SO2 PPM
\$Date	\$Time	AT-205CORR	AT-213A	AT-213B	AT-213C	AT-259CORR	AT-261	AT-263	AT-264
2019-07-03	15:44:00	74.6	7.6	6.2	45.93	44.2	10.58	0	643.6
2019-07-03	15:45:00	79.3	6.6	6.2	45.83	49.8	10.68	0	639.4
2019-07-03	15:46:00	79.3	6.8	6.2	46.49	45.7	10.50	0	663.6
2019-07-03	15:47:00	75.8	7.0	6.3	46.93	52.0	10.27	0	681.2
2019-07-03	15:48:00	70.8	7.1	6.3	46.78	41.6	10.11	1.56	694.3
2019-07-03	15:49:00	68.6	7.4	6.3	46.56	48.0	10.17	0	689.7
2019-07-03	15:50:00	65.8	7.6	6.3	46.86	39.6	10.16	0	690.9
2019-07-03	15:51:00	69.3	7.1	6.3	46.82	42.0	10.24	0	680.9
2019-07-03	15:52:00	75.1	7.8	6.2	46.41	43.3	10.46	0	653.6
2019-07-03	15:53:00	77.8	7.9	6.1	45.88	44.6	10.62	0	632.3
2019-07-03	15:54:00	81.8	7.7	6.2	45.99	42.5	10.70	0	645.2
2019-07-03	15:55:00	79.2	8.2	6.3	46.76	52.5	10.42	0	670.6
2019-07-03	15:56:00	77.8	8.0	6.3	46.70	42.8	10.24	0	681.2
2019-07-03	15:57:00	72.1	7.2	6.3	46.69	47.3	10.05	1.56	691.7
2019-07-03	15:58:00	71.3	6.9	6.3	46.86	40.8	10.14	0	691.7
2019-07-03	15:59:00	67.3	6.5	6.3	46.88	41.8	10.04	0	697.9
2019-07-03	16:00:00	75.5	8.0	6.3	46.71	39.6	10.39	0	665.0
2019-07-03	16:01:00	77.5	7.9	6.2	46.37	44.7	10.49	0	646.6
2019-07-03	16:02:00	80.7	8.0	6.2	46.03	53.1	10.70	0	631.4
2019-07-03	16:03:00	84.6	7.8	6.2	46.61	49.6	10.62	0	652.1
2019-07-03	16:04:00	86.9	7.3	6.3	47.04	54.4	10.34	0	668.8
2019-07-03	16:05:00	86.0	8.1	6.3	47.14	41.3	10.23	1.47	680.4
2019-07-03	16:06:00	77.9	7.5	6.3	47.09	46.2	10.37	0	672.2
2019-07-03	16:07:00	71.7	6.5	6.3	46.97	41.9	10.28	0	663.6
2019-07-03	16:08:00	72.6	6.8	6.3	46.55	44.7	10.22	0	651.6
2019-07-03	16:09:00	80.6	6.9	6.2	46.22	41.6	10.41	0	635.6
2019-07-03	16:10:00	80.7	6.4	6.2	45.72	47.1	10.54	0	623.7
2019-07-03	16:11:00	83.0	6.7	6.2	45.80	45.0	10.69	0	634.7
2019-07-03	16:12:00	80.9	7.7	6.3	46.73	46.0	10.40	0	669.4
2019-07-03	16:13:00	79.7	7.9	6.3	46.80	48.3	10.30	0	675.4
2019-07-03	16:14:00	75.7	7.4	6.3	46.72	45.7	10.16	1.51	682.1
2019-07-03	16:15:00	73.8	7.3	6.3	46.64	41.8	10.27	0	679.0
2019-07-03	16:16:00	69.3	8.0	6.3	46.84	42.2	10.23	0	678.8
2019-07-03	16:17:00	76.0	8.0	6.2	46.26	44.4	10.46	0	643.3
2019-07-03	16:18:00	77.8	8.2	6.2	45.98	45.4	10.47	0	629.7
2019-07-03	16:19:00	81.6	7.6	6.1	45.76	46.1	10.66	0	624.2
2019-07-03	16:20:00	84.5	7.4	6.2	46.19	46.7	10.70	0	642.3
2019-07-03	16:21:00	81.6	6.9	6.3	46.74	49.5	10.43	0	662.3
2019-07-03	16:22:00	73.5	6.8	6.3	46.78	40.3	10.14	1.53	686.5
2019-07-03	16:23:00	69.2	7.4	6.3	46.59	45.1	10.20	0	684.1
2019-07-03	16:24:00	66.4	7.4	6.3	46.79	39.3	10.20	0	683.8
2019-07-03	16:25:00	67.3	7.2	6.3	46.63	42.1	10.18	0	673.1
2019-07-03	16:26:00	76.7	8.0	6.2	46.36	40.2	10.47	0	647.5
2019-07-03	16:27:00	79.4	7.7	6.2	46.02	49.2	10.61	0	635.5
2019-07-03	16:28:00	81.7	6.8	6.2	45.93	48.8	10.69	0	640.8
2019-07-03	16:29:00	80.6	7.5	6.3	46.78	45.6	10.30	0	681.8
2019-07-03	16:30:00	75.5	8.2	6.4	47.20	41.3	10.24	0	691.3
2019-07-03	16:31:00	62.7	7.4	6.3	46.98	41.2	10.19	1.52	684.9
2019-07-03	16:32:00	60.0	6.8	6.3	46.69	40.1	10.25	0	675.8
2019-07-03	16:33:00	57.3	8.1	6.3	46.64	40.2	10.22	0	671.3
2019-07-03	16:34:00	66.3	8.2	6.2	46.34	40.7	10.43	0	644.1
2019-07-03	16:35:00	69.0	7.0	6.2	46.11	43.5	10.46	0	636.3
2019-07-03	16:36:00	68.6	7.2	6.2	45.86	49.8	10.55	0	637.7
2019-07-03	16:37:00	69.3	8.5	6.3	46.26	42.8	10.42	0	662.4
2019-07-03	16:38:00	68.7	8.6	6.3	46.93	51.2	10.13	0	690.0
2019-07-03	16:39:00	68.5	8.4	6.4	47.10	39.1	10.05	1.52	699.0
2019-07-03	16:40:00	64.3	7.8	6.3	46.81	43.0	10.13	0	689.4
2019-07-03	16:41:00	60.8	8.1	6.3	46.95	37.8	10.05	0	687.1
2019-07-03	16:42:00	58.9	7.9	6.3	46.81	40.9	9.98	0	681.9
2019-07-03	16:43:00	65.7	7.7	6.3	46.88	36.5	10.18	0	674.3
2019-07-03	16:44:00	65.4	7.1	6.2	46.11	43.6	10.39	0	643.0

July 3/2019	Analyzers							
	CO	HCl	CO2	H2O	THC	O2	Opacity	SO2
Test #	AT-205	AT-213A	AT-213B	AT-213C	AT-259	AT-261	AT-263	AT-264
Max	86.9	8.6	6.4	47.20	54.4	10.70	1.6	699.0
Min	57.3	6.4	6.1	45.72	36.5	9.98	0.0	623.7
Average	73.8	7.5	6.2	46.54	44.4	10.35	0.2	664.9
Variance	51.4	0.3	0.0	0.16	16.2	0.04	0.240059	479.1

\$Date	\$Time	Rich	Emulsion	Lean	Alkaline	TDU Flow	TDU Flow	Leachate	PAC	Primary	Secondary	Quench	SDA	Stack	Incinerator	SDA Inlet	BH Inlet	BH dP
		LPM	LPM	LPM	LPM	SCFM	LPM	LPM	Lbs/h	Degrees C	Degrees C	Degrees C	Degrees C	Degrees C	mmH2O	mmH2O	mmH2O	mmH2O
2019-07-03	9:35:00	FT-229	FT-219C	FT-223	PV-207	FT-313B	PV-211	SC-PAC-FI	PV-236	PV-209	FT-260C	TE-240	TE-204	TE-258	PT-249	PT-249	PT-615	PDT-622
2019-07-03	9:36:00	30.92	15.32	165.78	211.86	5.46	327.38	28.76	24.73	19684	11185	1093	499.4	185.3	-8.55	-46.30	-132.4	225.3
2019-07-03	9:37:00	30.93	14.53	163.80	205.56	5.46	327.53	29.10	25.83	19684	11287	1093	499.6	185.3	-8.55	-67.25	-154.8	192.3
2019-07-03	9:38:00	31.04	14.72	163.98	211.37	5.45	327.23	28.61	24.70	19511	11073	1094	499.8	185.3	-21.40	-65.75	-146.5	195.5
2019-07-03	9:39:00	31.02	14.92	165.50	211.10	5.46	327.30	29.06	25.67	19421	11185	1094	500.2	185.3	-6.55	-45.05	-123.9	234.6
2019-07-03	9:40:00	30.76	14.39	164.22	208.04	5.51	330.45	29.06	25.86	19062	11084	1096	500.6	185.3	-4.90	-41.80	-119.5	241.4
2019-07-03	9:41:00	30.28	14.42	164.79	207.63	5.47	328.35	29.06	25.62	19152	11096	1096	500.9	185.3	-8.90	-46.45	-128.5	232.6
2019-07-03	9:42:00	31.32	14.98	165.12	210.20	5.48	328.73	29.06	24.73	19152	11096	1096	501.0	185.3	-4.55	-40.75	-120.9	239.3
2019-07-03	9:43:00	31.41	14.93	165.31	208.85	5.52	331.35	29.06	25.25	19684	11197	1095	501.3	185.3	-12.25	-53.00	-140.0	221.8
2019-07-03	9:44:00	31.46	14.60	164.27	212.00	5.45	326.85	29.06	24.62	19511	11197	1095	501.1	185.3	-10.80	-50.25	-131.8	228.3
2019-07-03	9:45:00	30.87	14.48	164.98	207.14	5.49	329.40	28.76	25.65	19684	11197	1095	501.4	185.3	-11.10	-52.30	-135.9	209.7
2019-07-03	9:46:00	31.16	15.37	165.26	215.15	5.46	327.83	28.76	24.75	19331	11096	1094	501.2	185.3	-7.45	-46.20	-127.6	215.0
2019-07-03	9:47:00	30.47	15.08	164.98	208.35	5.50	330.08	28.76	25.83	19511	11208	1095	501.6	185.3	-8.80	-48.00	-133.2	230.8
2019-07-03	9:48:00	30.65	14.64	163.55	211.46	5.46	327.53	28.91	25.62	19511	11101	1096	501.4	185.3	-6.85	-43.65	-122.4	237.8
2019-07-03	9:49:00	31.01	14.67	164.79	207.81	5.52	331.43	28.91	24.81	19601	11225	1097	501.3	185.3	-12.70	-53.90	-138.7	228.8
2019-07-03	9:50:00	30.93	14.84	164.84	210.65	5.49	329.48	28.91	24.68	19421	11124	1095	500.7	185.3	-6.15	-42.50	-126.0	236.1
2019-07-03	9:51:00	30.65	14.89	165.35	208.67	5.46	327.83	28.95	25.33	19684	11230	1095	500.4	185.3	-23.00	-65.00	-159.6	211.4
2019-07-03	9:52:00	31.26	15.22	165.84	213.98	5.44	326.25	28.99	25.15	19511	11208	1093	500.1	185.3	-9.10	-48.75	-134.5	225.4
2019-07-03	9:53:00	31.19	15.01	163.46	210.33	5.47	327.90	28.99	25.78	19601	11197	1095	500.0	185.3	-21.45	-65.50	-151.5	188.6
2019-07-03	9:54:00	31.58	15.17	165.60	211.91	5.47	328.35	28.99	25.54	19594	11197	1094	499.7	185.3	-10.05	-50.55	-131.4	212.3
2019-07-03	9:55:00	30.11	14.70	164.22	207.36	5.45	327.15	28.99	25.17	19601	11096	1095	499.7	185.3	-18.80	-67.15	-135.5	198.4
2019-07-03	9:56:00	30.93	15.09	167.30	212.63	5.47	328.35	28.99	25.78	19421	11112	1096	499.6	185.3	-7.15	-43.85	-125.0	232.8
2019-07-03	9:57:00	31.11	15.15	165.54	209.97	5.47	328.20	28.99	25.88	19242	11112	1096	499.6	185.3	-4.90	-43.45	-122.2	239.6
2019-07-03	9:58:00	30.68	14.71	165.74	206.78	5.51	330.83	28.95	24.62	19331	11236	1096	500.0	185.3	-8.15	-47.20	-130.0	228.9
2019-07-03	9:59:00	30.27	14.38	166.31	208.40	5.46	327.75	28.99	24.54	19331	11118	1096	499.8	185.3	-3.55	-41.20	-120.6	239.5
2019-07-03	10:00:00	30.51	14.49	167.49	207.68	5.48	328.58	28.99	25.44	19511	11219	1095	500.1	185.3	-12.40	-51.85	-140.5	221.1
2019-07-03	10:01:00	31.23	15.31	167.30	214.38	5.46	327.30	28.01	24.70	19421	11112	1093	499.9	185.3	-9.35	-49.00	-131.4	228.4
2019-07-03	10:02:00	30.95	14.85	167.64	210.56	5.45	327.08	29.59	25.78	19594	11219	1095	500.2	185.3	-10.00	-48.55	-135.2	207.9
2019-07-03	10:03:00	31.67	15.63	166.44	215.64	5.47	328.28	29.25	25.07	19242	11112	1095	500.2	185.3	-6.25	-45.50	-126.9	213.5
2019-07-03	10:04:00	31.17	14.47	167.25	208.80	5.45	326.85	29.25	25.67	19601	11112	1096	500.6	185.3	-9.55	-48.65	-135.3	230.3
2019-07-03	10:05:00	31.89	15.36	167.73	214.16	5.45	327.15	28.95	24.54	19331	11112	1096	500.4	185.3	-4.35	-40.25	-124.0	234.9
2019-07-03	10:06:00	30.81	14.55	166.16	208.31	5.46	327.30	29.48	24.99	19511	11236	1099	500.8	185.3	-12.90	-51.60	-145.9	227.3
2019-07-03	10:07:00	31.29	15.23	167.73	214.74	5.51	330.53	29.36	24.49	19242	11135	1099	500.9	185.3	-5.20	-43.35	-123.8	233.3
2019-07-03	10:08:00	30.59	14.15	166.44	206.73	5.46	327.83	29.36	25.52	19774	11236	1095	501.2	185.3	-23.75	-70.20	-158.5	189.2
2019-07-03	10:09:00	29.40	14.44	166.21	213.71	5.50	329.85	29.36	25.54	19511	11112	1097	501.3	185.3	-11.00	-49.95	-135.1	222.4
2019-07-03	10:10:00	29.18	14.87	166.97	208.62	5.47	328.20	29.36	25.70	19331	11219	1095	500.2	185.3	-20.25	-64.90	-144.5	184.8
2019-07-03	10:11:00	30.27	14.97	167.49	212.31	5.46	327.30	29.10	25.04	19518	11219	1088	499.1	185.3	-9.60	-49.30	-131.5	209.1
2019-07-03	10:12:00	29.54	15.35	167.30	211.14	5.41	324.68	29.10	25.52	19331	11118	1085	498.4	185.3	-8.25	-46.00	-128.1	216.3
2019-07-03	10:13:00	30.32	14.50	166.74	211.55	5.48	329.03	29.10	24.89	19331	11124	1085	497.1	185.3	-9.25	-47.00	-129.2	230.1
2019-07-03	10:14:00	29.57	15.32	167.30	212.45	5.48	329.03	29.40	25.78	19331	11124	1085	497.1	185.3	-5.70	-41.15	-123.1	235.9
2019-07-03	10:15:00	30.05	14.85	166.55	211.46	5.47	327.90	28.39	25.67	19421	11225	1085	496.6	184.3	-8.65	-47.40	-130.4	225.4
2019-07-03	10:16:00	29.55	15.09	166.55	211.86	5.46	327.53	29.44	25.52	19242	11124	1086	496.2	184.3	-5.25	-43.05	-123.1	233.4
2019-07-03	10:17:00	29.45	14.59	166.40	209.61	5.45	327.15	28.28	25.65	19767	11118	1086	495.8	184.3	-14.50	-55.55	-143.4	216.9
2019-07-03	10:18:00	30.08	14.80	165.84	209.57	5.47	328.43	29.25	24.89	19594	11118	1082	495.1	184.3	-11.30	-50.60	-135.3	222.6
2019-07-03	10:19:00	29.45	14.44	164.55	204.98	5.50	329.70	29.25	24.73	19601	11118	1080	494.5	184.3	-14.30	-53.35	-141.2	205.9
2019-07-03	10:20:00	30.42	14.90	167.82	211.73	5.48	328.50	29.29	25.94	19421	11225	1079	493.9	183.3	-8.40	-45.95	-131.5	210.4
2019-07-03	10:21:00	30.32	14.77	166.35	208.22	5.48	328.50	29.51	24.81	19864	11325	1081	494.1	183.3	-12.25	-53.55	-139.8	228.3
2019-07-03	10:22:00	31.28	15.47	167.34	213.98	5.47	328.20	29.40	25.75	19511	11107	1084	494.1	183.3	-5.00	-47.90	-124.5	231.3
2019-07-03	10:23:00	30.42	14.11	166.25	206.64	5.44	326.33	29.40	24.62	19774	11219	1089	494.4	183.3	-23.65	-65.90	-160.7	209.6
2019-07-03	10:24:00	31.28	15.24	167.25	211.91	5.47	328.28	29.36	25.86	19242	11118	1090	494.8	183.3	-5.70	-44.50	-126.0	228.6
2019-07-03	10:25:00	30.57	14.66	167.34	208.17	5.47	328.13	29.03	24.99	19331	11236	1093	495.3	183.3	-22.35	-68.35	-156.5	185.1
2019-07-03	10:26:00	31.17	15.34	166.78	215.10	5.45	327.23	29.03	24.91	19601	11236	1093	495.9	183.3	-11.35	-52.25	-137.2	219.9
2019-07-03	10:27:00	30.96	13.94	166.25	205.83	5.48	328.73	29.06	24.62	19414	11129	1095	496.1	183.3	-8.60	-50.55	-133.2	197.3
2019-07-03	10:28:00	30.75	14.48	166.25	212.31	5.51	330.30	29.14	25.44	19421	11129							

SDate	STime	Rich	Emulsion	Lean	Alkaline	TDU Flow	TDU Flow	Leachate	PAC	Primary	Secondary	Stack	Primary	Secondary	Quench	SDA	Stack	Incinerator	SDA Inlet	BH Inlet	BH dP
		LPM	LPM	LPM	LPM	LPM	SCFM	LPM	SC-PAC-FT	m3/h	m3/h	m3/h	Degrees C	Degrees C	Degrees C	Degrees C	Degrees C	mmH2O	mmH2O	mmH2O	PDI-622
2019-07-03	10:45:00	FT-229	FT-219C	FT-223	PV-207	FT-313B	FT-313	PV-211	SC-PAC-FT	PV-236	FT-260C	FT-260C	TE-240	TE-241	TE-203	TE-204	TE-258	PT-242A	PT-249	PT-615	206.2
2019-07-03	10:46:00	30.45	14.48	168.20	211.19	5.45	327.23	29.14	24.52	19421	11197	90760	1494	1076	488.3	187.5	182.3	-12.10	-53.50	-136.8	206.2
2019-07-03	10:47:00	30.35	14.39	168.15	207.99	5.50	330.00	29.03	25.36	19421	11096	89441	1495	1074	487.6	187.0	182.3	-8.65	-47.00	-132.1	213.5
2019-07-03	10:48:00	30.69	14.95	168.25	213.12	5.48	328.50	29.03	25.59	19421	11118	93014	1489	1072	487.1	187.0	181.3	-9.25	-48.85	-131.1	227.4
2019-07-03	10:49:00	30.50	15.01	168.01	212.45	5.50	329.70	29.03	24.47	19424	11214	90058	1499	1074	487.1	186.5	181.3	-7.10	-46.60	-125.4	236.5
2019-07-03	10:50:00	30.41	14.80	169.01	209.84	5.51	330.45	28.91	25.10	19421	11124	90572	1499	1076	487.0	186.0	181.3	-11.55	-46.00	-126.6	234.1
2019-07-03	10:51:00	30.92	15.47	169.05	214.29	5.52	331.28	28.91	25.54	19594	11225	91561	1492	1074	486.3	186.0	181.3	-11.80	-50.20	-138.3	218.5
2019-07-03	10:52:00	30.67	14.68	168.95	209.61	5.48	328.73	28.91	25.20	19774	11225	92097	1490	1074	486.0	185.5	181.3	-15.30	-58.30	-147.0	201.1
2019-07-03	10:53:00	29.30	14.44	168.11	212.85	5.46	327.60	28.91	24.75	19594	11225	90743	1487	1071	485.4	185.0	180.3	-12.55	-52.35	-136.1	207.9
2019-07-03	10:54:00	30.18	14.72	168.35	209.52	5.42	325.13	28.80	24.73	19331	11118	89885	1488	1068	483.9	185.0	180.3	-7.90	-47.40	-130.7	227.6
2019-07-03	10:55:00	31.43	14.61	168.24	209.61	5.45	327.23	28.95	25.88	19684	11118	96155	1500	1071	483.7	184.5	180.3	-24.70	-71.95	-159.8	184.4
2019-07-03	10:56:00	31.55	15.34	170.28	213.98	5.46	327.30	28.95	25.62	19331	11124	91264	1501	1073	484.6	185.0	180.3	-7.80	-46.10	-130.6	226.3
2019-07-03	10:57:00	31.10	14.84	168.05	208.67	5.49	329.63	28.91	24.52	19331	11124	91531	1512	1078	485.4	185.0	180.3	-16.70	-67.65	-136.2	192.1
2019-07-03	11:00:00	31.34	15.14	169.85	213.39	5.45	327.15	28.91	24.89	19684	11225	93049	1505	1079	486.5	185.0	180.3	-11.90	-52.20	-142.0	216.9
2019-07-03	11:01:00	30.71	14.77	168.05	210.47	5.46	327.45	28.91	24.54	19511	11073	91415	1509	1080	487.3	186.0	180.3	-11.45	-52.55	-139.5	226.4
2019-07-03	11:02:00	31.31	14.73	169.20	211.50	5.52	331.43	29.21	24.81	19331	11275	92173	1507	1080	487.9	187.0	180.3	-12.25	-54.70	-141.2	205.6
2019-07-03	11:03:00	30.75	14.17	167.77	207.68	5.51	330.45	29.33	25.38	19511	11169	89829	1510	1080	488.1	187.0	180.3	-9.65	-50.70	-135.4	213.3
2019-07-03	11:04:00	30.62	14.55	168.24	206.42	5.52	330.98	28.99	25.80	19594	11169	92631	1507	1079	488.9	187.5	180.3	-9.85	-49.50	-134.2	228.6
2019-07-03	11:05:00	31.22	14.40	168.54	208.22	5.48	328.88	28.99	25.31	19424	11169	91636	1511	1079	488.6	188.0	180.3	-7.40	-45.55	-126.5	235.4
2019-07-03	11:06:00	31.56	14.62	169.10	209.21	5.50	329.85	28.99	25.28	19594	11169	92938	1509	1080	489.1	188.0	180.3	-11.55	-53.60	-136.0	224.9
2019-07-03	11:07:00	31.97	14.99	169.01	215.33	5.47	328.05	28.99	24.47	19424	11067	90794	1514	1081	489.4	188.0	180.3	-11.55	-53.60	-136.0	224.9
2019-07-03	11:08:00	30.72	14.89	168.30	210.69	5.52	331.43	28.50	24.91	19857	11197	93955	1515	1084	490.1	187.5	180.3	-16.55	-58.55	-150.5	218.2
2019-07-03	11:09:00	31.25	15.17	169.05	213.30	5.50	330.23	28.65	25.78	19511	11197	90235	1513	1083	490.5	188.0	180.3	-10.55	-52.35	-136.2	222.3
2019-07-03	11:10:00	30.90	14.38	168.95	209.57	5.51	330.53	28.84	25.59	19864	11197	92395	1515	1084	490.9	188.5	181.4	-15.90	-57.60	-152.2	203.8
2019-07-03	11:11:00	31.47	15.20	169.44	213.12	5.51	330.53	28.88	24.52	19414	11096	94130	1516	1085	491.2	189.0	181.4	-8.55	-49.20	-135.6	210.2
2019-07-03	11:12:00	30.96	14.38	168.58	207.45	5.51	330.83	28.65	24.60	19947	11315	95222	1520	1086	492.3	189.0	181.4	-24.40	-71.60	-164.4	195.4
2019-07-03	11:13:00	31.14	14.64	168.95	208.13	5.51	330.75	29.51	25.73	19421	11197	90303	1519	1085	492.6	189.5	181.4	-9.00	-49.20	-130.1	234.7
2019-07-03	11:14:00	31.29	14.40	168.44	209.25	5.51	330.68	28.76	25.78	19421	11079	92727	1522	1086	492.7	189.5	181.4	-21.15	-67.30	-150.8	189.1
2019-07-03	11:15:00	31.52	15.22	169.48	213.35	5.50	330.08	29.21	24.57	19331	11129	92339	1520	1088	492.9	190.0	181.4	-6.40	-47.20	-130.2	230.3
2019-07-03	11:16:00	31.97	14.78	168.39	209.88	5.50	330.08	29.21	25.78	19331	11129	88690	1529	1088	493.6	189.5	181.4	-4.40	-41.60	-122.6	238.4
2019-07-03	11:17:00	31.77	15.22	168.95	211.46	5.51	330.60	28.58	24.57	19504	11258	89324	1523	1088	494.3	190.0	181.4	-12.60	-51.75	-147.7	222.9
2019-07-03	11:18:00	31.16	14.76	167.68	210.20	5.52	330.90	28.43	25.31	19594	11157	92139	1524	1088	494.5	190.5	182.4	-10.20	-50.65	-135.3	230.5
2019-07-03	11:19:00	31.19	15.17	168.77	210.65	5.52	331.05	28.65	24.57	19594	11169	93079	1520	1087	494.8	190.5	182.4	-10.75	-50.10	-140.7	211.6
2019-07-03	11:20:00	31.44	15.30	169.85	217.85	5.51	330.45	29.10	25.80	19062	11169	90746	1524	1088	494.8	191.0	182.4	-8.45	-47.85	-131.7	218.2
2019-07-03	11:21:00	31.19	14.40	169.62	209.21	5.51	330.53	28.84	24.57	19594	11169	93429	1523	1088	495.2	190.5	182.4	-6.00	-45.80	-137.0	233.3
2019-07-03	11:22:00	31.07	14.86	168.20	210.38	5.49	329.40	28.84	24.44	19421	11169	89838	1523	1088	495.4	190.5	182.4	-5.60	-43.15	-123.7	241.1
2019-07-03	11:23:00	31.34	14.69	168.30	207.36	5.53	331.58	28.84	24.78	19684	11169	90726	1526	1088	495.5	190.5	182.4	-9.65	-48.30	-135.3	232.4
2019-07-03	11:24:00	32.00	15.23	169.72	216.05	5.50	330.15	28.84	24.86	19331	11062	90169	1529	1088	495.5	190.5	182.4	-7.25	-46.90	-125.0	240.6
2019-07-03	11:25:00	31.19	14.53	168.35	208.80	5.51	330.68	28.84	24.73	19691	11270	93373	1529	1090	496.0	190.0	182.4	-17.00	-59.50	-151.0	225.1
2019-07-03	11:26:00	31.25	14.60	168.58	209.93	5.50	329.85	29.06	25.86	19504	11169	91710	1523	1088	496.2	191.0	182.4	-9.40	-50.05	-137.3	230.3
2019-07-03	11:27:00	31.02	14.75	168.95	208.40	5.50	330.00	29.10	24.99	19684	11169	94471	1521	1087	496.2	191.5	182.4	-22.20	-67.70	-159.1	204.1
2019-07-03	11:28:00	31.40	14.96	170.28	213.71	5.50	329.70	28.80	25.25	19331	11169	93087	1520	1086	496.2	191.5	182.4	-8.45	-48.45	-132.0	217.4
2019-07-03	11:29:00	30.81	14.92	168.95	210.20	5.50	330.23	28.80	25.67	19677	11169	97224	1527	1089	496.4	191.5	182.4	-23.70	-71.10	-157.7	202.6
2019-07-03	11:30:00	31.41	14.65	169.10	208.67	5.51	330.60	28.80	25.88	19325	11174	91864	1524	1088	497.0	191.5	182.4	-7.35	-45.70	-127.2	240.3
2019-07-03	11:31:00	31.26	14.30	168.95	209.34	5.51	330.38	28.84	25.33	19331	11067	89845	1524	1088	497.4	191.5	183.4	-8.35	-49.10	-131.0	236.7
2019-07-03	11:32:00	30.80	14.30	168.95	209.34	5.51	330.38	28.84	25.33	19331	11067	89845	1524	1088	497.4	191.5	183.4	-8.35	-49.10	-131.0	236.7
2019-07-03	11:33:00	30.93	14.77	169.20	211.10	5.51	330.38	28.46	24.52	19152	11067	87156	1529								

\$Date	\$Time	Rich LPM	Emulsion LPM	Lean LPM	Alkaline LPM	TDU Flow LPM	TDU Flow SCFM	Leachate LPM	PAC Lbs/h	Primary m3/h	Secondary m3/h	Stack m3/h	Primary Degrees C	Secondary Degrees C	Quench Degrees C	SDA Degrees C	Stack Degrees C	Incinerator mmH2O	SDA Inlet mmH2O	BH Inlet mmH2O	BH dP mmH2O
2019-07-03	11:41:00	31.71	14.44	167.25	208.62	FT-3138	FT-313	PV-211	SC-PAC-FT	PV-236	PV-209	FT-260C	TE-240	TE-241	TE-203	TE-204	TE-258	PT-242A	PT-249	PT-615	PDT-622
2019-07-03	11:42:00	30.87	14.57	169.20	208.58	5.51	330.38	29.03	24.73	19242	11140	88857	1529	1090	496.6	190.5	183.4	-5.75	-43.60	-127.1	237.3
2019-07-03	11:43:00	31.29	15.31	169.20	215.01	5.51	330.30	28.99	25.67	19511	11140	91754	1528	1090	496.7	190.5	183.4	-18.80	-60.95	-154.5	221.0
2019-07-03	11:44:00	30.84	14.87	168.30	209.52	5.51	330.75	28.99	25.07	19684	11140	95324	1529	1090	497.0	191.0	183.4	-21.95	-50.15	-137.1	226.1
2019-07-03	11:45:00	31.71	15.00	169.81	213.03	5.55	333.23	28.99	24.65	19331	11140	92058	1526	1090	497.1	191.5	183.4	-9.05	-49.10	-135.2	212.9

July 3/2019		Waste Flows										Flows										Air Flows										Temperatures										Pressures									
Test #	Rich	Emulsion	Lean	Alkaline	TDU Flow	TDU Flow	TDU Flow	Leachate	PACFlow	Primary	Secondary	Stack	Primary	Secondary	Quench	SprayDryer	Stack	Incinerator	SDA Inlet	SD Outlet	Baghouse																														
Max	32.52	15.59	170.28	217.85	FT-313	FT-3138	30.11	30.11	25.88	19947	11315	97927	1532	1091	497.4	191.5	183.4	-4.40	-41.60	-122.6	245.9																														
Min	29.30	14.01	167.25	206.42	5.42	325.13	28.43	24.44	19062	11023	87156	1486	1068	483.7	184.5	180.3	-24.70	-71.95	-164.4	184.4																															
Average	31.05	14.79	168.78	210.75	5.50	329.84	28.93	25.09	19500	11158	91937	1515	1083	492.1	188.9	181.8	-11.52	-52.52	-137.7	221.2																															
Variance	0.33	0.11	0.44	5.71	0.00	2.36	0.06	0.24	38862	3567	5365966	181	43	20.7	5.4	1.4	26.33	60.04	112.8	211.3																															

\$Date	\$Time	Rich LPM	Emulsion LPM	Lean LPM	Alkaline LPM	TDU Flow LPM	TDU Flow SCFM	Leachate LPM	PAC lbs/h	Primary m3/h	Secondary m3/h	Stack m3/h	Primary Degrees C	Secondary Degrees C	Quench Degrees C	SDA Degrees C	Stack Degrees C	Incinerator mmH2O	SDA Inlet mmH2O	BH Inlet mmH2O	BH dP mmH2O
2019-07-03	11:59:00	FT-229	FT-219C	FT-223	PV-207	FT-313B	FT-313	PV-211	SC-PAC-FT	PV-236	PV-209	FT-260C	TE-240	TE-241	TE-203	TE-204	TE-238	PT-242A	PT-249	PT-615	PDT-622
2019-07-03	12:00:00	30.78	14.59	170.85	209.30	5.51	330.30	29.03	25.86	19684	11191	92858	1529	1090	497.7	191.5	183.4	-20.85	-62.10	-164.4	208.9
2019-07-03	12:01:00	31.86	15.21	171.71	212.58	5.53	331.73	29.03	25.44	19504	11079	93044	1524	1088	497.6	192.5	183.4	-8.65	-48.70	-136.1	221.7
2019-07-03	12:02:00	30.83	14.88	171.33	210.29	5.51	330.68	28.80	25.75	19331	11073	92398	1524	1088	497.6	192.5	184.5	-8.15	-48.25	-135.8	211.3
2019-07-03	12:03:00	31.11	14.55	170.75	211.14	5.50	330.00	29.06	25.75	19331	10972	96077	1528	1090	497.5	192.5	184.5	-17.05	-64.05	-137.3	195.4
2019-07-03	12:04:00	31.65	14.64	171.95	211.05	5.49	329.55	29.06	25.75	19325	11084	90491	1527	1089	497.8	192.5	184.5	-5.35	-44.60	-125.9	232.3
2019-07-03	12:05:00	30.53	14.54	171.00	207.95	5.54	332.25	28.46	25.83	19325	10978	91145	1530	1090	497.4	191.5	184.5	-5.95	-46.00	-126.0	231.0
2019-07-03	12:06:00	30.69	14.68	170.28	207.63	5.52	330.90	29.59	24.78	19331	11084	88573	1533	1089	497.0	191.5	184.5	-5.30	-45.20	-123.9	240.9
2019-07-03	12:07:00	31.28	15.01	171.95	209.03	5.52	331.20	29.06	24.49	19594	11197	92117	1526	1088	496.7	191.5	184.5	-11.95	-54.35	-143.8	223.5
2019-07-03	12:08:00	31.95	15.26	171.95	212.85	5.52	331.20	29.10	24.49	19414	11084	92289	1528	1086	496.7	191.5	184.5	-8.50	-49.95	-133.9	229.3
2019-07-03	12:09:00	31.25	14.93	170.62	210.83	5.54	332.63	29.10	25.80	19594	11191	92606	1528	1086	496.9	191.5	184.5	-11.00	-52.15	-135.9	209.9
2019-07-03	12:10:00	31.52	14.32	170.43	206.15	5.48	328.73	29.10	24.73	19242	11084	90171	1527	1085	496.6	191.5	184.5	-6.95	-45.70	-129.6	217.6
2019-07-03	12:11:00	30.93	14.71	171.24	207.50	5.54	332.10	29.06	24.60	19587	11191	92484	1527	1086	496.4	191.5	183.4	-10.35	-52.45	-137.1	234.9
2019-07-03	12:12:00	30.32	14.31	170.34	207.77	5.52	331.43	28.28	25.65	19594	11214	91315	1534	1089	496.4	191.0	183.4	-12.35	-55.35	-145.3	229.8
2019-07-03	12:13:00	30.59	14.63	170.34	209.25	5.53	331.65	29.25	25.17	19242	11096	90455	1534	1088	496.1	191.0	183.4	-5.15	-42.95	-125.3	238.8
2019-07-03	12:14:00	31.23	14.93	171.09	209.16	5.53	332.03	29.25	25.80	19767	11096	92921	1534	1088	496.0	190.5	183.4	-24.15	-70.90	-163.4	197.2
2019-07-03	12:15:00	31.73	15.20	171.84	210.38	5.58	335.03	29.25	24.86	19421	11107	91993	1529	1087	496.0	191.0	183.4	-10.10	-51.25	-138.6	228.4
2019-07-03	12:16:00	31.29	14.76	169.48	208.49	5.52	330.90	28.76	25.78	19242	11090	94957	1532	1088	496.0	191.0	183.4	-19.60	-67.10	-146.7	193.4
2019-07-03	12:17:00	31.53	14.75	171.37	208.31	5.51	330.53	28.80	24.52	19242	11197	90964	1525	1087	496.0	191.5	183.4	-9.35	-50.80	-136.4	218.2
2019-07-03	12:18:00	30.75	14.75	170.75	209.30	5.53	331.88	28.88	25.07	19325	11073	91794	1529	1088	495.7	191.5	183.4	-6.85	-45.90	-130.8	224.2
2019-07-03	12:19:00	31.19	15.07	171.33	210.06	5.51	330.75	29.10	24.57	19325	11067	90606	1525	1088	495.7	192.0	183.4	-6.40	-48.20	-129.2	240.2
2019-07-03	12:20:00	31.94	15.63	172.14	213.53	5.53	331.88	28.91	25.15	19152	11067	88360	1534	1091	495.9	191.5	183.4	-2.50	-41.20	-120.5	244.4
2019-07-03	12:21:00	31.47	14.66	171.00	208.35	5.50	330.00	28.73	24.47	19331	11067	90030	1532	1092	496.4	191.5	183.4	-8.95	-49.55	-131.1	235.5
2019-07-03	12:22:00	30.71	14.51	169.76	208.17	5.49	329.33	28.73	25.59	19331	11067	89282	1534	1092	496.4	191.5	183.4	-5.45	-44.65	-122.7	243.8
2019-07-03	12:23:00	30.30	14.84	170.90	205.11	5.50	330.15	29.10	25.17	19594	11056	92754	1528	1092	496.7	191.5	183.4	-14.15	-57.75	-143.8	226.5
2019-07-03	12:24:00	31.40	15.43	172.89	212.94	5.50	330.00	29.59	24.99	19414	11056	91669	1527	1090	496.7	192.5	184.4	-9.35	-50.40	-133.5	231.3
2019-07-03	12:25:00	30.95	14.85	170.47	207.41	5.52	331.20	29.10	24.57	19325	11163	92599	1526	1091	496.9	192.5	184.4	-13.15	-55.15	-140.6	212.4
2019-07-03	12:26:00	31.95	15.45	171.42	215.42	5.50	330.23	29.10	25.78	19325	11056	92758	1530	1091	496.9	193.0	184.4	-5.60	-44.35	-131.1	216.3
2019-07-03	12:27:00	31.16	14.37	171.24	206.73	5.53	331.80	28.88	24.78	19504	11157	92141	1528	1092	497.2	192.5	184.4	-10.25	-50.80	-139.8	235.0
2019-07-03	12:28:00	31.79	14.93	171.00	214.47	5.50	330.08	28.95	24.89	19421	11051	87817	1532	1092	496.9	193.0	184.4	-2.50	-40.80	-124.7	237.3
2019-07-03	12:29:00	30.84	14.88	170.34	208.80	5.52	331.13	28.01	24.91	19594	11152	97572	1536	1095	497.0	192.0	184.4	-19.00	-58.50	-155.7	223.0
2019-07-03	12:30:00	30.98	14.58	170.04	209.84	5.53	331.73	29.40	24.96	19055	11039	89971	1534	1094	497.1	192.5	184.4	-4.55	-41.50	-129.4	239.4
2019-07-03	12:31:00	30.53	14.07	169.72	205.97	5.52	331.43	29.40	25.04	19331	11039	95514	1538	1095	497.2	192.0	184.4	-2.25	-70.75	-157.7	192.0
2019-07-03	12:32:00	30.75	14.56	169.67	207.00	5.52	330.90	28.24	24.89	19414	11163	93775	1527	1093	496.7	192.5	184.4	-11.10	-53.70	-140.4	223.9
2019-07-03	12:33:00	30.87	14.27	171.90	207.18	5.53	331.58	29.14	25.12	19421	11163	98528	1528	1090	496.7	193.0	184.4	-11.80	-59.30	-137.1	191.2
2019-07-03	12:34:00	31.73	15.20	172.18	211.68	5.52	331.13	28.65	25.62	19414	11056	90326	1525	1089	496.7	193.0	184.4	-8.55	-50.60	-135.2	208.4
2019-07-03	12:35:00	31.11	15.18	170.62	210.38	5.52	331.05	28.88	25.73	19414	11056	91070	1531	1091	496.9	193.0	184.4	-6.50	-44.70	-127.8	214.3
2019-07-03	12:36:00	31.05	14.89	171.47	209.57	5.52	331.05	28.50	25.73	19235	11051	88118	1528	1090	497.1	193.0	184.4	-5.95	-46.00	-128.8	227.9
2019-07-03	12:37:00	30.62	14.72	169.62	209.75	5.52	331.20	28.73	25.59	19055	11051	90739	1534	1092	497.3	193.0	184.4	-2.95	-40.50	-120.0	233.4
2019-07-03	12:38:00	31.14	14.72	170.57	208.53	5.50	329.85	28.73	24.81	19331	11157	90944	1530	1092	497.1	192.5	184.4	-7.05	-47.60	-134.6	222.7
2019-07-03	12:39:00	30.75	14.72	169.91	208.53	5.50	329.83	28.73	24.62	19159	11056	90452	1533	1092	496.8	192.5	184.4	-4.55	-42.85	-125.3	232.3
2019-07-03	12:40:00	30.75	14.15	170.43	204.26	5.51	330.60	28.73	25.38	19684	11157	92090	1527	1091	496.7	192.5	184.4	-13.90	-58.55	-143.8	214.2
2019-07-03	12:41:00	30.62	14.84	171.42	209.75	5.53	331.80	28.73	24.96	19331	11039	89815	1524	1088	496.3	193.0	184.4	-8.70	-49.15	-134.3	219.1
2019-07-03	12:42:00	30.56	14.78	169.67	206.19	5.51	330.68	28.73	24.75	19504	11157	92677	1522	1087	496.1	193.0	184.4	-11.60	-54.55	-140.6	201.1
2019-07-03	12:43:00	31.53	15.10	171.18	213.39	5.53	331.58	29.36	24.62	19325	11163	90306	1525	1087	496.1	193.0	184.4	-7.30	-48.45	-131.6	207.3
2019-07-03	12:44:00	30.96	14.40	167.68	202.19	5.51	330.30	29.36	25.91	19677	11163	91474	1528	1089	496.2	192.5	184.4	-12.05	-53.70	-144.9	226.0
2019-07-03	12:45:00	31.35	15.17	170.19	213.03	5.51	330.83	30.53	25.65	19242	11163	89060	1531	1089	496.3	192.5	184.4	-5.20	-46.25	-126.2	229.5
2019-07-03	12:46:00	30.96	14.64																		

\$Date	\$Time	Rich	Emulsion	Lean	Alkaline	TDU Flow	TDU Flow	Leachate	PAC	Primary	Secondary	Stack	Primary	Secondary	Quench	SDA	Stack	Incinerator	SDA Inlet	BH Inlet	BH dP
		LPM	LPM	LPM	LPM	LPM	SCFM	LPM	Lbs/h	m3/h	m3/h	m3/h	Degrees C	Degrees C	Degrees C	Degrees C	Degrees C	mmH2O	mmH2O	mmH2O	
2019-07-03	13:10:00	FT-229	FT-219C	FT-223	PV-207	FT-313B	FT-313	PV-211	SC-PAC-FI	PV-236	PV-209	FT-260C	TE-240	TE-241	TE-203	TE-204	TE-258	PT-242A	PT-249	PT-615	POT-622
2019-07-03	13:11:00	30.45	15.07	171.65	210.83	5.51	330.60	29.03	24.54	19338	11202	93639	1525	1087	493.9	191.5	184.4	-8.15	-50.20	-135.9	208.8
2019-07-03	13:12:00	30.69	14.94	170.62	208.26	5.52	330.90	29.03	25.12	19331	10994	90908	1527	1086	493.7	191.0	184.4	-6.05	-48.70	-132.5	216.7
2019-07-03	13:13:00	30.71	14.90	171.84	211.14	5.52	331.33	28.91	24.49	19311	11006	91410	1524	1086	493.5	191.0	184.4	-7.30	-48.85	-132.4	231.9
2019-07-03	13:14:00	30.38	15.10	171.80	209.93	5.50	329.70	29.03	25.23	19325	11006	87578	1531	1087	493.3	190.5	184.4	-3.45	-43.65	-124.8	237.0
2019-07-03	13:15:00	30.08	14.82	170.75	209.93	5.50	330.00	29.03	25.62	19511	11219	90622	1525	1087	493.2	190.0	184.4	-9.85	-52.65	-136.7	227.0
2019-07-03	13:16:00	30.18	14.97	170.62	208.22	5.50	330.08	29.03	25.02	19325	11017	89463	1526	1086	493.0	190.0	184.4	-4.35	-44.30	-126.0	227.0
2019-07-03	13:17:00	30.63	15.17	171.99	211.23	5.45	327.15	29.03	25.57	19331	11129	92651	1518	1083	492.5	190.5	183.3	-10.30	-53.65	-138.3	222.3
2019-07-03	13:18:00	30.45	14.70	170.15	208.31	5.51	330.38	29.03	24.70	19684	11124	91599	1519	1083	492.2	190.5	183.3	-14.60	-59.20	-150.3	205.9
2019-07-03	13:19:00	31.11	15.07	170.71	211.73	5.47	327.98	29.03	25.57	19325	11011	92617	1519	1083	492.1	190.5	183.3	-7.65	-49.05	-133.6	209.9
2019-07-03	13:20:00	30.94	14.40	170.04	207.23	5.51	330.60	29.03	25.78	19684	11135	94954	1519	1084	492.2	190.0	183.3	-23.65	-72.65	-162.6	195.4
2019-07-03	13:21:00	30.74	15.16	170.94	211.14	5.52	331.13	29.03	25.41	19242	11017	91375	1521	1084	492.2	190.5	183.3	-6.50	-47.50	-129.3	232.7
2019-07-03	13:22:00	30.47	14.72	170.62	209.07	5.50	329.70	29.40	25.59	19325	11124	96520	1529	1086	492.6	190.0	183.3	-19.35	-68.30	-147.7	190.1
2019-07-03	13:23:00	30.54	14.85	171.37	207.59	5.53	331.58	29.40	24.68	19152	11124	90236	1524	1085	492.6	190.0	183.3	-5.65	-45.50	-130.0	232.1
2019-07-03	13:24:00	30.08	14.23	169.62	204.03	5.51	330.38	28.65	24.52	19152	11124	87463	1527	1084	492.4	189.5	183.3	-4.40	-43.50	-122.6	244.3
2019-07-03	13:25:00	30.50	14.95	170.57	208.04	5.50	329.78	29.21	25.86	19511	11124	93165	1518	1082	491.8	189.5	183.3	-10.90	-53.20	-139.8	223.1
2019-07-03	13:26:00	31.02	14.74	171.75	211.10	5.49	329.63	29.21	25.28	19331	11101	88992	1520	1082	491.2	189.5	183.3	-7.65	-48.65	-137.5	230.3
2019-07-03	13:27:00	30.44	14.72	170.66	214.52	5.50	330.15	28.95	25.78	19414	11101	92345	1517	1082	491.1	189.5	183.3	-10.50	-54.20	-140.4	211.9
2019-07-03	13:28:00	30.30	14.70	170.62	210.33	5.49	329.25	28.95	25.88	19235	11000	91824	1523	1083	491.0	189.0	183.3	-5.60	-45.95	-132.2	218.2
2019-07-03	13:29:00	30.41	15.07	171.33	208.31	5.50	330.15	29.18	24.49	19331	11000	91249	1520	1083	490.8	188.5	182.3	-7.40	-49.25	-136.5	233.0
2019-07-03	13:30:00	31.20	15.44	172.32	212.54	5.51	330.68	29.63	24.78	18972	11101	90720	1527	1083	490.7	188.5	182.3	-4.25	-45.65	-126.6	238.8
2019-07-03	13:31:00	30.81	14.57	170.94	207.81	5.52	331.13	28.50	25.83	19421	11096	92639	1524	1085	491.0	188.0	182.3	-9.55	-52.55	-139.8	227.5
2019-07-03	13:32:00	30.57	14.90	170.38	207.09	5.52	331.43	29.21	25.86	19242	10994	90284	1527	1084	490.7	188.0	182.3	-15.75	-60.45	-150.6	218.9
2019-07-03	13:33:00	30.23	14.74	170.43	207.77	5.53	331.80	29.21	25.78	19684	11101	92838	1525	1084	490.7	188.0	182.3	-9.55	-52.55	-136.9	224.3
2019-07-03	13:34:00	31.32	15.31	171.28	211.32	5.53	332.03	29.29	25.75	19511	10994	91950	1524	1083	490.8	189.0	182.3	-8.95	-49.55	-139.5	203.5
2019-07-03	13:35:00	30.89	14.92	169.29	208.71	5.50	329.70	29.46	25.67	19684	11096	92118	1524	1083	491.1	189.0	182.3	-22.95	-70.10	-159.5	203.5
2019-07-03	13:36:00	30.92	14.59	171.28	207.50	5.52	331.35	29.36	25.46	19325	10994	91249	1527	1084	491.4	189.5	182.3	-9.55	-49.55	-135.5	213.4
2019-07-03	13:37:00	31.20	15.09	170.24	208.58	5.52	331.28	29.14	25.02	19511	11118	94457	1529	1085	491.4	190.0	182.3	-23.10	-73.25	-158.4	199.4
2019-07-03	13:38:00	32.09	15.18	171.18	211.32	5.50	331.20	29.14	25.31	19152	11006	91385	1530	1086	491.9	190.5	182.3	-7.00	-48.75	-127.1	233.7
2019-07-03	13:39:00	31.58	14.54	169.72	209.07	5.47	328.28	29.14	24.78	18972	11006	95859	1543	1089	492.4	190.0	182.3	-8.55	-58.90	-129.6	203.6
2019-07-03	13:40:00	31.05	14.92	171.09	209.07	5.51	330.68	29.14	24.70	19242	11006	91284	1539	1091	493.5	190.5	182.3	-5.50	-46.60	-128.1	230.6
2019-07-03	13:41:00	31.37	14.56	169.20	204.75	5.51	330.60	29.14	24.65	19242	11006	87997	1544	1092	493.7	190.5	182.3	-4.20	-43.65	-123.6	244.1
2019-07-03	13:42:00	31.62	15.09	170.47	210.42	5.51	330.53	29.14	25.31	19152	10978	92553	1539	1092	493.8	191.0	182.3	-11.80	-56.10	-140.4	223.4
2019-07-03	13:43:00	32.64	15.22	170.71	210.29	5.50	330.00	29.14	25.38	19331	11101	92741	1543	1093	494.0	191.0	183.5	-8.45	-51.55	-132.0	228.9
2019-07-03	13:44:00	32.55	14.86	171.42	209.75	5.51	330.30	29.55	25.78	19242	11101	90060	1540	1094	494.7	191.5	183.5	-9.70	-52.05	-136.7	211.9
2019-07-03	13:45:00	31.71	14.86	170.90	206.96	5.46	327.45	29.33	24.68	19242	11084	92578	1539	1094	495.1	192.0	183.5	-7.05	-47.00	-131.8	217.8
2019-07-03	13:46:00	31.94	15.05	170.34	206.87	5.49	329.33	29.29	24.60	19414	11084	89730	1531	1093	495.4	192.5	183.5	-7.50	-47.60	-136.8	233.9
2019-07-03	13:47:00	33.00	15.49	170.71	212.13	5.50	331.35	29.93	25.07	19331	10972	90703	1535	1092	495.4	192.5	183.5	-3.60	-44.30	-125.3	240.6
2019-07-03	13:48:00	32.09	14.70	169.44	206.33	5.52	331.35	29.25	25.49	19511	11185	90803	1535	1095	495.9	192.0	183.5	-8.55	-49.00	-137.6	228.8
2019-07-03	13:49:00	32.58	14.79	170.43	206.96	5.52	330.90	29.10	24.65	19242	11079	87246	1529	1094	496.5	192.5	183.5	-5.40	-44.35	-127.7	243.1
2019-07-03	13:50:00	31.85	14.62	171.99	208.94	5.47	328.13	28.73	24.60	19594	11079	91768	1524	1093	496.8	192.5	183.5	-15.15	-61.00	-154.9	222.2
2019-07-03	13:51:00	33.29	15.32	172.65	212.54	5.50	330.00	28.76	24.49	19242	11079	89671	1516	1090	496.6	193.0	184.6	-7.05	-47.55	-136.6	225.8
2019-07-03	13:52:00	32.45	14.84	170.00	209.75	5.46	327.75	28.88	25.10	19421	11191	96964	1515	1089	496.5	192.5	184.6	-20.35	-67.95	-157.8	191.1
2019-07-03	13:53:00	32.73	14.80	172.70	210.11	5.51	330.68	28.88	24.54	19242	10983	89300	1507	1087	495.9	193.0	184.6	-7.65	-48.40	-132.1	212.8
2019-07-03	13:54:00	32.09	14.94	169.44	206.28	5.52	331.28	28.88	25.44	19242	11084	95974	1506	1086	495.1	192.0	184.6	-2.35	-72.00	-153.0	197.9
2019-07-03	13:55:00	32.85	15.22	171.05	213.30	5.45	326.85	28.88	25.17	19159	11084	88817	1500	1084	494.8	192.0	184.6	-4.95	-44.65	-128.0	235.0
2019-07-03	13:56:00	32.54	14.46	169.34	207.27	5.50	329.85	28.88	25.83	18889	11079	89786	1507	1083	494.2	191.					

\$Date	\$Time	Rich LPM	Emulsion LPM	Lean LPM	Alkaline LPM	TDU Flow LPM	TDU Flow SCFM	Leachate LPM	PAC Lbs/h	Primary m3/h	Secondary m3/h	Stack m3/h	Primary Degrees C	Secondary Degrees C	Quench Degrees C	SDA Degrees C	Stack Degrees C	Incinerator mmH2O	SDA Inlet mmH2O	BH Inlet mmH2O	BH dP mmH2O
2019-07-03	14:06:00	32.42	14.78	171.47	208.26	5.50	330.00	29.18	25.57	18972	10983	89403	1499	1077	490.0	189.0	182.6	PT-242A	PT-249	PT-615	PDT-622
2019-07-03	14:07:00	32.58	14.62	171.18	207.54	5.49	329.33	28.28	24.60	19767	11084	93960	1501	1078	489.5	188.5	182.6	TE-258	TE-249	TE-615	PDT-622
2019-07-03	14:08:00	33.09	15.27	171.61	216.81	5.47	328.20	29.44	25.52	19242	11084	91735	1497	1077	489.5	189.0	182.6	PT-242A	PT-249	PT-615	PDT-622
2019-07-03	14:09:00	32.06	14.25	169.20	208.94	5.50	329.70	29.63	25.49	19414	11084	97423	1501	1077	489.5	188.5	182.6	PT-242A	PT-249	PT-615	PDT-622
2019-07-03	14:10:00	32.60	14.92	170.62	206.78	5.46	327.45	28.76	25.75	19421	11084	92139	1498	1076	489.2	188.5	182.6	PT-242A	PT-249	PT-615	PDT-622

July 3/2019	Waste Flows											Air Flows					Temperatures					Pressures				
	Rich	Emulsion	Lean	Alkaline	TDU Flow	TDU Flow	Leachate	PACFlow	Primary	Secondary	Stack	Primary	Secondary	Quench	Spray/Dryer	Stack	Incinerator	SDA Inlet	SD Outlet	Baghouse						
Test # 1	FT-229	FT-219C	FT-223	PV-207	FT-313B	FT-313	PV-211	SC-PAC-FT	PV-236	PV-209C	FT-260C	TE-240	TE-241	TE-203	TE-204	TE-258	PT-242A	PT-249	PT-615	PDT-622						
Max	33.29	15.49	172.70	216.81	5.53	332.03	29.93	25.88	19767	11219	97423	1544	1095	496.8	193.0	184.6	-2.65	-37.65	-122.6	244.3						
Min	29.94	14.23	169.20	204.03	5.45	326.70	28.28	24.47	18889	10972	87246	1492	1076	489.2	188.0	182.3	-23.65	-73.25	-166.9	187.9						
Average	31.53	14.86	170.79	209.21	5.50	330.00	29.09	25.17	19331	11071	91462	1519	1085	492.7	190.3	183.4	-9.80	-52.35	-137.4	222.0						
Variance	0.99	0.08	0.69	5.55	0.00	1.76	0.08	0.22	40633	3939	5260130	200	26	3.8	1.7	0.6	31.34	71.73	116.9	205.0						

\$Date	\$Time	Rich	Emulsion	Lean	Alkaline	TDU Flow	Leachate	PAC	Primary	Secondary	Stack	Primary	Secondary	Quench	SDA	Stack	Incinerator	SDA Inlet	BH Inlet	BH dP
		LPM	LPM	LPM	LPM	SCFM	LPM	Lbs/h	m3/h	m3/h	m3/h	Degrees C	Degrees C	Degrees C	Degrees C	Degrees C	mmH2O	mmH2O	mmH2O	mmH2O
2019-07-03	14:15:00	FT-229	FT-219C	FT-223	PV-207	FT-313B	PV-211	SC-PAC-FT	PV-236	PV-209	FT-260C	FE-240	FE-241	FE-203	FE-204	FE-258	PT-242A	PT-249	PT-615	PDT-622
2019-07-03	14:16:00	32.70	14.82	170.71	207.59	5.51	328.43	29.06	19062	11011	88929	1515	1082	490.0	188.5	182.6	-5.35	45.70	-125.6	236.9
2019-07-03	14:17:00	32.96	15.32	172.18	213.21	5.49	330.63	28.95	19421	11129	92268	1511	1081	490.3	189.0	182.6	-12.20	-56.40	-146.4	217.3
2019-07-03	14:18:00	32.45	14.88	171.14	208.58	5.50	329.85	28.99	19414	11056	91099	1511	1083	491.2	190.0	182.6	-9.40	-52.75	-140.8	202.8
2019-07-03	14:19:00	33.06	15.06	171.09	212.09	5.45	326.70	27.98	19242	11056	90988	1515	1083	491.1	190.5	182.6	-6.85	-49.90	-134.0	209.5
2019-07-03	14:20:00	32.66	14.58	170.43	207.72	5.50	330.00	29.18	19331	11062	89214	1516	1085	491.6	190.0	182.6	-11.60	-53.80	-141.4	228.3
2019-07-03	14:21:00	33.69	15.05	171.84	210.33	5.50	329.70	29.18	19062	11062	90078	1522	1085	491.6	190.5	182.6	-4.20	-45.55	-127.5	229.1
2019-07-03	14:22:00	32.42	14.81	171.28	209.25	5.50	329.70	29.29	19331	11174	92816	1523	1087	492.3	190.0	182.6	-10.90	-53.75	-148.4	220.9
2019-07-03	14:23:00	32.72	14.81	170.47	206.82	5.50	330.08	29.29	19152	11073	91109	1520	1086	492.5	190.5	182.6	-4.10	-44.80	-130.0	228.5
2019-07-03	14:24:00	32.40	14.51	169.91	207.99	5.50	329.78	29.25	19325	11090	95668	1522	1086	492.6	190.0	182.6	-23.95	-74.15	-165.6	185.4
2019-07-03	14:25:00	32.96	15.10	171.05	212.72	5.51	330.38	28.91	19325	10989	90656	1514	1086	492.5	190.5	182.6	-8.65	-50.15	-140.5	215.5
2019-07-03	14:26:00	32.49	14.65	169.76	208.44	5.47	328.35	29.06	19159	11090	97748	1519	1086	492.7	190.5	183.7	-18.30	-65.85	-151.2	180.3
2019-07-03	14:27:00	32.36	14.53	171.47	209.21	5.52	331.05	29.14	19331	11096	90261	1514	1084	492.7	191.0	183.7	-7.75	-50.75	-138.2	202.6
2019-07-03	14:28:00	32.51	14.88	171.33	208.35	5.47	328.05	29.25	19159	10994	89549	1515	1084	492.7	190.5	183.7	-8.00	-49.30	-132.8	212.4
2019-07-03	14:29:00	32.54	14.92	170.85	210.11	5.50	330.23	29.40	19152	10978	91184	1513	1084	492.8	191.0	183.7	-5.70	-47.50	-131.8	226.9
2019-07-03	14:30:00	32.48	14.55	169.85	207.90	5.50	330.23	29.44	18972	10966	89998	1521	1087	492.6	190.5	183.7	-4.05	-45.25	-126.6	234.8
2019-07-03	14:31:00	32.04	14.51	171.24	208.71	5.44	326.18	29.63	19062	10961	88950	1517	1088	493.0	190.5	183.7	-6.85	-50.00	-134.2	224.9
2019-07-03	14:32:00	32.31	14.80	170.57	208.80	6.00	359.70	29.06	18882	10961	88036	1519	1088	492.8	190.0	183.7	-4.75	-45.90	-128.0	234.0
2019-07-03	14:33:00	31.91	14.90	171.95	209.07	5.49	329.25	29.06	19421	11062	91570	1514	1087	492.7	190.0	183.7	-12.20	-58.60	-144.6	215.9
2019-07-03	14:34:00	32.73	15.30	170.52	213.66	5.52	331.13	29.06	19062	10944	91590	1516	1085	492.8	190.5	183.7	-7.45	-49.25	-136.2	220.7
2019-07-03	14:35:00	32.16	14.76	170.47	207.72	5.46	327.75	29.89	19414	10938	92636	1514	1086	493.1	190.5	183.7	-11.30	-55.60	-144.0	207.2
2019-07-03	14:36:00	31.85	13.96	171.47	208.08	5.49	329.63	29.33	19062	11039	91149	1515	1084	492.8	191.0	183.7	-8.05	-50.45	-138.2	213.3
2019-07-03	14:37:00	31.74	14.42	171.42	214.52	5.46	327.38	29.48	19421	11039	90240	1514	1084	492.7	190.5	183.7	-10.65	-56.50	-147.0	233.4
2019-07-03	14:38:00	32.60	15.39	171.42	214.52	5.46	327.60	28.69	19090	10933	91189	1517	1084	492.3	191.0	183.7	-3.80	-46.45	-127.6	233.3
2019-07-03	14:39:00	31.77	14.29	168.67	205.38	5.47	327.90	28.69	19504	11039	92395	1523	1087	492.6	190.0	183.7	-21.85	-68.60	-164.4	216.9
2019-07-03	14:40:00	32.52	14.84	170.94	207.99	5.49	328.18	28.13	19152	11039	90423	1520	1086	492.6	190.5	183.7	-5.00	-45.45	-129.8	232.9
2019-07-03	14:41:00	32.69	14.69	170.34	208.71	5.48	328.80	29.25	19331	11034	95037	1525	1087	492.7	190.0	183.7	-23.90	-73.40	-163.8	189.1
2019-07-03	14:42:00	32.97	15.16	171.99	212.18	5.49	329.18	29.51	19331	10933	92598	1518	1085	492.9	190.5	183.7	-10.25	-55.70	-142.0	220.9
2019-07-03	14:43:00	32.09	14.30	169.67	208.04	5.46	327.68	28.28	19159	10916	89424	1522	1086	493.1	190.5	183.7	-12.65	-61.25	-139.2	195.9
2019-07-03	14:44:00	32.13	14.31	170.66	206.19	5.47	328.43	28.65	19152	11017	89007	1515	1084	492.9	190.5	183.7	-8.40	-49.60	-141.1	209.6
2019-07-03	14:45:00	32.00	15.32	171.14	212.27	5.46	327.45	28.76	19159	11017	89661	1518	1084	492.1	190.5	183.7	-5.55	-47.50	-135.0	215.2
2019-07-03	14:46:00	32.39	14.73	169.95	209.03	5.50	329.70	28.76	19062	11017	92619	1517	1084	492.1	190.0	183.7	-6.15	-47.35	-134.1	230.4
2019-07-03	14:47:00	32.48	14.45	169.76	209.70	5.45	327.15	28.76	18889	11017	89345	1526	1085	491.5	190.0	183.7	-3.85	-44.45	-129.4	237.9
2019-07-03	14:48:00	32.51	14.72	171.95	209.43	5.50	329.70	28.76	19331	11017	89072	1521	1086	491.1	189.5	183.7	-7.35	-50.95	-136.9	226.5
2019-07-03	14:49:00	33.35	15.07	171.90	211.82	5.92	354.90	29.03	19062	10910	88483	1526	1087	491.1	189.0	183.7	-4.05	-46.15	-129.1	235.0
2019-07-03	14:50:00	32.43	14.25	170.10	207.86	5.50	329.70	29.03	19242	11140	91304	1522	1089	491.4	189.0	182.6	-12.25	-56.30	-149.1	216.7
2019-07-03	14:51:00	32.78	14.57	169.20	206.96	5.93	355.80	28.91	19242	11028	90766	1519	1087	491.3	189.5	182.6	-9.75	-53.25	-139.2	223.8
2019-07-03	14:52:00	31.71	14.49	170.81	207.05	5.92	354.98	28.61	19325	11028	89808	1516	1085	490.9	189.5	182.6	-11.90	-55.30	-148.2	205.7
2019-07-03	14:53:00	32.37	15.04	170.94	211.23	5.48	328.50	28.58	19048	10921	92123	1518	1084	490.5	190.0	182.6	-8.45	-50.85	-136.1	209.3
2019-07-03	14:54:00	32.10	14.83	170.94	206.82	5.47	327.90	28.54	19511	11062	89761	1520	1085	490.3	189.5	182.6	-10.85	-54.70	-150.5	228.9
2019-07-03	14:55:00	31.88	14.91	170.75	210.06	5.81	348.53	29.55	18889	10961	90716	1520	1084	490.0	189.5	182.6	-5.80	-45.10	-129.6	231.4
2019-07-03	14:56:00	31.80	14.69	170.38	208.53	5.91	354.30	29.63	19414	11073	95333	1522	1085	489.9	189.0	182.6	-22.25	-70.80	-163.5	190.4
2019-07-03	14:57:00	32.51	14.90	172.23	214.02	5.90	354.00	28.69	19062	10966	89557	1520	1084	489.4	189.0	182.6	-6.40	-46.25	-131.9	230.7
2019-07-03	14:58:00	31.97	15.17	169.34	211.73	5.77	345.98	29.59	19242	10966	97042	1526	1087	489.4	188.0	182.6	-21.20	-69.95	-155.6	187.1
2019-07-03	14:59:00	31.44	14.09	170.15	209.75	5.91	354.45	28.69	19331	11073	90695	1516	1085	489.8	188.0	182.6	-12.30	-57.70	-141.2	218.9
2019-07-03	15:00:00	32.40	14.77	171.47	206.96	5.92	355.43	28.76	19152	11073	91224	1514	1083	489.4	188.0	182.6	-9.20	-52.15	-140.0	227.5
2019-07-03	15:01:00	32.36	15.00	170.85	208.04	5.92	354.90	28.76	19159	10966	92034	1512	1082	489.2	188.5	182.6	-10.10	-54.75	-141.2	207.8
2019-07-03	15:02:00	32.69	14.94	171.42	211.86	5.48	328.80	28.76	18972	10994	89559	1520	1084	488.8	188.5	182.6	-5.70	-46.25	-136.5	214.9
2019-07-03	15:03:00	32.52	14.68	171.33	207.77	5.48	328.73	28.76	19331	11006	92652	1519	1084	489.2	188.5	181.6	-6.85			

SDate	STime	Rich		Lean		Alkaline		TDU Flow		Leachate		PAC		Primary		Secondary		Stack		Primary		Secondary		Quench		SDA		Stack		Incinerator		SDA Inlet		BH Inlet		BH dP		
		LPM	FT-229	FT-219C	FT-223	PV-207	FT-313B	FT-313	PV-211	SC-PAC-FT	PV-236	PV-209	FT-260C	TE-240	TE-241	TE-203	TE-204	TE-258	PT-242A	PT-249	PT-615	PT-622	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O			
2019-07-03	15:11:00	32.09	14.32	169.38	208.44	5.91	354.75	28.73	19421	10989	91750	1520	1084	489.2	188.5	181.6	-18.40	-60.65	-165.2	224.8																		
2019-07-03	15:12:00	32.01	14.73	169.20	208.67	5.94	356.63	28.91	19062	10989	90740	1518	1083	489.2	188.5	181.6	-6.00	-47.35	-130.5	233.3																		
2019-07-03	15:13:00	31.94	14.23	169.29	206.28	5.92	355.43	28.91	19242	10989	96193	1522	1084	488.9	188.0	181.6	-21.45	-71.00	-162.9	191.8																		
2019-07-03	15:14:00	32.22	15.13	171.95	211.73	5.46	327.75	28.91	19062	11096	89932	1519	1083	488.7	188.0	181.6	-5.90	-48.20	-133.2	232.8																		
2019-07-03	15:15:00	32.13	14.69	170.43	210.11	5.45	326.85	28.91	19062	10978	97095	1527	1086	488.8	187.5	181.6	-11.05	-62.40	-134.6	202.4																		

Test #	Waste Flows										Air Flows					Temperatures					Pressures				
	Rich	Emulsion	Lean	Alkaline	TDU Flow	TDU Flow	Leachate	PACFlow	Primary	Secondary	Stack	Primary	Secondary	Quench	Spray/Dryer	Stack	Incinerator	SDA Inlet	SD Outlet	Baghouse					
Max	33.69	15.44	173.22	214.52	6.00	359.70	29.89	25.94	19511	11197	97748	1527	1089	493.1	191.0	183.7	-3.80	-43.30	-125.6	238.6					
Min	31.44	13.96	168.67	205.34	5.44	326.18	27.98	24.49	18882	10910	88036	1511	1081	488.7	187.5	181.6	-23.95	-74.15	-165.6	180.3					
Average	32.37	14.76	170.80	209.26	5.60	336.13	29.01	25.24	19208	11022	91386	1519	1085	491.1	189.5	182.8	-9.77	-53.27	-140.4	218.2					
Variance	0.17	0.11	0.76	4.96	0.04	134.54	0.15	0.25	28019	3817	4877454	17	3	2.4	1.0	0.7	28.27	61.56	112.1	214.6					

SDate	STime	Rich	Emulsion	Lean	Alkaline	TDU Flow	TDU Flow	Leachate	PAC	Primary	Secondary	Stack	Primary	Secondary	Quench	SDA	Stack	Incinerator	SDA Inlet	BH Inlet	BH dP
		LPM	LPM	LPM	LPM	SCFM	LPM	LPM	lbs/h	m3/h	m3/h	m3/h	Degrees C	Degrees C	Degrees C	Degrees C	Degrees C	mmH2O	mmH2O	mmH2O	mmH2O
2019-07-03	15:44:00	FT-229	FT-219C	FT-223	PV-207	FT-313B	FT-313	PV-211	SC-PAC-FT	PV-236	PV-209	FT-260C	TE-240	TE-241	TE-203	TE-204	TE-258	PT-242A	PT-249	PT-615	POT-622
2019-07-03	15:45:00	32.43	14.90	172.18	209.43	5.90	354.08	28.80	24.52	19421	10916	90597	1512	1084	488.4	488.0	180.6	-7.80	-50.80	-141.8	210.3
2019-07-03	15:46:00	32.07	14.40	169.85	207.95	5.92	354.90	28.99	25.75	19421	11017	94762	1517	1086	488.0	488.0	180.6	-5.80	-69.25	-168.1	198.8
2019-07-03	15:47:00	32.49	15.32	171.71	212.99	5.90	353.78	28.99	24.52	19069	10916	92390	1516	1086	487.6	487.5	180.6	-5.80	-46.25	-134.2	238.3
2019-07-03	15:48:00	32.51	14.57	170.32	208.85	5.86	351.68	28.99	25.80	19062	10916	92678	1523	1088	487.9	487.9	180.6	-8.60	-60.30	-136.7	198.6
2019-07-03	15:49:00	32.51	14.99	170.90	210.92	5.86	351.60	28.99	25.10	19159	10893	91093	1519	1088	488.4	487.5	180.6	-5.80	-44.95	-137.6	230.3
2019-07-03	15:50:00	31.77	14.48	169.57	205.88	5.90	353.93	28.88	24.60	18979	10893	87457	1523	1089	489.2	487.5	180.6	-4.40	-44.25	-129.5	239.9
2019-07-03	15:51:00	31.82	14.48	170.62	204.62	5.88	353.03	28.88	24.52	19152	11006	89978	1513	1086	489.8	488.5	181.7	-11.60	-55.40	-149.9	219.6
2019-07-03	15:52:00	32.10	14.47	170.66	207.99	5.88	352.65	29.36	25.04	19331	11006	90814	1508	1084	489.9	489.9	181.7	-9.80	-52.70	-144.3	227.0
2019-07-03	15:53:00	32.85	14.92	170.52	210.96	5.88	352.73	29.36	24.49	19152	10899	89614	1511	1084	489.8	489.0	181.7	-6.00	-55.10	-149.6	207.5
2019-07-03	15:54:00	32.00	14.75	171.05	209.84	5.89	353.63	29.40	25.02	19159	11006	92765	1508	1085	490.7	489.5	181.7	-8.45	-51.00	-139.8	212.1
2019-07-03	15:55:00	32.76	15.05	173.08	218.43	5.75	344.78	29.14	24.73	18806	10899	89517	1514	1086	490.6	489.5	181.7	-3.80	-44.75	-132.3	232.0
2019-07-03	15:56:00	31.85	14.55	170.90	204.98	5.88	352.95	29.06	24.52	19331	11023	92205	1515	1088	491.7	488.5	181.7	-10.05	-52.50	-145.9	224.2
2019-07-03	15:57:00	32.67	15.27	172.37	212.40	5.86	351.60	29.03	25.73	19152	11023	89799	1518	1087	491.4	488.5	181.7	-4.55	-46.05	-131.0	230.8
2019-07-03	15:58:00	32.15	14.74	170.94	207.00	5.88	352.50	28.54	25.78	19421	11023	91027	1517	1089	491.5	488.0	181.7	-15.35	-61.45	-162.9	214.1
2019-07-03	15:59:00	32.12	14.46	170.34	205.07	5.88	352.65	29.48	25.73	19421	11023	91931	1511	1087	491.4	488.5	181.7	-11.40	-56.50	-148.5	219.8
2019-07-03	16:00:00	32.06	14.45	171.80	207.72	5.88	352.65	29.33	25.83	19069	11017	96592	1510	1086	490.2	488.5	181.7	-21.65	-69.50	-169.0	184.1
2019-07-03	16:01:00	31.88	15.07	172.42	210.29	5.91	354.60	29.33	24.88	19069	11017	90527	1508	1084	489.8	489.0	181.7	-9.20	-54.05	-142.5	205.9
2019-07-03	16:02:00	31.47	14.82	169.57	209.52	5.88	352.50	29.33	24.78	19249	10910	97330	1514	1084	489.2	488.5	181.7	-20.75	-70.15	-158.7	189.3
2019-07-03	16:03:00	31.88	14.94	173.94	211.46	5.85	351.15	28.99	24.57	19069	10921	90054	1511	1084	488.9	488.0	181.7	-5.60	-46.35	-137.3	225.9
2019-07-03	16:04:00	31.74	15.07	169.62	209.25	5.86	351.45	28.61	25.91	19062	10921	88916	1518	1086	488.5	488.5	181.7	-3.80	-44.70	-129.0	236.4
2019-07-03	16:05:00	31.73	14.69	171.95	210.06	5.86	351.38	28.76	25.78	19242	11027	89716	1513	1085	488.2	487.0	181.7	-7.40	-49.95	-137.1	229.2
2019-07-03	16:06:00	31.13	14.81	170.57	205.79	5.89	353.48	28.84	24.78	19069	10927	88346	1517	1085	487.7	487.0	181.7	-3.70	-43.60	-136.0	238.2
2019-07-03	16:07:00	31.80	14.71	171.47	208.53	5.87	352.28	28.84	25.46	19414	11039	92171	1509	1084	488.1	487.0	181.7	-10.15	-52.00	-152.4	221.1
2019-07-03	16:08:00	31.35	14.97	169.10	206.06	5.88	352.50	28.84	25.33	19242	11039	93088	1507	1083	487.9	487.5	181.7	-11.30	-55.15	-145.5	228.1
2019-07-03	16:09:00	32.76	15.15	170.34	210.69	5.87	352.35	28.91	24.42	19249	11017	92424	1503	1082	487.8	487.5	181.7	-12.20	-55.75	-148.6	211.2
2019-07-03	16:10:00	31.77	14.41	171.24	207.72	5.91	354.83	28.73	25.44	19249	11017	92424	1506	1082	487.6	488.0	181.7	-7.85	-51.80	-140.4	216.8
2019-07-03	16:11:00	31.74	14.57	170.71	206.91	5.87	352.28	28.91	25.88	19062	11011	92604	1507	1083	487.9	487.5	181.7	-9.20	-51.35	-147.4	233.5
2019-07-03	16:12:00	31.95	15.33	171.80	213.12	5.91	354.53	29.14	25.20	18889	10798	91490	1510	1084	487.7	487.5	181.7	-3.60	-43.40	-133.8	234.9
2019-07-03	16:13:00	31.41	14.05	170.90	207.50	5.91	354.60	28.09	24.52	19249	11000	90175	1513	1086	488.3	488.0	181.7	-11.60	-54.90	-153.0	228.6
2019-07-03	16:14:00	31.77	14.80	171.14	209.75	5.91	354.68	28.39	24.52	19242	11092	87877	1513	1086	488.4	487.0	181.7	-4.55	-45.70	-134.9	236.9
2019-07-03	16:15:00	32.06	14.58	170.75	207.77	5.90	353.70	29.78	25.67	19414	11079	92911	1513	1087	488.1	487.0	181.7	-21.65	-68.55	-174.1	213.6
2019-07-03	16:16:00	31.61	14.42	170.38	206.24	5.90	354.23	29.51	24.47	19242	10978	93433	1505	1084	488.1	487.5	181.7	-9.90	-53.10	-149.1	224.9
2019-07-03	16:17:00	31.85	14.71	170.94	208.17	5.94	356.18	29.25	24.86	19242	10978	93433	1504	1083	487.6	487.5	181.7	-20.75	-67.95	-166.0	191.3
2019-07-03	16:18:00	31.86	14.67	171.56	208.26	5.90	354.00	29.03	25.75	19069	11079	93183	1501	1081	487.4	488.0	181.7	-10.00	-54.10	-146.1	213.1
2019-07-03	16:19:00	31.23	14.39	169.91	205.97	5.89	353.63	29.03	25.78	19249	10972	96217	1505	1081	487.2	487.5	181.7	-17.05	-69.15	-150.0	199.9
2019-07-03	16:20:00	32.39	15.33	172.14	213.39	5.89	353.63	29.10	24.44	19069	10961	88522	1505	1081	487.6	487.5	181.7	-6.00	-48.25	-137.8	231.8
2019-07-03	16:21:00	32.15	14.93	170.04	211.55	5.89	353.55	29.10	25.65	19069	10961	86453	1514	1084	487.5	487.5	180.6	-3.75	-44.10	-134.2	237.4
2019-07-03	16:22:00	32.06	14.66	171.37	207.54	5.89	353.63	29.21	25.91	19062	10961	87667	1514	1085	487.9	487.0	180.6	-6.80	-47.75	-140.3	229.4
2019-07-03	16:23:00	32.06	14.66	171.37	207.54	5.89	353.63	29.21	25.91	19062	10961	87667	1514	1085	487.9	487.0	180.6	-6.80	-47.75	-140.3	229.4
2019-07-03	16:24:00	31.95	14.30	171.61	205.88	5.87	352.43	29.25	25.04	19249	11062	90936	1507	1085	487.9	487.0	180.6	-4.80	-46.35	-133.7	236.8
2019-07-03	16:25:00	31.95	14.87	171.95	209.75	5.89	353.55	28.88	24.60	19242	10961	90063	1503	1083	487.9	487.5	180.6	-13.30	-57.50	-153.2	219.3
2019-07-03	16:26:00	31.97	14.60	171.52	207.36	5.91	354.83	29.36	25.07	19242	11062	90063	1501	1083	487.9	487.5	180.6	-10.65	-54.40	-146.2	226.8
2019-07-03	16:27:00	32.75	15.10	172.80	214.70	5.90	353.70	29.18	24.54	19062	11062	90063	1501	1083	487.9	487.5	180.6	-11.65	-55.80	-150.0	206.6
2019-07-03	16:28:00	32.19	14.68	169.91	208.26	5.89	353.55	29.18	24.49	19249	10961	88554	1505	1083	488.0	488.0	180.6	-6.00	-47.55	-143.5	210.8
2019-07-03	16:29:00	32.05	15.24	170.90	210.29	5.87	352.43	28.80	24.65	19062	11062	91216	1510	1086	488.1	487.5	180.6	-9.30	-52.70	-148.2	227.0
2019-07-03	16:30:00	32.21	14.61	170.90	208.53	5.86	351.83	28.65	25.10	19331	11062	90926	1515	1090							

\$Date	\$Time	Rich		Emulsion		Lean		Alkaline		TDU Flow		Leachate		PAC		Primary		Secondary		Stack		Primary		Secondary		Quench		SDA		Stack		Incinerator		SDA Inlet		BH Inlet		BH dP																																																																							
		LPM	FT-229	FT-219C	FT-223	PV-207	FT-313B	FT-313	PV-211	SC-PAC-FT	Lbs/h	m3/h	PV-236	PV-209	FT-260C	TE-240	TE-241	TE-203	TE-204	TE-258	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O	mmH2O																																																																						
2019-07-03	16:40:00	32.69	15.13	170.94	211.82	5.91	354.53	29.21	24.81	18889	10837	89104	1522	1094	490.8	187.0	181.7	3.00	-42.80	-135.3	236.6	2019-07-03	16:41:00	32.36	15.20	171.47	212.31	5.89	353.18	28.73	25.80	19159	10938	91541	1516	1093	491.4	187.5	181.7	-11.35	-54.50	-153.9	216.6	2019-07-03	16:42:00	32.90	14.98	170.85	212.31	5.91	354.45	29.51	25.86	19159	10938	90501	1516	1092	491.5	187.5	181.7	-7.25	-50.95	-146.8	223.5	2019-07-03	16:43:00	32.34	14.82	171.65	208.26	5.90	353.78	29.55	25.88	19331	11039	90628	1513	1092	491.5	187.5	181.7	-9.50	-53.10	-152.8	205.9	2019-07-03	16:44:00	32.31	14.80	168.58	213.71	5.92	354.90	29.51	24.73	19152	10938	90455	1515	1091	491.9	188.0	181.7	-7.50	-48.40	-143.6	212.3

July 3/2019	Waste Flows										Flows										Air Flows										Temperatures										Pressures																																																																																									
	Rich	Emulsion	Lean	Alkaline	TDU Flow	TDU Flow	Leachate	PACFlow	Primary	Secondary	Stack	Primary	Secondary	Quench	Spray/Dryer	Stack	Primary	Secondary	Quench	SDA Inlet	SD Outlet	Baghouse	Rich	Emulsion	Lean	Alkaline	TDU Flow	TDU Flow	Leachate	PACFlow	Primary	Secondary	Stack	Primary	Secondary	Quench	Spray/Dryer	Stack	Primary	Secondary	Quench	SDA Inlet	SD Outlet	Baghouse																																																																																						
Test # 6	32.90	15.80	173.94	218.43	5.94	356.18	29.81	25.91	19421	11079	97902	1523	1094	491.9	189.5	181.7	-3.00	-42.80	-129.0	239.9	2019-07-03	16:40:00	32.69	15.13	170.94	211.82	5.91	354.53	29.21	24.81	18889	10837	89104	1522	1094	490.8	187.0	181.7	3.00	-42.80	-135.3	236.6	2019-07-03	16:41:00	32.36	15.20	171.47	212.31	5.89	353.18	28.73	25.80	19159	10938	91541	1516	1093	491.4	187.5	181.7	-11.35	-54.50	-153.9	216.6	2019-07-03	16:42:00	32.90	14.98	170.85	212.31	5.91	354.45	29.51	25.86	19159	10938	90501	1516	1092	491.5	187.5	181.7	-7.25	-50.95	-146.8	223.5	2019-07-03	16:43:00	32.34	14.82	171.65	208.26	5.90	353.78	29.55	25.88	19331	11039	90628	1513	1092	491.5	187.5	181.7	-9.50	-53.10	-152.8	205.9	2019-07-03	16:44:00	32.31	14.80	168.58	213.71	5.92	354.90	29.51	24.73	19152	10938	90455	1515	1091	491.9	188.0	181.7	-7.50	-48.40	-143.6	212.3
Max	31.13	14.05	168.58	204.62	5.75	344.78	28.09	24.44	18806	10798	86453	1501	1081	487.2	187.0	180.6	-24.50	-74.75	-174.1	184.1	Average	32.10	14.81	170.92	209.44	5.89	353.22	29.06	25.10	19174	10969	91263	1512	1086	489.1	187.8	181.3	-9.54	-52.88	-145.6	219.6	Variance	0.17	0.11	0.99	7.96	0.00	2.50	0.29	19826	4110	5329332	30	10	1.9	0.4	0.3	29.11	63.28	116.0	207.2																																																																					