Compliance Emissions Test Report

Lansing Board of Water and Light
Delta Energy Park Facility
HRSG #2 and #3 Stacks
Lansing, Michigan
Project No. M241108C
July 31 and August 1, 2024

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HRSG #2 and #3 Stacks
Lansing, Michigan
July 31 and August 1, 2024

Report Submittal Date
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Project No. M241108C

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1.0 EXECUTIVE SUMMARY

Mostardi Platt conducted a compliance emissions test program for Lansing Board of Water and Light on August 1 and 2, 2024 at the Delta Energy Park Facility in Lansing, Michigan on the HRSG #2 and #3 Stacks. This report summarizes the results of the test program and test methods used.

The test location, test date, and test parameters are summarized below.

TEST INFORMATION		
Test Location	**Test Date**	**Test Parameters**
HRSG #2 Stack	July 31, 2024	Filterable Particulate Matter (FPM), Condensable Particulate Matter (CPM), Total Particulate Matter (TPM), and Volatile Organic Compounds (VOC)
HRSG #3 Stack	August 1, 2024	

The test was conducted with the duct burners at maximum capacity. A complete summary of emission test results follows the narrative portion of this report.

TEST RESULTS			
Test Location	**Test Parameter**	**Emission Limits**	**Emission Rate**
HRSG #2 Stack	TPM ($PM_{2.5}$, PM_{10})	6.02 lb/hr	0.94 lb/hr
	VOC ppm as C_3H_8	3 ppm @ 15% O_2	0.0 ppm @ 15% O_2
HRSG #3 Stack	TPM ($PM_{2.5}$, PM_{10})	6.02 lb/hr	0.75 lb/hr
	VOC ppm as C_3H_8	3 ppm @ 15% O_2	0.0 ppm @ 15% O_2

All of the filterable and condensable particulate matter were considered to be $PM_{2.5}$ and PM_{10} in the TPM evaluation. Operating data as provided by Lansing Board of Water and Light are included in Appendix A.

The identifications of individuals associated with the test program are summarized below.

TEST PERSONNEL INFORMATION		
Location	**Address**	**Contact**
Test Coordinator	Lansing Board of Water and Light 1232 Haco Drive P.O. Box 13007 Lansing, Michigan 48912	Mr. Nathan Hude Environmental Regulatory Compliance (517) 702-6170 (phone) nathan.hude@lbwl.com
Test Facility	Lansing Board of Water and Light Delta Energy Park Facility 3725 South Canal Road Lansing, Michigan 48917 Permit to Install 74-18C	
Testing Company Representative	Mostardi Platt 888 Industrial Drive Elmhurst, Illinois 60126	Mr. Paul F Coleman Senior Project Manager (630) 993-2100 (phone) pcoleman@mp-mail.com

The test crew consisted of C. Buglio, L. Costanza, A. Woywod and P. Coleman of Mostardi Platt.

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2.0 TEST METHODOLOGY

Emissions testing was conducted following the methods specified in 40CFR60, Appendix A, and 40CFR51, Appendix M. A schematic of the test section diagram is found in Appendix B and schematics of the sampling trains used are included in Appendix C. Calculation nomenclature and sample calculations are included in Appendix D. Laboratory analysis data are found in Appendix E. Copies of analyzer print-outs for each test run are included in Appendix F and field data sheets are found in Appendix G.

The following methodologies were used during the test program:

Method 1 Traverse Point Determination

Test measurement points were selected in accordance with Method 1. The characteristics of the measurement location are summarized below.

TEST POINT INFORMATION						
Location	**Stack Diameter**	**Stack Area**	**Upstream Diameters**	**Downstream Diameters**	**Test Parameter**	**Number of Sampling Points**
HRSG #2 and #3 Stacks	10 Feet	78.54 sq. ft.	1.8	5.5	FPM, TPM	24

Gaseous Stratification Test

A twelve-point stratification test was performed during Run 1 of the test program. Based on the stratification test results, one test point was used for Runs 2 and 3.

Method 2 Volumetric Flowrate Determination

Gas velocity was measured following Method 2, for purposes of calculating stack gas volumetric flow rate and FPM/TPM emissions on a lb/hr basis. An S-type pitot tube, differential pressure gauge, thermocouple and temperature readout were used to determine gas velocity at each sample point. All of the equipment used was calibrated in accordance with the specifications of the Method. Calibration data are presented in Appendix H.

Method 3A Oxygen (O_2)/Carbon Dioxide (CO_2) Determination

Stack gas molecular weight was determined in accordance with Method 3A. A California Analytical Instruments 700 LX analyzer was used to determine stack gas oxygen and carbon dioxide content and, by difference, nitrogen content. All of the equipment used was calibrated in accordance with the specifications of the Method. Calibration data are presented in Appendix H and copies of the gas cylinder certifications are found in Appendix I.

Method 5 Filterable Particulate Matter (FPM) Determination

Stack gas filterable particulate concentrations and emission rates were determined in accordance with Method 5. An Environmental Supply Company, Inc. sampling train was used to sample stack gas at an isokinetic rate, as specified in the Method. Particulate matter in the sample probe was recovered using an acetone wash. The probe wash and filter catch were analyzed by Mostardi Platt personnel. Laboratory analysis data are found in Appendix E. Calibration data are presented in Appendix H.

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Method 202 Condensable Particulate Matter (CPM) Determination

Stack gas CPM concentrations and emission rates were determined in accordance with the Method 202, 40CFR51, Appendix M, in conjunction with Method 5 filterable particulate sampling. Condensable particulate matter was collected in the impinger portion of the Method 202 sampling train.

The condensable particulate matter (CPM) was collected in impingers after filterable particulate material was collected using Method 5. The organic and aqueous fractions were then taken to dryness and weighed. The total of all fractions represents the CPM. Compared to the December 17, 1991 promulgated Method 202, this Method includes the addition of a condenser, followed by a water dropout impinger immediately after the final heated filter. One modified Greenburg Smith impinger and an ambient temperature filter follow the water dropout impinger. A schematic of the sampling train configured with these updates is found in the Appendix.

CPM was collected in the water dropout, modified Greenburg Smith impinger and ambient filter portion of the sampling train as described in this Method. The impinger contents were purged with nitrogen (N_2) immediately after sample collection to remove dissolved sulfur dioxide (SO_2) gases from the impingers. The impinger solution was then extracted with DI water, acetone, and hexane. The organic and aqueous fractions were dried and the residues weighed. The total of the aqueous, organic, and ambient filter fractions represents the CPM. Laboratory analysis data are found in Appendix E. All of the equipment used was calibrated in accordance with the specifications of the Method. Calibration data are presented in Appendix H.

Method 25A Volatile Organic Compound (VOC) Determination

The Method 25A sampling and measurement system meets the requirements for sampling of volatile organic compounds (VOCs) set forth by the USEPA. In particular, it meets the requirements of USEPA Reference Method 25A, "Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer," 40CFR60, Appendix A. This method applies to the measurement of total gaseous organic concentration of hydrocarbons. With this method, gas samples are extracted from the sample locations through heated Teflon sample lines to the analyzer.

The flame ionization detector (FID) used during this program was a Thermo 51i-HT analyzer, a highly sensitive FID that provides a direct reading of total organic vapor concentrations with linear ranges of 0-10, 100, 1000, and 10,000 ppm by volume. The instrument was calibrated using ultra-zero air and propane in air EPA Protocol standards. The calibrations are performed before and after sampling with calibration checks performed between each test run. Sample times and locations are logged simultaneously on a data logger.

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3.0 TEST RESULT SUMMARIES

Client: Lansing Board of Water & Light
Facility: Delta Energy Park Facility
Test Location: HRSG #2 Stack
Test Method: 5/202

Source Condition	Normal	Normal	Normal	
Date	7/31/24	7/31/24	7/31/24	
Start Time	10:10	12:45	15:30	
End Time	12:25	15:00	17:45	
	Run 1	Run 2	Run 3	Average
Stack Conditions				
Average Gas Temperature, °F	181.0	182.4	181.9	181.8
Flue Gas Moisture, percent by volume	10.9%	9.9%	9.9%	10.2%
Average Flue Pressure, in. Hg	28.92	28.92	28.92	28.92
Gas Sample Volume, dscf	73.965	73.485	72.863	73.438
Average Gas Velocity, ft/sec	62.530	63.072	62.746	62.783
Gas Volumetric Flow Rate, acfm	294,664	297,222	295,681	295,856
Gas Volumetric Flow Rate, dscfm	209,078	212,680	211,785	211,181
Gas Volumetric Flow Rate, scfm	234,614	236,113	235,072	235,266
Average $\%CO_2$ by volume, dry basis	4.9	5.0	5.1	5.0
Average $\%O_2$ by volume, dry basis	12.0	12.0	12.0	12.0
Isokinetic Variance	104.1	101.7	101.2	102.3
Filterable Particulate Matter (Method 5)				
grams collected	0.00204	0.00164	0.00202	0.00190
mg/dscm	0.974	0.788	0.979	0.9137
grains/acf	0.0003	0.0002	0.0003	0.0003
grains/dscf	0.0004	0.0003	0.0004	0.0004
lb/hr	0.763	0.628	0.777	0.723
Condensable Particulate Matter (Method 202)				
grams collected	0.00064	0.00016	0.00092	0.00057
grains/acf	0.0001	0.0000	0.0001	0.0001
grains/dscf	0.0001	0.0000	0.0002	0.0001
grains/dscf @ 10% O2	0.0001	0.0000	0.0002	0.0001
lb/hr	0.239	0.061	0.354	0.218
Total Particulate Matter (5/202)				
grams collected	0.00268	0.00180	0.00294	0.00247
grains/acf	0.0004	0.0002	0.0004	0.0003
grains/dscf	0.0005	0.0003	0.0006	0.0005
lb/hr	1.002	0.689	1.131	0.941

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Lansing Board of Water & Light Delta Energy Park EUCTHRSG2 (Combined Cycle) Gaseous Summary Normal Load						
Test No.	**Date**	**Start Time**	**End Time**	**THC ppm as C_3H_8 (wet)**	**THC ppm as C_3H_8 (dry)**	**VOC ppm @ 15% O2 (dry)**
1	07/31/24	10:10	12:15	0.0	0.0	0.0
2	07/31/24	12:45	14:50	0.0	0.0	0.0
3	07/31/24	15:30	17:35	0.0	0.0	0.0
Average				0.0	0.0	0.0

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Client: Lansing Board of Water & Light
Facility: Delta Energy Park Facility
Test Location: HRSG #3 Stack
Test Method: 5/202

Source Condition	Normal	Normal	Normal	
Date	8/1/24	8/1/24	8/1/24	
Start Time	7:55	10:25	12:55	
End Time	10:10	12:40	15:10	
	Run 1	Run 2	Run 3	Average
Stack Conditions				
Average Gas Temperature, °F	180.9	182.1	182.5	181.8
Flue Gas Moisture, percent by volume	10.8%	10.8%	11.0%	10.9%
Average Flue Pressure, in. Hg	28.99	28.93	28.93	28.95
Gas Sample Volume, dscf	75.586	74.238	74.213	74.679
Average Gas Velocity, ft/sec	63.741	63.688	64.040	63.823
Gas Volumetric Flow Rate, acfm	300,373	300,122	301,781	300,759
Gas Volumetric Flow Rate, dscfm	213,736	212,775	213,468	213,326
Gas Volumetric Flow Rate, scfm	239,747	238,586	239,765	239,366
Average $\%CO_2$ by volume, dry basis	4.8	4.9	4.9	4.9
Average $\%O_2$ by volume, dry basis	12.1	12.1	12.1	12.1
Isokinetic Variance	104.1	102.7	102.3	103.0
Filterable Particulate Matter (Method 5)				
grams collected	0.00112	0.00151	0.00051	0.00105
mg/dscm	0.523	0.718	0.243	0.4948
mg/wscm	0.467	0.641	0.216	0.4412
grains/acf	0.0002	0.0002	0.0001	0.0002
grains/dscf	0.0002	0.0003	0.0001	0.0002
lb/hr	0.419	0.572	0.194	0.395
Condensable Particulate Matter (Method 202)				
grams collected	0.00068	0.00139	0.00072	0.00093
grains/acf	0.0001	0.0002	0.0001	0.0001
grains/dscf	0.0001	0.0003	0.0001	0.0002
lb/hr	0.254	0.527	0.274	0.352
Total Particulate Matter (5/202)				
grams collected	0.00180	0.00290	0.00123	0.00198
grains/acf	0.0003	0.0004	0.0002	0.0003
grains/dscf	0.0003	0.0006	0.0002	0.0004
lb/hr	0.673	1.099	0.468	0.747

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Lansing Board of Water & Light Delta Energy Park EUCTHRSG3 (Combined Cycle) Gaseous Summary Normal Load						
Test No.	Date	Start Time	End Time	THC ppm as C_3H_8 (wet)	THC ppm as C_3H_8 (dry)	VOC ppm @ 15% O2 (dry)
1	08/01/24	07:55	10:01	0.0	0.0	0.0
2	08/01/24	10:25	12:30	0.0	0.0	0.0
3	08/01/24	12:55	15:00	0.0	0.0	0.0
Average				0.0	0.0	0.0

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4.0 CERTIFICATION

Mostardi Platt is pleased to have been of service to Lansing Board of Water and Light. If you have any questions regarding this test report, please do not hesitate to contact us at 630-993-2100.

As project manager, I hereby certify that this test report represents a true and accurate summary of emissions test results and the methodologies employed to obtain those results, and the test program was performed in accordance with the methods specified in this test report.

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Paul F. Coleman — Program Manager

Benjamin W. Hendricks — Quality Assurance

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APPENDICES

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Appendix A - Plant Operating Data

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DCS Tag Name	IN2HRF3176PDIT3001|	|XQ01;IN2HRF3176PDIT3002|	|XQ01;IN2HRF3176TE3004A|
Name	CO CATALYST DIFF PR	SCR CATALYST DIFF PR	SCR DUCT TEMP
2024/07/31 09:00:00.000 AM;;	1.2507596	1.29796	770.4
2024/07/31 09:15:00.000 AM;;	1.2480469	1.2881944	770
2024/07/31 09:30:00.000 AM;;	1.2432725	1.2821181	770
2024/07/31 09:45:00.000 AM;;	1.2335069	1.2756077	770
2024/07/31 10:00:00.000 AM;;	1.2329644	1.2768012	769.3
2024/07/31 10:15:00.000 AM;;	1.2311198	1.2741971	769.7001
2024/07/31 10:30:00.000 AM;;	1.2261285	1.2682291	769.7001
2024/07/31 10:45:00.000 AM;;	1.2227647	1.2674696	769.7001
2024/07/31 11:00:00.000 AM;;	1.2227647	1.2681206	769.7001
2024/07/31 11:15:00.000 AM;;	1.2195096	1.2643229	769.7001
2024/07/31 11:30:00.000 AM;;	1.2145182	1.2608507	769.9
2024/07/31 11:45:00.000 AM;;	1.2208116	1.2630209	769.30005
2024/07/31 12:00:00.000 PM;;	1.2163628	1.2632378	769.80005
2024/07/31 12:15:00.000 PM;;	1.2184244	1.2620443	769.80005
2024/07/31 12:30:00.000 PM;;	1.2154948	1.2590061	769.5001
2024/07/31 12:45:00.000 PM;;	1.2226562	1.2552084	769.9
2024/07/31 01:00:00.000 PM;;	1.2216797	1.2569444	769.9
2024/07/31 01:15:00.000 PM;;	1.2234159	1.2557509	769.9
2024/07/31 01:30:00.000 PM;;	1.2231988	1.2561849	769.9
2024/07/31 01:45:00.000 PM;;	1.2251519	1.2650825	769.9
2024/07/31 02:00:00.000 PM;;	1.2241753	1.2618272	770.30005
2024/07/31 02:15:00.000 PM;;	1.2220052	1.2568359	770.30005
2024/07/31 02:30:00.000 PM;;	1.2259115	1.2594401	770.2001
2024/07/31 02:45:00.000 PM;;	1.2226562	1.2628038	770.2001
2024/07/31 03:00:00.000 PM;;	1.2291666	1.2639974	769.80005
2024/07/31 03:15:00.000 PM;;	1.2217882	1.2650825	770.30005
2024/07/31 03:30:00.000 PM;;	1.2263455	1.2587891	770.30005
2024/07/31 03:45:00.000 PM;;	1.2254775	1.2628038	770.2001
2024/07/31 04:00:00.000 PM;;	1.227105	1.2585721	770.2001
2024/07/31 04:15:00.000 PM;;	1.2226562	1.2550999	770.2001
2024/07/31 04:30:00.000 PM;;	1.2225478	1.2613932	770.2001
2024/07/31 04:45:00.000 PM;;	1.2255859	1.2604166	770.2001
2024/07/31 05:00:00.000 PM;;	1.2261285	1.2634549	770.6001
2024/07/31 05:15:00.000 PM;;	1.2224393	1.2604166	770
2024/07/31 05:30:00.000 PM;;	1.2224393	1.2629124	770
2024/07/31 05:45:00.000 PM;;	1.2261285	1.2592231	770
2024/07/31 06:00:00.000 PM;;	1.2236328	1.2581381	770
2024/07/31 06:15:00.000 PM;;	1.2241753	1.2573785	770
2024/07/31 06:30:00.000 PM;;	1.2223307	1.2511936	770
2024/07/31 06:45:00.000 PM;;	1.2228733	1.2601997	770
2024/07/31 07:00:00.000 PM;;	1.2233073	1.2595487	769.80005

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CTGHRSG2 Data for PM and VOC Compliance Testing- Run1

Date/Time	CTGHRSG2 HEATINCT (MMBTU/HR) Value CTG Heat Input	CTGHRSG2 GASFLOWR (KSCFH) Value CTG Gas Flow	CTGHRSG2 HEATINDB (MMBTU/HR) Value Duct Burner Heat Input	CTGHRSG2 GASFLOWD (KSCFH) Value Duct Burner Gas Flow	CTGHRSG2 LOADCTMW (MW) Value CTG mW	CTGHRSG2 LOADTOT (MW) Value CTG + STG mW
07/31/2024 10:10	470	447.6	138.6	132	48	85
07/31/2024 10:11	470	447.5	138.6	132	48	85
07/31/2024 10:12	470.3	447.9	138.6	132	48	85
07/31/2024 10:13	470.6	448.2	138.7	132.1	48	85
07/31/2024 10:14	471.2	448.8	138.7	132.1	48	85
07/31/2024 10:15	470.6	448.2	138.7	132.1	47	85
07/31/2024 10:16	470.4	448	138.6	132	47	85
07/31/2024 10:17	469.8	447.5	138.6	132	47	85
07/31/2024 10:18	469.5	447.2	138.6	132	47	85
07/31/2024 10:19	469.5	447.1	138.6	132	47	85
07/31/2024 10:20	469.2	446.8	138.6	132	47	85
07/31/2024 10:21	469.7	447.3	139.9	133.2	47	85
07/31/2024 10:22	469.5	447.2	139	132.4	47	85
07/31/2024 10:23	469.5	447.2	138.9	132.3	47	85
07/31/2024 10:24	469.1	446.7	138.8	132.2	47	85
07/31/2024 10:25	470	447.6	138.8	132.2	47	85
07/31/2024 10:26	470.4	447.9	138.9	132.3	47	85
07/31/2024 10:27	469.2	446.9	138.9	132.3	47	85
07/31/2024 10:28	470.3	448	138.9	132.3	47	85
07/31/2024 10:29	469.3	447	138.1	131.5	47	85
07/31/2024 10:30	469.3	447	138.7	132.1	47	85
07/31/2024 10:31	469	446.6	139.5	132.9	47	85
07/31/2024 10:32	469.4	447	138.6	132	47	85
07/31/2024 10:33	468.6	446.3	138.1	131.5	47	85
07/31/2024 10:34	469	446.7	139.4	132.8	47	85
07/31/2024 10:35	469.4	447	139.1	132.5	47	85
07/31/2024 10:36	468.9	446.6	138.2	131.6	47	85
07/31/2024 10:37	469	446.7	138.2	131.6	47	85
07/31/2024 10:38	469.5	447.1	139.4	132.8	47	85
07/31/2024 10:39	470.5	448	139.4	132.8	47	85
07/31/2024 10:40	469.6	447.3	137.9	131.3	47	85
07/31/2024 10:41	470.3	447.8	139.3	132.7	47	85
07/31/2024 10:42	469.8	447.4	139.3	132.7	47	85
07/31/2024 10:43	470.5	448.1	138.3	131.7	47	85
07/31/2024 10:44	470	447.7	138.1	131.5	47	85
07/31/2024 10:45	470.1	447.7	139.3	132.7	47	85
07/31/2024 10:46	469.9	447.5	138.9	132.3	47	85
07/31/2024 10:47	469.7	447.4	138.1	131.5	47	85
07/31/2024 10:48	470.4	448	138.6	132	47	85
07/31/2024 10:49	470.1	447.7	139.1	132.5	47	85
07/31/2024 10:50	469.5	447.2	139.2	132.6	47	85
07/31/2024 10:51	470.9	448.5	139.4	132.8	47	85
07/31/2024 10:52	470.3	448	138.1	131.5	47	85
07/31/2024 10:53	470.8	448.5	138.1	131.5	47	85
07/31/2024 10:54	470.1	447.6	139.4	132.8	47	85
07/31/2024 10:55	470.3	447.9	138.5	131.9	47	85
07/31/2024 10:56	471	448.5	138.1	131.5	47	85
07/31/2024 10:57	469.9	447.5	138.8	132.2	47	85
07/31/2024 10:58	470.4	447.9	139.2	132.6	47	85
07/31/2024 10:59	470.9	448.5	138.4	131.8	48	85
07/31/2024 11:00	471.2	448.7	138.1	131.5	48	85
07/31/2024 11:01	470.1	447.7	138.9	132.3	47	85
07/31/2024 11:02	470.9	448.4	139.5	132.9	47	85
07/31/2024 11:03	470.2	447.8	138.7	132.1	47	85
07/31/2024 11:04	469.7	447.3	138.7	132.1	47	85
07/31/2024 11:05	469.1	446.8	138.7	132.1	47	85
07/31/2024 11:06	468.9	446.5	138.7	132.1	47	85
07/31/2024 11:07	469.5	447.1	138.7	132.1	47	85
07/31/2024 11:08	470	447.5	138.7	132.1	47	85
07/31/2024 11:09	468.6	446.3	138.8	132.2	47	85
07/31/2024 11:10	469.3	447	138.9	132.3	47	85

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07/31/2024 11:11	469	446.6	138.8	132.2	47	85
07/31/2024 11:12	469.4	447.1	138.7	132.1	47	85
07/31/2024 11:13	469.2	446.9	138.7	132.1	47	85
07/31/2024 11:14	470.2	447.8	138.8	132.2	47	85
07/31/2024 11:15	469.8	447.4	138.8	132.2	47	85
07/31/2024 11:16	469.9	447.5	138.7	132.1	47	85
07/31/2024 11:17	470.4	447.9	138.6	132	47	85
07/31/2024 11:18	470	447.6	138.7	132.1	47	85
07/31/2024 11:19	470.8	448.4	138.7	132.1	48	85
07/31/2024 11:20	470.5	448.1	138.7	132.1	47	85
07/31/2024 11:21	469.9	447.5	138.6	132	47	85
07/31/2024 11:22	469	446.7	138.6	132	47	85
07/31/2024 11:23	468.3	446	138.8	132.2	47	85
07/31/2024 11:24	472.1	449.6	138.7	132.1	48	85
07/31/2024 11:25	469.3	446.9	138.7	132.1	47	85
07/31/2024 11:26	469.6	447.2	138.7	132.1	47	85
07/31/2024 11:27	470.4	448	138.7	132.1	47	85
07/31/2024 11:28	470.1	447.7	138.7	132.1	47	85
07/31/2024 11:29	469.8	447.5	138.8	132.2	47	85
07/31/2024 11:30	469.7	447.3	138.7	132.1	47	85
07/31/2024 11:31	469.8	447.4	138.6	132	47	85
07/31/2024 11:32	469.4	447	138.8	132.2	47	85
07/31/2024 11:33	469.3	446.9	139.4	132.8	47	85
07/31/2024 11:34	469.6	447.3	138.6	132	47	85
07/31/2024 11:35	469.7	447.3	138.5	131.9	47	85
07/31/2024 11:36	469.3	446.9	138.5	131.9	47	85
07/31/2024 11:37	468.9	446.6	138.5	131.9	47	85
07/31/2024 11:38	467.9	445.6	139.5	132.9	47	85
07/31/2024 11:39	468.9	446.5	138.8	132.2	47	85
07/31/2024 11:40	470.3	448	138.5	131.9	47	85
07/31/2024 11:41	470.8	448.4	138.6	132	47	85
07/31/2024 11:42	470.1	447.7	138.7	132.1	47	85
07/31/2024 11:43	469.8	447.4	138.6	132	47	85
07/31/2024 11:44	470.3	447.9	138.7	132.1	47	85
07/31/2024 11:45	470	447.6	138.6	132	47	85
07/31/2024 11:46	471.5	449.1	138.6	132	47	85
07/31/2024 11:47	470.9	448.5	139.4	132.8	47	85
07/31/2024 11:48	470.1	447.7	139.1	132.5	47	85
07/31/2024 11:49	468.6	446.3	139	132.4	47	85
07/31/2024 11:50	468.8	446.5	139	132.4	47	85
07/31/2024 11:51	469.7	447.4	138.4	131.8	47	85
07/31/2024 11:52	469.4	447.1	139.1	132.5	47	85
07/31/2024 11:53	469.8	447.4	139.2	132.6	47	85
07/31/2024 11:54	470.3	447.9	138.7	132.1	47	85
07/31/2024 11:55	470.3	447.9	138.7	132.1	48	85
07/31/2024 11:56	470.2	447.8	138.7	132.1	48	85
07/31/2024 11:57	470.5	448.1	138.7	132.1	47	85
07/31/2024 11:58	469.2	446.8	138.7	132.1	47	85
07/31/2024 11:59	468.7	446.3	138.7	132.1	47	85
07/31/2024 12:00	469.4	447	138.8	132.2	47	85
07/31/2024 12:01	468.9	446.6	138.9	132.3	47	85
07/31/2024 12:02	470.1	447.7	138.8	132.2	47	85
07/31/2024 12:03	470	447.5	138.8	132.2	47	85
07/31/2024 12:04	470.6	448.1	138.8	132.2	48	85
07/31/2024 12:05	470.5	448.1	138.8	132.2	48	85
07/31/2024 12:06	470.6	448.1	138.7	132.1	48	85
07/31/2024 12:07	470.8	448.4	138.7	132.1	48	85
07/31/2024 12:08	471	448.6	138.7	132.1	48	85
07/31/2024 12:09	471	448.5	138.6	132	48	85
07/31/2024 12:10	471.1	448.6	138.7	132.1	48	85
07/31/2024 12:11	471.3	448.8	138.7	132.1	48	85
07/31/2024 12:12	470.8	448.4	138.8	132.2	48	85
07/31/2024 12:13	471.8	449.3	138.8	132.2	48	85
07/31/2024 12:14	470.6	448.2	138.8	132.2	48	85
07/31/2024 12:15	470.9	448.5	138.8	132.2	48	85
07/31/2024 12:16	469.9	447.5	138.8	132.2	48	85
07/31/2024 12:17	471.1	448.6	138.7	132.1	48	85
07/31/2024 12:18	470.6	448.2	138.7	132.1	47	85
07/31/2024 12:19	469.9	447.6	138.7	132.1	47	85
07/31/2024 12:20	470.3	447.9	138.7	132.1	47	85
07/31/2024 12:21	470.6	448.2	138.7	132.1	47	85
07/31/2024 12:22	470.6	448.2	138.7	132.1	47	85
07/31/2024 12:23	469.2	446.8	138.7	132.1	47	85
07/31/2024 12:24	469.4	447.1	138.7	132.1	47	85
08/01/2024 12:25	470.7	448.3	138.7	132.1	47	85

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CTGHRSG2 Data for PM and VOC Compliance Testing- Run2

Date/Time	CTGHRSG2 HEATINCT (MMBTU/HR) Value CTG Heat Input	CTGHRSG2 GASFLOWR (KSCFH) Value CTG Gas Flow	CTGHRSG2 HEATINDB (MMBTU/HR) Value Duct Burner Heat Input	CTGHRSG2 GASFLOWD (KSCFH) Value Duct Burner Gas Flow	CTGHRSG2 LOADCTMW (MW) Value CTG mW	CTGHRSG2 LOADTOT (MW) Value CTG + STG mW
07/31/2024 12:45	471	448.5	138.8	132.2	48	85
07/31/2024 12:46	471.2	448.8	138.8	132.2	48	85
07/31/2024 12:47	471.5	449	138.8	132.2	48	85
07/31/2024 12:48	471.3	448.9	138.9	132.3	48	85
07/31/2024 12:49	471	448.6	138.9	132.3	48	85
07/31/2024 12:50	471.3	448.9	138.9	132.3	48	85
07/31/2024 12:51	471.3	448.9	139	132.4	48	85
07/31/2024 12:52	470.9	448.5	139	132.4	48	85
07/31/2024 12:53	470.8	448.4	139	132.4	48	85
07/31/2024 12:54	471	448.6	139.1	132.5	48	85
07/31/2024 12:55	471.1	448.6	139.1	132.5	48	85
07/31/2024 12:56	471.1	448.6	138.1	131.5	48	85
07/31/2024 12:57	470.1	447.7	138.1	131.5	48	85
07/31/2024 12:58	469.4	447	139.3	132.7	48	85
07/31/2024 12:59	469.5	447.1	139.2	132.6	48	85
07/31/2024 13:00	469.9	447.5	139.2	132.6	48	85
07/31/2024 13:01	470.5	448.1	138.1	131.5	48	85
07/31/2024 13:02	470.6	448.3	138.1	131.5	48	85
07/31/2024 13:03	470.2	447.8	139.1	132.5	48	85
07/31/2024 13:04	470.1	447.7	139.1	132.5	48	85
07/31/2024 13:05	470	447.6	139.1	132.5	48	85
07/31/2024 13:06	469.3	446.9	139	132.4	47	85
07/31/2024 13:07	469.2	447	137.9	131.3	48	85
07/31/2024 13:08	470.9	448.5	138.7	132.1	47	85
07/31/2024 13:09	471.1	448.6	139.3	132.7	47	85
07/31/2024 13:10	472.9	450.3	138.5	131.9	48	85
07/31/2024 13:11	472.8	450.3	138	131.4	48	85
07/31/2024 13:12	472.4	449.9	139	132.4	48	85
07/31/2024 13:13	473.9	451.3	139.3	132.7	48	85
07/31/2024 13:14	472.2	449.7	138.8	132.2	48	85
07/31/2024 13:15	471.7	449.2	138.7	132.1	47	85
07/31/2024 13:16	471.8	449.4	138.6	132	48	85
07/31/2024 13:17	472.7	450.1	138.7	132.1	48	85
07/31/2024 13:18	472.8	450.2	138.7	132.1	48	85
07/31/2024 13:19	474.1	451.5	138.7	132.1	48	85
07/31/2024 13:20	474.2	451.6	138.7	132.1	48	85
07/31/2024 13:21	473.3	450.7	138.7	132.1	48	85
07/31/2024 13:22	473.8	451.2	138.7	132.1	48	85
07/31/2024 13:23	472.7	450.2	138.7	132.1	48	85
07/31/2024 13:24	471.7	449.2	138.7	132.1	48	85
07/31/2024 13:25	472.2	449.7	138.7	132.1	48	85
07/31/2024 13:26	472.4	450	138.7	132.1	48	85
07/31/2024 13:27	472.6	450.1	138.7	132.1	48	85
07/31/2024 13:28	472.1	449.6	138.7	132.1	48	85
07/31/2024 13:29	472	449.6	138.7	132.1	48	85
07/31/2024 13:30	472	449.5	138.7	132.1	48	85
07/31/2024 13:31	471.9	449.5	138.7	132.1	48	85
07/31/2024 13:32	471.6	449.2	138.7	132.1	48	85
07/31/2024 13:33	472.6	450.1	138.7	132.1	48	85
07/31/2024 13:34	472.1	449.6	138.8	132.2	48	85
07/31/2024 13:35	472.2	449.7	138.8	132.2	48	85
07/31/2024 13:36	472.6	450.2	138.8	132.2	48	85
07/31/2024 13:37	472.8	450.2	138.7	132.1	48	85
07/31/2024 13:38	471.9	449.4	138.7	132.1	48	85
07/31/2024 13:39	472.5	450.1	138.7	132.1	48	85
07/31/2024 13:40	472.2	449.7	139.2	132.6	48	85
07/31/2024 13:41	471.8	449.4	139.8	133.1	48	85
07/31/2024 13:42	472	449.5	138.8	132.2	48	85
07/31/2024 13:43	471.6	449.1	138.7	132.1	48	85
07/31/2024 13:44	472.1	449.6	138.7	132.1	48	85
07/31/2024 13:45	471.7	449.2	138.7	132.1	48	85
07/31/2024 13:46	471.4	448.9	138.7	132.1	48	85
07/31/2024 13:47	471.9	449.4	138.7	132.1	48	85
07/31/2024 13:48	472.5	450	138.7	132.1	48	85
07/31/2024 13:49	471.8	449.4	138.7	132.1	48	85
07/31/2024 13:50	472.3	449.8	138.6	132	48	85
07/31/2024 13:51	472.1	449.6	138.7	132.1	48	85
07/31/2024 13:52	471.4	449	138.7	132.1	48	85
07/31/2024 13:53	472.7	450.2	138.7	132.1	48	85

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07/31/2024 13:54	472.7	450.2	138.7	132.1	48	85
07/31/2024 13:55	470.4	448	138.7	132.1	48	85
07/31/2024 13:56	471.8	449.3	138.7	132.1	48	85
07/31/2024 13:57	472.1	449.6	138.7	132.1	48	85
07/31/2024 13:58	472.8	450.4	138.8	132.2	48	85
07/31/2024 13:59	471.6	449.2	138.8	132.2	48	85
07/31/2024 14:00	472.2	449.7	138.7	132.1	48	85
07/31/2024 14:01	473.4	450.8	138.7	132.1	48	85
07/31/2024 14:02	473.8	451.3	138.8	132.2	48	85
07/31/2024 14:03	473.3	450.7	138.7	132.1	48	85
07/31/2024 14:04	472.2	449.7	138.7	132.1	48	85
07/31/2024 14:05	472.9	450.3	138.7	132.1	48	85
07/31/2024 14:06	471.8	449.3	139.3	132.7	48	85
07/31/2024 14:07	472.7	450.2	139.7	133	48	85
07/31/2024 14:08	472.9	450.4	138.9	132.3	48	85
07/31/2024 14:09	472.6	450.1	138.6	132	48	85
07/31/2024 14:10	472.2	449.7	138.6	132	48	85
07/31/2024 14:11	472.8	450.3	138.6	132	48	85
07/31/2024 14:12	472.6	450.1	138.6	132	48	85
07/31/2024 14:13	473.7	451.1	138.6	132	48	85
07/31/2024 14:14	473.8	451.3	138.7	132.1	48	85
07/31/2024 14:15	473.4	450.9	138.7	132.1	48	85
07/31/2024 14:16	472.9	450.4	138.7	132.1	48	85
07/31/2024 14:17	472.7	450.2	138.7	132.1	48	85
07/31/2024 14:18	472.7	450.2	138.7	132.1	48	85
07/31/2024 14:19	472.4	449.9	138.7	132.1	48	85
07/31/2024 14:20	472.3	449.8	138.9	132.3	48	85
07/31/2024 14:21	472.5	450	139.5	132.9	48	85
07/31/2024 14:22	472.6	450.1	138.8	132.2	48	85
07/31/2024 14:23	472.7	450.2	138.8	132.2	48	85
07/31/2024 14:24	473.3	450.7	138.8	132.2	48	85
07/31/2024 14:25	472.2	449.7	138.8	132.2	48	85
07/31/2024 14:26	472.2	449.7	138.8	132.2	48	85
07/31/2024 14:27	471.8	449.3	138.9	132.3	48	85
07/31/2024 14:28	472.5	450	138.8	132.2	48	85
07/31/2024 14:29	473.1	450.5	138.8	132.2	48	85
07/31/2024 14:30	472.2	449.6	138.8	132.2	48	85
07/31/2024 14:31	473	450.4	138.8	132.2	48	85
07/31/2024 14:32	473.7	451.2	138.8	132.2	48	85
07/31/2024 14:33	473.7	451.2	138.9	132.3	48	85
07/31/2024 14:34	473.2	450.7	138.8	132.2	48	85
07/31/2024 14:35	472.2	449.7	138.9	132.3	48	85
07/31/2024 14:36	472.3	449.8	138.9	132.3	48	85
07/31/2024 14:37	471.8	449.3	138.9	132.3	48	85
07/31/2024 14:38	472.9	450.3	138.7	132.1	48	85
07/31/2024 14:39	473.8	451.2	138.7	132.1	48	85
07/31/2024 14:40	472.5	450	138.7	132.1	48	85
07/31/2024 14:41	474.1	451.6	138.7	132.1	48	85
07/31/2024 14:42	473.4	450.8	138.7	132.1	48	85
07/31/2024 14:43	473.7	451.1	138.7	132.1	48	85
07/31/2024 14:44	472.1	449.7	138.7	132.1	48	85
07/31/2024 14:45	471.3	448.9	138.7	132.1	48	85
07/31/2024 14:46	471.8	449.3	138.7	132.1	48	85
07/31/2024 14:47	473	450.5	138.7	132.1	48	85
07/31/2024 14:48	472.6	450.1	138.7	132.1	48	85
07/31/2024 14:49	473.1	450.6	138.7	132.1	48	85
07/31/2024 14:50	472.9	450.3	138.6	132	48	85
07/31/2024 14:51	473.3	450.7	138.6	132	48	85
07/31/2024 14:52	472.8	450.2	138.6	132	48	85
07/31/2024 14:53	472.6	450.1	138.7	132.1	48	85
07/31/2024 14:54	473.3	450.8	138.7	132.1	48	85
07/31/2024 14:55	473.2	450.6	138.7	132.1	48	85
07/31/2024 14:56	472.7	450.2	138.7	132.1	48	85
07/31/2024 14:57	472.8	450.3	139	132.4	48	85
07/31/2024 14:58	473.1	450.5	139.5	132.9	48	85
07/31/2024 14:59	473.7	451.1	138.8	132.2	48	85
07/31/2024 15:00	473.7	451.1	138.8	132.2	48	85

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CTGHRSG2 Data for PM and VOC Compliance Testing- Run3

Date/Time	CTGHRSG2 HEATINCT (MMBTU/HR) Value CTG Heat Input	CTGHRSG2 GASFLOWR (KSCFH) Value CTG Gas Flow	CTGHRSG2 HEATINDB (MMBTU/HR) Value Duct Burner Heat Input	CTGHRSG2 GASFLOWD (KSCFH) Value Duct Burner Gas Flow	CTGHRSG2 LOADCTMW (MW) Value CTG mW	CTGHRSG2 LOADTOT (MW) Value CTG + STG mW
07/31/2024 15:30	471.1	448.6	138.4	131.8	47	85
07/31/2024 15:31	471.4	448.9	138.4	131.8	48	85
07/31/2024 15:32	471.2	448.7	138.4	131.8	47	85
07/31/2024 15:33	471	448.6	139	132.4	47	85
07/31/2024 15:34	471.9	449.4	139.4	132.8	47	85
07/31/2024 15:35	471.4	449	138.3	131.7	48	85
07/31/2024 15:36	472	449.6	138.3	131.7	48	85
07/31/2024 15:37	471.5	449	139.5	132.9	48	85
07/31/2024 15:38	472	449.5	139.7	133	48	85
07/31/2024 15:39	471.7	449.3	138.3	131.7	48	85
07/31/2024 15:40	472	449.5	138.3	131.7	48	85
07/31/2024 15:41	472.4	449.8	138.3	131.7	48	85
07/31/2024 15:42	472.2	449.6	139.3	132.7	48	85
07/31/2024 15:43	471.5	449.2	139.7	133	48	85
07/31/2024 15:44	471.4	449	138.5	131.9	48	85
07/31/2024 15:45	472.7	450.2	138.4	131.8	48	85
07/31/2024 15:46	472.7	450.2	138.4	131.8	48	85
07/31/2024 15:47	471.9	449.4	138.4	131.8	48	85
07/31/2024 15:48	472	449.5	139	132.4	48	85
07/31/2024 15:49	471.5	449.1	139.7	133	48	85
07/31/2024 15:50	470.7	448.2	138.9	132.3	47	85
07/31/2024 15:51	470.2	447.9	138.3	131.7	47	85
07/31/2024 15:52	471.2	448.7	138.3	131.7	48	85
07/31/2024 15:53	472.2	449.7	138.4	131.8	48	85
07/31/2024 15:54	473.3	450.7	139.4	132.8	48	85
07/31/2024 15:55	472.6	450.1	139.4	132.8	48	85
07/31/2024 15:56	473	450.4	139.4	132.8	48	85
07/31/2024 15:57	473	450.5	138.1	131.5	48	85
07/31/2024 15:58	473.4	450.9	138	131.4	48	85
07/31/2024 15:59	472.3	449.8	139.2	132.6	48	85
07/31/2024 16:00	473.1	450.5	139.5	132.9	48	85
07/31/2024 16:01	472.9	450.4	138.8	132.2	48	85
07/31/2024 16:02	472.5	450.1	138.1	131.5	48	85
07/31/2024 16:03	473.2	450.7	138.2	131.6	48	85
07/31/2024 16:04	472.8	450.3	139.4	132.8	48	85
07/31/2024 16:05	472.7	450.2	139.3	132.7	48	85
07/31/2024 16:06	473	450.5	138.4	131.8	48	85
07/31/2024 16:07	473.7	451.2	138.4	131.8	48	85
07/31/2024 16:08	472.7	450.2	138.4	131.8	48	85
07/31/2024 16:09	474	451.4	138.8	132.2	48	85
07/31/2024 16:10	473	450.5	139.9	133.2	48	85
07/31/2024 16:11	472	449.6	138.2	131.6	47	85
07/31/2024 16:12	471.8	449.4	138.1	131.5	47	85
07/31/2024 16:13	472.4	449.9	139.3	132.7	48	85
07/31/2024 16:14	473.3	450.7	139.3	132.7	48	85
07/31/2024 16:15	472.9	450.4	138.9	132.3	48	85
07/31/2024 16:16	472.7	450.3	138.9	132.3	48	85
07/31/2024 16:17	473.5	451	138.9	132.3	48	85
07/31/2024 16:18	472.9	450.4	138.9	132.3	48	85
07/31/2024 16:19	473.5	450.9	138.8	132.2	48	85
07/31/2024 16:20	473.4	450.8	138.7	132.1	48	85
07/31/2024 16:21	473	450.4	138.3	131.7	48	85
07/31/2024 16:22	472.1	449.6	138.1	131.5	48	85
07/31/2024 16:23	472.7	450.1	138.9	132.3	48	85
07/31/2024 16:24	472.7	450.2	139.5	132.9	48	85
07/31/2024 16:25	472.7	450.2	138.9	132.3	48	85
07/31/2024 16:26	473.7	451.2	137.9	131.3	48	85
07/31/2024 16:27	473	450.5	138.9	132.3	48	85
07/31/2024 16:28	473.2	450.7	139.1	132.5	48	85
07/31/2024 16:29	473.3	450.8	139.2	132.6	48	85
07/31/2024 16:30	473.3	450.7	139.2	132.6	48	85
07/31/2024 16:31	473.7	451.2	138.4	131.8	48	85
07/31/2024 16:32	473.5	451	138.2	131.6	48	85
07/31/2024 16:33	473.5	450.9	138.2	131.6	48	85
07/31/2024 16:34	473.7	451.1	139	132.4	48	85
07/31/2024 16:35	472.8	450.3	139.7	133	48	85
07/31/2024 16:36	472.8	450.3	138.9	132.3	48	85
07/31/2024 16:37	473.7	451.1	137.9	131.3	48	85
07/31/2024 16:38	473.4	450.8	139.2	132.6	48	85
07/31/2024 16:39	474	451.4	139.4	132.8	48	85
07/31/2024 16:40	473.8	451.2	138.2	131.6	48	85

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07/31/2024 16:41	474.2	451.6	138.2	131.6	48	85
07/31/2024 16:42	473.7	451.2	138.4	131.8	48	85
07/31/2024 16:43	473.3	450.8	139.4	132.8	48	85
07/31/2024 16:44	472.5	449.9	139.4	132.8	48	85
07/31/2024 16:45	473.1	450.6	139	132.4	48	85
07/31/2024 16:46	473.2	450.7	138.5	131.9	48	85
07/31/2024 16:47	474.1	451.5	138.5	131.9	48	85
07/31/2024 16:48	473.9	451.4	138.5	131.9	48	85
07/31/2024 16:49	473.5	450.9	138.5	131.9	48	85
07/31/2024 16:50	472.8	450.3	138.6	132	48	85
07/31/2024 16:51	474	451.5	139.7	133	48	85
07/31/2024 16:52	474.1	451.5	139.7	133	48	85
07/31/2024 16:53	474.1	451.5	138.3	131.7	48	85
07/31/2024 16:54	474	451.4	138.1	131.5	48	85
07/31/2024 16:55	474.1	451.5	139.3	132.7	48	85
07/31/2024 16:56	472.9	450.3	139.1	132.5	48	85
07/31/2024 16:57	472.8	450.3	138.6	132	48	85
07/31/2024 16:58	473	450.4	138.6	132	48	85
07/31/2024 16:59	472.8	450.3	138.6	132	48	85
07/31/2024 17:00	472.8	450.3	138.6	132	48	85
07/31/2024 17:01	473.3	450.8	138.6	132	48	85
07/31/2024 17:02	472.8	450.3	138.6	132	48	85
07/31/2024 17:03	473.5	451	138.6	132	48	85
07/31/2024 17:04	473.2	450.6	138.6	132	48	85
07/31/2024 17:05	473.7	451.1	139.1	132.5	48	85
07/31/2024 17:06	473.1	450.5	139.9	133.2	48	85
07/31/2024 17:07	472	449.5	138.4	131.8	48	85
07/31/2024 17:08	473.1	450.5	138.4	131.8	48	85
07/31/2024 17:09	472.7	450.2	138.4	131.8	48	85
07/31/2024 17:10	473.2	450.6	139.1	132.5	48	85
07/31/2024 17:11	473.1	450.5	139.5	132.9	48	85
07/31/2024 17:12	473.4	450.9	138.4	131.8	48	85
07/31/2024 17:13	472.7	450.2	138.3	131.7	48	85
07/31/2024 17:14	473	450.5	138.4	131.8	48	85
07/31/2024 17:15	472.8	450.4	139.8	133.1	48	85
07/31/2024 17:16	472.9	450.4	138.8	132.2	48	85
07/31/2024 17:17	472.2	449.7	138.5	131.9	48	85
07/31/2024 17:18	472.3	449.7	138.5	131.9	48	85
07/31/2024 17:19	472.3	449.8	138.5	131.9	48	85
07/31/2024 17:20	472.4	449.9	138.5	131.9	48	85
07/31/2024 17:21	472.2	449.7	138.9	132.3	48	85
07/31/2024 17:22	473	450.5	139.7	133	48	85
07/31/2024 17:23	472.7	450.2	139	132.4	48	85
07/31/2024 17:24	473.2	450.6	139	132.4	48	85
07/31/2024 17:25	473.5	451	138.2	131.6	48	85
07/31/2024 17:26	473	450.5	138.3	131.7	48	85
07/31/2024 17:27	473	450.5	139.7	133	48	85
07/31/2024 17:28	473.1	450.6	138.9	132.3	48	85
07/31/2024 17:29	472.7	450.2	138.6	132	48	85
07/31/2024 17:30	472.3	449.8	138.6	132	48	85
07/31/2024 17:31	472.3	449.8	138.6	132	48	85
07/31/2024 17:32	472.2	449.8	138.6	132	47	85
07/31/2024 17:33	472	449.6	138.6	132	47	85
07/31/2024 17:34	471.6	449.1	138.6	132	47	85
07/31/2024 17:35	472.2	449.7	138.6	132	47	85
07/31/2024 17:36	472.5	450	138.6	132	47	85
07/31/2024 17:37	472.8	450.3	140	133.3	48	85
07/31/2024 17:38	472	449.4	139	132.4	48	85
07/31/2024 17:39	472.6	450.1	138.9	132.3	48	85
07/31/2024 17:40	472.7	450.1	138.9	132.3	48	85
07/31/2024 17:41	473.1	450.6	138.9	132.3	48	85
07/31/2024 17:42	472.2	449.7	138.5	131.9	48	85
07/31/2024 17:43	472.2	449.7	138.2	131.6	48	85
07/31/2024 17:44	472.2	449.6	138.6	132	48	85
07/31/2024 17:45	472.8	450.2	139.5	132.9	48	85

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DCS Tag Name	IN3HRF3176PDIT3001|	|XQ01;IN3HRF3176PDIT3002|	|XQ01;IN3HRF3176TE3004A|
Name	CO CATALYST DIFF PR	SCR CATALYST DIFF PR	SCR DUCT TEMP
2024/08/01 06:30:00.000 AM;;	1.2140843	1.1252496	782.1
2024/08/01 06:40:00.000 AM;;	1.2100694	1.1373048	782.1
2024/08/01 06:50:00.000 AM;;	1.2154948	1.132411	782.1
2024/08/01 07:00:00.000 AM;;	1.2133247	1.1299045	782.1
2024/08/01 07:10:00.000 AM;;	1.2128906	1.1363499	782.1
2024/08/01 07:20:00.000 AM;;	1.2157118	1.1313367	782.1
2024/08/01 07:30:00.000 AM;;	1.2137587	1.1312175	782.1
2024/08/01 07:40:00.000 AM;;	1.2164713	1.1316948	782.30005
2024/08/01 07:50:00.000 AM;;	1.2190756	1.1234591	782.30005
2024/08/01 08:00:00.000 AM;;	1.2196181	1.1288302	782.30005
2024/08/01 08:10:00.000 AM;;	1.2207031	1.132411	782.30005
2024/08/01 08:20:00.000 AM;;	1.2152778	1.1301432	782.30005
2024/08/01 08:30:00.000 AM;;	1.2115885	1.123698	782.30005
2024/08/01 08:40:00.000 AM;;	1.2085503	1.1262045	782.30005
2024/08/01 08:50:00.000 AM;;	1.2124566	1.1213107	782.30005
2024/08/01 09:00:00.000 AM;;	1.2098525	1.1271594	782.30005
2024/08/01 09:10:00.000 AM;;	1.2122396	1.1305013	782.30005
2024/08/01 09:20:00.000 AM;;	1.2076823	1.1155815	781.80005
2024/08/01 09:30:00.000 AM;;	1.2088759	1.1176107	781.80005
2024/08/01 09:40:00.000 AM;;	1.2059462	1.1253688	782
2024/08/01 09:50:00.000 AM;;	1.2025825	1.1111653	782
2024/08/01 10:00:00.000 AM;;	1.2047526	1.1155815	782
2024/08/01 10:10:00.000 AM;;	1.203559	1.1167753	782
2024/08/01 10:20:00.000 AM;;	1.2027994	1.1086588	782
2024/08/01 10:30:00.000 AM;;	1.2003038	1.1102104	782
2024/08/01 10:40:00.000 AM;;	1.2009549	1.1061523	782
2024/08/01 10:50:00.000 AM;;	1.2025825	1.1044812	782
2024/08/01 11:00:00.000 AM;;	1.2007378	1.1145074	782
2024/08/01 11:10:00.000 AM;;	1.1981337	1.1018555	781.80005
2024/08/01 11:20:00.000 AM;;	1.1974827	1.1022136	781.80005
2024/08/01 11:30:00.000 AM;;	1.1976997	1.0997071	782
2024/08/01 11:40:00.000 AM;;	1.1942275	1.1011393	782
2024/08/01 11:50:00.000 AM;;	1.1925999	1.0955296	782
2024/08/01 12:00:00.000 PM;;	1.1967231	1.1036458	782
2024/08/01 12:10:00.000 PM;;	1.1984593	1.1009007	782
2024/08/01 12:20:00.000 PM;;	1.1932509	1.0975585	782
2024/08/01 12:30:00.000 PM;;	1.1925999	1.1044812	782
2024/08/01 12:40:00.000 PM;;	1.1946615	1.0992296	781.80005
2024/08/01 12:50:00.000 PM;;	1.1891276	1.0920682	781.80005
2024/08/01 01:00:00.000 PM;;	1.1905382	1.0884874	781.80005
2024/08/01 01:10:00.000 PM;;	1.1893446	1.0930231	781.80005
2024/08/01 01:20:00.000 PM;;	1.1877171	1.0862195	781.80005
2024/08/01 01:30:00.000 PM;;	1.1916233	1.0964844	781.9
2024/08/01 01:40:00.000 PM;;	1.185764	1.0967231	781.9
2024/08/01 01:50:00.000 PM;;	1.1916233	1.094336	781.9
2024/08/01 02:00:00.000 PM;;	1.1876085	1.090039	781.9
2024/08/01 02:10:00.000 PM;;	1.1876085	1.0872939	781.9
2024/08/01 02:20:00.000 PM;;	1.1886936	1.0893228	781.9
2024/08/01 02:30:00.000 PM;;	1.1855469	1.0864582	781.9
2024/08/01 02:40:00.000 PM;;	1.1895616	1.0870552	781.9
2024/08/01 02:50:00.000 PM;;	1.1943359	1.100065	781.30005
2024/08/01 03:00:00.000 PM;;	1.1948785	1.100662	781.6001
2024/08/01 03:10:00.000 PM;;	1.1892362	1.0969617	782
2024/08/01 03:20:00.000 PM;;	1.1909722	1.0998263	782
2024/08/01 03:30:00.000 PM;;	1.1902127	1.0912325	782

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CTGHRSG3 Data for PM and VOC Compliance Testing- Run1

Date/Time	CTGHRSG3 HEATINCT (MMBTU/HR) Value CTG Heat Input	CTGHRSG3 GASFLOWR (KSCFH) Value CTG Gas Flow	CTGHRSG3 HEATINDB (MMBTU/HR) Value Duct Burner Heat Input	CTGHRSG3 GASFLOWD (KSCFH) Value Duct Burner Gas Flow	CTGHRSG3 LOADCTMW (MW) Value CTG mW	CTGHRSG3 LOADTOT (MW) Value CTG + STG mW
08/01/2024 07:55	470.9	448.5	138.2	131.6	48	86
08/01/2024 07:56	470	447.6	138.6	132	48	85
08/01/2024 07:57	468.8	446.5	138.6	132	48	85
08/01/2024 07:58	469.8	447.4	138.7	132.1	48	85
08/01/2024 07:59	469	446.7	138.7	132.1	48	85
08/01/2024 08:00	468.7	446.4	138.1	131.5	48	85
08/01/2024 08:01	468.1	445.8	138.3	131.7	48	85
08/01/2024 08:02	470	447.6	139	132.4	48	86
08/01/2024 08:03	468.8	446.5	139	132.4	48	86
08/01/2024 08:04	469.3	447	138.5	131.9	48	86
08/01/2024 08:05	469	446.7	137.8	131.2	48	85
08/01/2024 08:06	468.1	445.8	138.2	131.6	48	85
08/01/2024 08:07	470.1	447.7	139	132.4	48	86
08/01/2024 08:08	468.9	446.5	138.9	132.3	48	85
08/01/2024 08:09	468.4	446.1	138.1	131.5	48	85
08/01/2024 08:10	469.7	447.4	138.1	131.5	48	85
08/01/2024 08:11	469.8	447.5	138.1	131.5	48	85
08/01/2024 08:12	470.1	447.8	138.1	131.5	48	85
08/01/2024 08:13	469.6	447.3	138.6	132	48	85
08/01/2024 08:14	467	444.8	138.6	132	48	85
08/01/2024 08:15	467.4	445.1	138.6	132	48	85
08/01/2024 08:16	467.9	445.6	138.5	131.9	48	85
08/01/2024 08:17	469.3	446.9	138.5	131.9	48	85
08/01/2024 08:18	468.7	446.4	138.5	131.9	48	85
08/01/2024 08:19	469.8	447.4	138.5	131.9	48	85
08/01/2024 08:20	468.2	446	138.4	131.8	48	85
08/01/2024 08:21	467.7	445.5	138.4	131.8	48	85
08/01/2024 08:22	467.3	445.1	138.4	131.8	48	85
08/01/2024 08:23	469.3	447	138.4	131.8	48	85
08/01/2024 08:24	468.9	446.6	138.4	131.8	48	85
08/01/2024 08:25	469.1	446.8	138.4	131.8	48	85
08/01/2024 08:26	468.6	446.3	138.3	131.7	48	85
08/01/2024 08:27	466.8	444.6	138.4	131.8	48	85
08/01/2024 08:28	469.6	447.2	138.7	132.1	48	85
08/01/2024 08:29	469.4	447.1	138.7	132.1	48	85
08/01/2024 08:30	468.8	446.5	138.4	131.8	48	85
08/01/2024 08:31	469.6	447.3	138.3	131.7	48	85
08/01/2024 08:32	468.1	445.8	138.4	131.8	48	85
08/01/2024 08:33	467.2	445	139.3	132.7	48	85
08/01/2024 08:34	468.6	446.3	138.5	131.9	48	85
08/01/2024 08:35	468.9	446.6	138.3	131.7	48	85
08/01/2024 08:36	469.4	447.1	138.3	131.7	48	85
08/01/2024 08:37	469.6	447.2	138.3	131.7	48	85
08/01/2024 08:38	468.8	446.5	138.4	131.8	48	85
08/01/2024 08:39	468.7	446.4	138.5	131.9	48	85
08/01/2024 08:40	467.8	445.5	139.2	132.6	48	85
08/01/2024 08:41	469.2	446.8	139	132.4	48	85
08/01/2024 08:42	467.9	445.7	138.1	131.5	48	85
08/01/2024 08:43	468.2	446	138.1	131.5	48	85
08/01/2024 08:44	468.7	446.4	138.3	131.7	48	85
08/01/2024 08:45	468.4	446	139.1	132.5	48	85
08/01/2024 08:46	469.6	447.2	138.6	132	48	85
08/01/2024 08:47	467.7	445.4	138.3	131.7	48	85
08/01/2024 08:48	467	444.8	138.3	131.7	48	85
08/01/2024 08:49	467.9	445.7	138.2	131.6	48	85
08/01/2024 08:50	469.9	447.6	138.2	131.6	48	85
08/01/2024 08:51	468.9	446.6	138.2	131.6	48	85
08/01/2024 08:52	468.8	446.5	139.2	132.6	48	85

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08/01/2024 08:53	466.3	444.1	138.7	132.1	48	85
08/01/2024 08:54	467.2	444.9	138.7	132.1	48	85
08/01/2024 08:55	468.8	446.5	138.6	132	48	85
08/01/2024 08:56	468	445.7	138.2	131.6	48	85
08/01/2024 08:57	468.1	445.8	138.1	131.5	48	85
08/01/2024 08:58	468	445.7	139.1	132.5	48	85
08/01/2024 08:59	468.1	445.8	138.7	132.1	48	85
08/01/2024 09:00	468.7	446.4	138.1	131.5	48	85
08/01/2024 09:01	469.4	447.1	138.2	131.6	48	85
08/01/2024 09:02	468.1	445.9	138.1	131.5	48	85
08/01/2024 09:03	466.7	444.5	138.8	132.2	48	85
08/01/2024 09:04	467	444.7	139.3	132.7	48	85
08/01/2024 09:05	467.9	445.7	138.2	131.6	48	85
08/01/2024 09:06	467.8	445.5	138.2	131.6	48	85
08/01/2024 09:07	466.8	444.6	138.2	131.6	48	85
08/01/2024 09:08	467.9	445.6	138.2	131.6	48	85
08/01/2024 09:09	467.7	445.4	138.5	131.9	48	85
08/01/2024 09:10	466.2	444	139.3	132.7	48	85
08/01/2024 09:11	465.2	443.1	138.8	132.2	48	85
08/01/2024 09:12	465.7	443.6	138.3	131.7	48	85
08/01/2024 09:13	467.8	445.6	138.3	131.7	48	85
08/01/2024 09:14	468	445.8	138.3	131.7	48	85
08/01/2024 09:15	468.4	446.1	138.3	131.7	48	85
08/01/2024 09:16	467.2	444.9	138.3	131.7	48	85
08/01/2024 09:17	465.6	443.4	138.3	131.7	48	85
08/01/2024 09:18	467.6	445.4	138.3	131.7	48	85
08/01/2024 09:19	467.9	445.6	138.5	131.9	48	85
08/01/2024 09:20	467.8	445.5	139	132.4	48	85
08/01/2024 09:21	466.7	444.5	138.5	131.9	48	85
08/01/2024 09:22	466.5	444.2	138.5	131.9	48	85
08/01/2024 09:23	465.9	443.7	138.5	131.9	48	85
08/01/2024 09:24	468.6	446.3	138.4	131.8	48	85
08/01/2024 09:25	469	446.7	138.4	131.8	48	85
08/01/2024 09:26	467.7	445.5	138.5	131.9	48	85
08/01/2024 09:27	466.4	444.2	138.5	131.9	48	85
08/01/2024 09:28	464.9	442.8	138.5	131.9	47	84
08/01/2024 09:29	465.8	443.6	138.5	131.9	48	85
08/01/2024 09:30	465.4	443.3	138.5	131.9	47	85
08/01/2024 09:31	469.3	447	138.5	131.9	48	85
08/01/2024 09:32	468.1	445.8	138.5	131.9	48	85
08/01/2024 09:33	466.6	444.4	138.5	131.9	48	85
08/01/2024 09:34	465.3	443.1	138.5	131.9	47	85
08/01/2024 09:35	465	442.8	138.5	131.9	47	84
08/01/2024 09:36	465.6	443.4	138.5	131.9	48	85
08/01/2024 09:37	464.8	442.6	138.5	131.9	47	84
08/01/2024 09:38	466.7	444.5	138.4	131.8	48	85
08/01/2024 09:39	466.6	444.4	138.4	131.8	48	85
08/01/2024 09:40	465.9	443.7	138.4	131.8	48	85
08/01/2024 09:41	466.9	444.7	138.4	131.8	48	85
08/01/2024 09:42	467.7	445.4	138.4	131.8	48	85
08/01/2024 09:43	467.2	444.9	138.4	131.8	48	85
08/01/2024 09:44	466	443.8	138.9	132.3	48	85
08/01/2024 09:45	465.9	443.7	139.1	132.5	48	85
08/01/2024 09:46	466.8	444.6	138.4	131.8	48	85
08/01/2024 09:47	465	442.9	138.4	131.8	48	85
08/01/2024 09:48	466	443.8	138.3	131.7	48	85
08/01/2024 09:49	466	443.8	138.3	131.7	48	85
08/01/2024 09:50	467.5	445.3	138.3	131.7	48	85
08/01/2024 09:51	463.5	441.4	139.2	132.6	47	84
08/01/2024 09:52	466.4	444.2	139.4	132.8	48	85
08/01/2024 09:53	465.6	443.4	138.4	131.8	48	85
08/01/2024 09:54	462.9	440.9	138.3	131.7	47	84
08/01/2024 09:55	462.4	440.4	138.4	131.8	47	84
08/01/2024 09:56	465.7	443.5	138.4	131.8	48	85
08/01/2024 09:57	466.2	444	138.4	131.8	48	85
08/01/2024 09:58	466.9	444.7	138.4	131.8	48	85
08/01/2024 09:59	465.5	443.4	138.5	131.9	48	85
08/01/2024 10:00	466.3	444.1	138.3	131.7	48	85
08/01/2024 10:01	465.3	443.2	138.4	131.8	47	85
08/01/2024 10:02	463.5	441.5	138.3	131.7	47	84
08/01/2024 10:03	463.1	441.1	138.3	131.7	47	84
08/01/2024 10:04	462.7	440.7	139	132.4	47	84
08/01/2024 10:05	463.9	441.8	138.7	132.1	47	84
08/01/2024 10:06	465.7	443.5	138.3	131.7	47	85
08/01/2024 10:07	466.6	444.4	138.4	131.8	48	85
08/01/2024 10:08	464.4	442.3	138.1	131.5	47	84
08/01/2024 10:09	464.1	442	138.3	131.7	47	84
08/01/2024 10:10	465.7	443.5	139.1	132.5	48	85

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CTGHRSG3 Data for PM and VOC Compliance Testing- Run2

Date/Time	CTGHRSG3 HEATINCT (MMBTU/HR) Value CTG Heat Input	CTGHRSG3 GASFLOWR (KSCFH) Value CTG Gas Flow	CTGHRSG3 HEATINDB (MMBTU/HR) Value Duct Burner Heat Input	CTGHRSG3 GASFLOWD (KSCFH) Value Duct Burner Gas Flow	CTGHRSG3 LOADCTMW (MW) Value CTG mW	CTGHRSG3 LOADTOT (MW) Value CTG + STG mW
08/01/2024 10:25	467	444.7	138.7	132.1	47	84
08/01/2024 10:26	461.3	439.4	138.6	132	47	84
08/01/2024 10:27	464.7	442.6	138.7	132.1	47	84
08/01/2024 10:28	467.2	444.9	138.3	131.7	48	85
08/01/2024 10:29	465.1	443	137.9	131.3	47	84
08/01/2024 10:30	464.4	442.3	138.9	132.3	47	84
08/01/2024 10:31	464	442	138.1	131.5	47	84
08/01/2024 10:32	463.1	441.1	138.1	131.5	47	84
08/01/2024 10:33	463.4	441.4	138.7	132.1	47	84
08/01/2024 10:34	463.6	441.5	139.4	132.8	47	84
08/01/2024 10:35	464.3	442.2	137.9	131.3	47	84
08/01/2024 10:36	464.9	442.8	138.3	131.7	47	84
08/01/2024 10:37	464.2	442.1	139.3	132.7	47	84
08/01/2024 10:38	463.5	441.4	137.8	131.2	47	84
08/01/2024 10:39	463.4	441.3	138.9	132.3	47	84
08/01/2024 10:40	461.5	439.5	139	132.4	47	84
08/01/2024 10:41	461.8	439.8	138.6	132	47	84
08/01/2024 10:42	462.6	440.6	137.9	131.3	47	84
08/01/2024 10:43	463.5	441.5	137.8	131.2	47	84
08/01/2024 10:44	462.7	440.7	139.1	132.5	47	84
08/01/2024 10:45	465.8	443.6	139.3	132.7	48	85
08/01/2024 10:46	464.2	442.1	137.9	131.3	47	84
08/01/2024 10:47	463.4	441.4	137.8	131.2	47	84
08/01/2024 10:48	462.9	440.8	139.2	132.6	47	84
08/01/2024 10:49	462.6	440.6	138.4	131.8	47	84
08/01/2024 10:50	463.2	441.1	137.9	131.3	47	84
08/01/2024 10:51	463.8	441.7	138.9	132.3	47	84
08/01/2024 10:52	463.5	441.4	138.7	132.1	47	84
08/01/2024 10:53	462.9	440.9	137.9	131.3	47	84
08/01/2024 10:54	463.3	441.3	138.6	132	47	84
08/01/2024 10:55	462.6	440.6	139.2	132.6	47	84
08/01/2024 10:56	463.5	441.4	138.1	131.5	47	84
08/01/2024 10:57	463.7	441.7	138	131.4	47	84
08/01/2024 10:58	463.4	441.3	138	131.4	47	84
08/01/2024 10:59	463.3	441.2	139.4	132.8	47	84
08/01/2024 11:00	462.7	440.7	138.8	132.2	47	84
08/01/2024 11:01	462.3	440.3	138.7	132.1	47	84
08/01/2024 11:02	462.8	440.8	138.6	132	47	84
08/01/2024 11:03	463.3	441.3	138.3	131.7	47	84
08/01/2024 11:04	465	442.9	138	131.4	47	84
08/01/2024 11:05	463.6	441.5	138	131.4	47	84
08/01/2024 11:06	465	442.9	139.3	132.7	47	84
08/01/2024 11:07	463.6	441.6	139.2	132.6	47	84
08/01/2024 11:08	463.2	441.2	137.8	131.2	47	84
08/01/2024 11:09	463.6	441.5	138.9	132.3	47	84
08/01/2024 11:10	464.1	442	139.2	132.6	47	84
08/01/2024 11:11	462.5	440.5	138.2	131.6	47	84
08/01/2024 11:12	464.9	442.8	137.9	131.3	47	84
08/01/2024 11:13	462.5	440.5	138.3	131.7	47	84
08/01/2024 11:14	463.2	441.1	139.2	132.6	47	84
08/01/2024 11:15	461.7	439.8	138.7	132.1	47	84
08/01/2024 11:16	462.2	440.2	137.9	131.3	47	84
08/01/2024 11:17	463.1	441.1	138.1	131.5	47	84
08/01/2024 11:18	463.3	441.2	139.1	132.5	47	84
08/01/2024 11:19	463.5	441.4	139.1	132.5	47	84
08/01/2024 11:20	463.1	441.1	137.9	131.3	47	84
08/01/2024 11:21	463.9	441.8	137.9	131.3	47	84
08/01/2024 11:22	461.4	439.5	138.3	131.7	47	84
08/01/2024 11:23	461.9	439.9	138.4	131.8	47	84
08/01/2024 11:24	461.5	439.6	138.5	131.9	47	84
08/01/2024 11:25	462.2	440.2	138.5	131.9	47	84
08/01/2024 11:26	462.1	440.1	138.5	131.9	47	84
08/01/2024 11:27	462.1	440.1	138.6	132	47	84
08/01/2024 11:28	462.5	440.5	138.6	132	47	84
08/01/2024 11:29	461.7	439.7	138.7	132.1	47	84
08/01/2024 11:30	460.3	438.4	138.7	132.1	47	84
08/01/2024 11:31	461.7	439.7	138.6	132	47	84
08/01/2024 11:32	462.4	440.4	138.5	131.9	47	84
08/01/2024 11:33	462.3	440.3	138.6	132	47	84
08/01/2024 11:34	461.7	439.8	138.5	131.9	47	84
08/01/2024 11:35	462	440	138.4	131.8	47	84
08/01/2024 11:36	460.1	438.2	138.4	131.8	47	84

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08/01/2024 11:37	460.2	438.3	138.4	131.8	47	84
08/01/2024 11:38	462.2	440.2	138.4	131.8	47	84
08/01/2024 11:39	461	439.1	138.3	131.7	47	84
08/01/2024 11:40	462.1	440.1	138.2	131.6	47	84
08/01/2024 11:41	463	441	138.2	131.6	47	84
08/01/2024 11:42	462.6	440.6	138.3	131.7	47	84
08/01/2024 11:43	461.1	439.2	139.3	132.7	47	84
08/01/2024 11:44	462.6	440.6	138.9	132.3	47	84
08/01/2024 11:45	461.4	439.4	138.7	132.1	47	84
08/01/2024 11:46	462.6	440.5	138.6	132	47	84
08/01/2024 11:47	462.3	440.3	138.5	131.9	47	84
08/01/2024 11:48	462	440	138.4	131.8	47	84
08/01/2024 11:49	461.6	439.7	138.4	131.8	47	84
08/01/2024 11:50	460.7	438.8	138.4	131.8	47	84
08/01/2024 11:51	460.8	438.9	138.3	131.7	47	84
08/01/2024 11:52	460.7	438.8	138.2	131.6	47	84
08/01/2024 11:53	463	441	138.3	131.7	47	84
08/01/2024 11:54	463	440.9	138.3	131.7	47	84
08/01/2024 11:55	460.2	438.3	139.5	132.9	47	84
08/01/2024 11:56	459.6	437.7	138.7	132.1	47	84
08/01/2024 11:57	462.4	440.4	138.5	131.9	47	84
08/01/2024 11:58	462.4	440.4	138.4	131.8	47	84
08/01/2024 11:59	461.9	439.9	138.4	131.8	47	84
08/01/2024 12:00	461.2	439.3	138.6	132	47	84
08/01/2024 12:01	461.7	439.7	138.6	132	47	84
08/01/2024 12:02	459.7	437.8	138.6	132	47	84
08/01/2024 12:03	460.4	438.5	138.4	131.8	47	84
08/01/2024 12:04	462.1	440.1	138.4	131.8	47	84
08/01/2024 12:05	462.6	440.6	138.4	131.8	47	84
08/01/2024 12:06	463.5	441.5	138.5	131.9	47	84
08/01/2024 12:07	463.7	441.6	138.4	131.8	47	84
08/01/2024 12:08	460.7	438.8	138.3	131.7	47	84
08/01/2024 12:09	460.4	438.5	138.3	131.7	47	84
08/01/2024 12:10	460.9	439	138.4	131.8	47	84
08/01/2024 12:11	459.3	437.5	138.3	131.7	47	83
08/01/2024 12:12	462.1	440.1	138.3	131.7	47	84
08/01/2024 12:13	461.3	439.3	139	132.4	47	84
08/01/2024 12:14	461.5	439.5	138.9	132.3	47	84
08/01/2024 12:15	460	438.1	139	132.4	47	84
08/01/2024 12:16	459.8	437.9	138.6	132	47	84
08/01/2024 12:17	460.5	438.6	138.6	132	47	84
08/01/2024 12:18	460.5	438.6	138.7	132.1	47	84
08/01/2024 12:19	460.9	439	138.7	132.1	47	84
08/01/2024 12:20	461.1	439.1	138.7	132.1	47	84
08/01/2024 12:21	461.1	439.2	138.4	131.8	47	84
08/01/2024 12:22	460.4	438.5	138.4	131.8	47	84
08/01/2024 12:23	463.1	441	138.5	131.9	47	84
08/01/2024 12:24	462	440	138.4	131.8	47	84
08/01/2024 12:25	461	439	138.3	131.7	47	84
08/01/2024 12:26	460.5	438.6	138.4	131.8	47	84
08/01/2024 12:27	460	438.1	138.5	131.9	47	84
08/01/2024 12:28	459.5	437.6	138.7	132.1	47	84
08/01/2024 12:29	461.3	439.3	138.7	132.1	47	84
08/01/2024 12:30	462.8	440.8	138.6	132	47	84
08/01/2024 12:31	462	440	138.6	132	47	84
08/01/2024 12:32	461.5	439.5	138.7	132.1	47	84
08/01/2024 12:33	462	440	138.6	132	47	84
08/01/2024 12:34	461.8	439.8	138	131.4	47	84
08/01/2024 12:35	461.8	439.8	138.5	131.9	47	84
08/01/2024 12:36	461.8	439.8	139.2	132.6	47	84
08/01/2024 12:37	462.2	440.2	139.1	132.5	47	84
08/01/2024 12:38	461	439.1	137.9	131.3	47	84
08/01/2024 12:39	461.1	439.2	137.8	131.2	47	84
08/01/2024 12:40	458.7	436.9	139.1	132.5	47	84

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CTGHRSG3 Data for PM and VOC Compliance Testing- Run3

Date/Time	CTGHRSG3 HEATINCT (MMBTU/HR) Value CTG Heat Input	CTGHRSG3 GASFLOWR (KSCFH) Value CTG Gas Flow	CTGHRSG3 HEATINDB (MMBTU/HR) Value Duct Burner Heat Input	CTGHRSG3 GASFLOWD (KSCFH) Value Duct Burner Gas Flow	CTGHRSG3 LOADCTMW (MW) Value CTG mW	CTGHRSG3 LOADTOT (MW) Value CTG + STG mW
08/01/2024 12:55	461.1	439.1	138.3	131.7	47	84
08/01/2024 12:56	460.7	438.8	138.3	131.7	47	84
08/01/2024 12:57	459.9	438	138.2	131.6	47	84
08/01/2024 12:58	458.6	436.8	138.2	131.6	47	83
08/01/2024 12:59	459.4	437.5	138.8	132.2	47	83
08/01/2024 13:00	459	437.2	138.5	131.9	47	84
08/01/2024 13:01	461	439	138.5	131.9	47	84
08/01/2024 13:02	461.7	439.7	138.5	131.9	47	84
08/01/2024 13:03	462.8	440.8	138.5	131.9	47	84
08/01/2024 13:04	461.5	439.5	138.5	131.9	47	84
08/01/2024 13:05	461.3	439.4	138.5	131.9	47	84
08/01/2024 13:06	461.6	439.7	138.5	131.9	47	84
08/01/2024 13:07	460.5	438.6	138.4	131.8	47	84
08/01/2024 13:08	459.4	437.5	138.4	131.8	47	83
08/01/2024 13:09	458.1	436.3	138.4	131.8	47	83
08/01/2024 13:10	458.7	436.8	138.4	131.8	47	83
08/01/2024 13:11	460.4	438.5	138.5	131.9	47	84
08/01/2024 13:12	460.8	438.8	138.5	131.9	47	84
08/01/2024 13:13	460.9	438.9	138.5	131.9	47	84
08/01/2024 13:14	461	439	138.5	131.9	47	84
08/01/2024 13:15	461.1	439.1	138.5	131.9	47	84
08/01/2024 13:16	459.9	438	138.5	131.9	47	84
08/01/2024 13:17	459.1	437.2	138.6	132	47	83
08/01/2024 13:18	459.2	437.4	138.6	132	47	84
08/01/2024 13:19	459.2	437.3	138.7	132.1	47	84
08/01/2024 13:20	458.7	436.9	138.7	132.1	47	84
08/01/2024 13:21	460.6	438.6	138.7	132.1	47	84
08/01/2024 13:22	461.2	439.2	138.7	132.1	47	84
08/01/2024 13:23	461.3	439.4	138.8	132.2	47	84
08/01/2024 13:24	461.6	439.6	138.4	131.8	47	84
08/01/2024 13:25	462.4	440.4	138.3	131.7	47	84
08/01/2024 13:26	462.1	440.1	138.3	131.7	47	84
08/01/2024 13:27	462	440	138.4	131.8	47	84
08/01/2024 13:28	459.9	438	138.4	131.8	47	84
08/01/2024 13:29	459.7	437.8	138.2	131.6	47	84
08/01/2024 13:30	459.4	437.6	139.1	132.5	47	84
08/01/2024 13:31	459.5	437.6	138.9	132.3	47	84
08/01/2024 13:32	459.7	437.8	138.5	131.9	47	84
08/01/2024 13:33	460.2	438.3	138.5	131.9	47	84
08/01/2024 13:34	460.5	438.6	138.3	131.7	47	84
08/01/2024 13:35	461.4	439.5	138.5	131.9	47	84
08/01/2024 13:36	460.8	438.9	138.5	131.9	47	84
08/01/2024 13:37	460.8	438.8	138.6	132	47	84
08/01/2024 13:38	461.2	439.3	138.6	132	47	84
08/01/2024 13:39	460.9	438.9	138.6	132	47	84
08/01/2024 13:40	459.6	437.8	138.6	132	47	83
08/01/2024 13:41	457.6	435.8	138.6	132	47	83
08/01/2024 13:42	459.3	437.5	138.6	132	47	83
08/01/2024 13:43	460.4	438.5	138.6	132	47	84
08/01/2024 13:44	461.4	439.4	138.6	132	47	84
08/01/2024 13:45	461.2	439.2	138.5	131.9	47	84
08/01/2024 13:46	460.9	439	138.6	132	47	84
08/01/2024 13:47	460.9	438.9	138.6	132	47	84
08/01/2024 13:48	460.7	438.7	138.6	132	47	84
08/01/2024 13:49	461.3	439.4	138.3	131.7	47	84
08/01/2024 13:50	462.3	440.3	138.1	131.5	47	84
08/01/2024 13:51	463.2	441.2	138.1	131.5	47	84
08/01/2024 13:52	463	441	138.9	132.3	47	84
08/01/2024 13:53	464	441.9	139	132.4	47	84
08/01/2024 13:54	461.2	439.2	138.5	131.9	47	84
08/01/2024 13:55	461.3	439.3	138.5	131.9	47	84
08/01/2024 13:56	461	439.1	138.5	131.9	47	84
08/01/2024 13:57	461.8	439.8	138.5	131.9	47	84
08/01/2024 13:58	462.3	440.3	138.5	131.9	47	84
08/01/2024 13:59	461.6	439.6	138.5	131.9	47	84
08/01/2024 14:00	462.3	440.3	138.5	131.9	47	84
08/01/2024 14:01	462.1	440.1	138.5	131.9	47	84
08/01/2024 14:02	462.8	440.7	138.6	132	47	84
08/01/2024 14:03	462.8	440.8	138.6	132	47	84
08/01/2024 14:04	462.4	440.4	138.4	131.8	47	84
08/01/2024 14:05	462.1	440.1	138.3	131.7	47	84
08/01/2024 14:06	461.3	439.4	138.3	131.7	47	84

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08/01/2024 14:07	461.6	439.6	138.4	131.8	47	84
08/01/2024 14:08	460.5	438.6	138.6	132	47	84
08/01/2024 14:09	460.1	438.2	138.4	131.8	47	84
08/01/2024 14:10	460.3	438.4	138.3	131.7	47	84
08/01/2024 14:11	460.6	438.7	138.3	131.7	47	84
08/01/2024 14:12	460.3	438.4	138.6	132	47	84
08/01/2024 14:13	461.4	439.4	138.7	132.1	47	84
08/01/2024 14:14	460.3	438.3	138.6	132	47	84
08/01/2024 14:15	460.8	438.8	138.6	132	47	84
08/01/2024 14:16	460.1	438.2	138.7	132.1	47	84
08/01/2024 14:17	464.5	442.4	138.8	132.2	47	84
08/01/2024 14:18	461.9	439.9	138.9	132.3	47	84
08/01/2024 14:19	460.9	438.9	138.9	132.3	47	84
08/01/2024 14:20	461.1	439.1	138.1	131.5	47	84
08/01/2024 14:21	461	439	138.1	131.5	47	84
08/01/2024 14:22	461.3	439.4	138.3	131.7	47	84
08/01/2024 14:23	461.1	439.2	139.1	132.5	47	84
08/01/2024 14:24	460.5	438.6	138.5	131.9	47	84
08/01/2024 14:25	460.7	438.7	138.4	131.8	47	84
08/01/2024 14:26	460.1	438.2	138.5	131.9	47	84
08/01/2024 14:27	460.3	438.3	138.6	132	47	84
08/01/2024 14:28	461.3	439.3	138.7	132.1	47	84
08/01/2024 14:29	460.7	438.7	138.6	132	47	84
08/01/2024 14:30	461.8	439.8	138.5	131.9	47	84
08/01/2024 14:31	460.4	438.5	138.6	132	47	84
08/01/2024 14:32	461	439	138.7	132.1	47	84
08/01/2024 14:33	462	440	138.7	132.1	47	84
08/01/2024 14:34	461.9	439.9	138.5	131.9	47	84
08/01/2024 14:35	461.6	439.6	138.6	132	47	84
08/01/2024 14:36	460.8	438.9	138.5	131.9	47	84
08/01/2024 14:37	460.2	438.3	138.5	131.9	47	84
08/01/2024 14:38	460.1	438.2	138.4	131.8	47	84
08/01/2024 14:39	460.1	438.3	138	131.4	47	84
08/01/2024 14:40	459.7	437.8	138.7	132.1	47	84
08/01/2024 14:41	460.8	438.9	138.5	131.9	47	84
08/01/2024 14:42	460.9	438.9	138.5	131.9	47	84
08/01/2024 14:43	461.2	439.3	138.5	131.9	47	84
08/01/2024 14:44	460.4	438.5	138.5	131.9	47	84
08/01/2024 14:45	460.7	438.8	138.6	132	47	84
08/01/2024 14:46	460.3	438.3	138.5	131.9	47	84
08/01/2024 14:47	459.4	437.5	138.6	132	47	84
08/01/2024 14:48	460.2	438.3	138.5	131.9	47	84
08/01/2024 14:49	459.8	437.9	138.5	131.9	47	84
08/01/2024 14:50	460.3	438.4	138.5	131.9	47	84
08/01/2024 14:51	460.6	438.6	138.5	131.9	47	84
08/01/2024 14:52	460	438.1	138.5	131.9	47	84
08/01/2024 14:53	460	438.1	138.5	131.9	47	84
08/01/2024 14:54	459.8	437.9	138.6	132	47	84
08/01/2024 14:55	460	438.1	138.6	132	47	84
08/01/2024 14:56	459.4	437.6	138.6	132	47	84
08/01/2024 14:57	459.3	437.5	138.6	132	47	84
08/01/2024 14:58	460	438.1	138.6	132	47	84
08/01/2024 14:59	461	439.1	138.6	132	47	84
08/01/2024 15:00	460.3	438.4	138.5	131.9	47	84
08/01/2024 15:01	460	438.1	138.5	131.9	47	84
08/01/2024 15:02	459.4	437.6	138.5	131.9	47	84
08/01/2024 15:03	460.6	438.7	138.6	132	47	84
08/01/2024 15:04	459.4	437.6	138	131.4	47	83
08/01/2024 15:05	460.2	438.3	138	131.4	47	84
08/01/2024 15:06	460.1	438.2	139.3	132.7	47	84
08/01/2024 15:07	460.4	438.5	138.4	131.8	47	84
08/01/2024 15:08	459.8	437.9	138	131.4	47	84
08/01/2024 15:09	460.2	438.3	138.3	131.7	47	84
08/01/2024 15:10	460	438.1	138.6	132	47	84

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Appendix B - Test Section Diagrams

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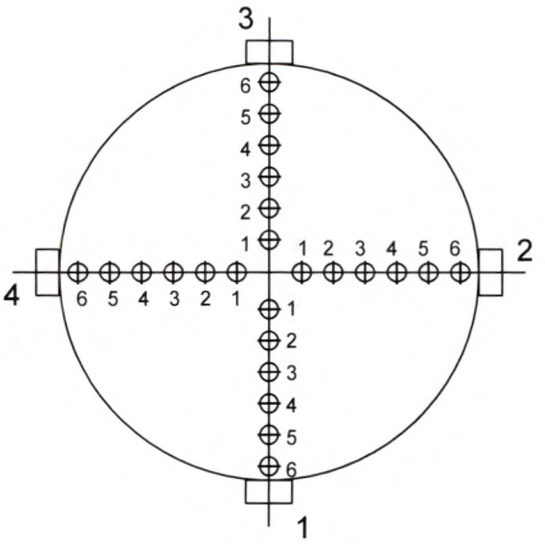
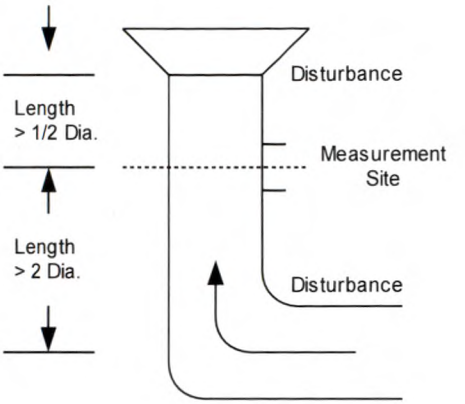
EQUAL AREA TRAVERSE FOR ROUND DUCTS

Particulate Sampling





Job: Lansing Board of Water & Light

Delta Energy Park

Lansing, MI

Date: HRSG 2

Test Location: Stack

Stack Diameter: 10 Feet

Stack Area: 78.54 Square Feet

No. Points Across Diameter: 12

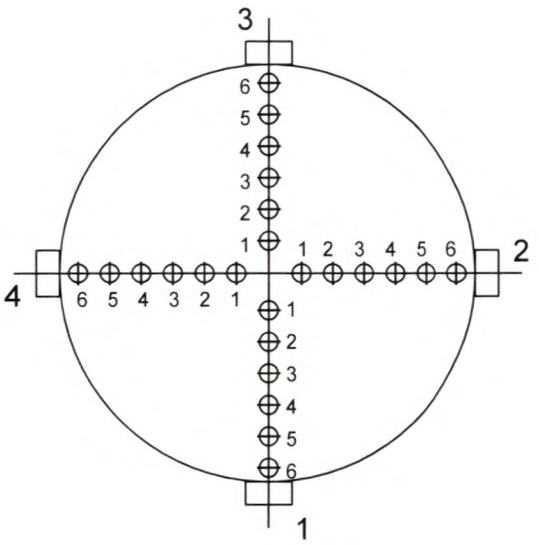
No. of Ports: 4

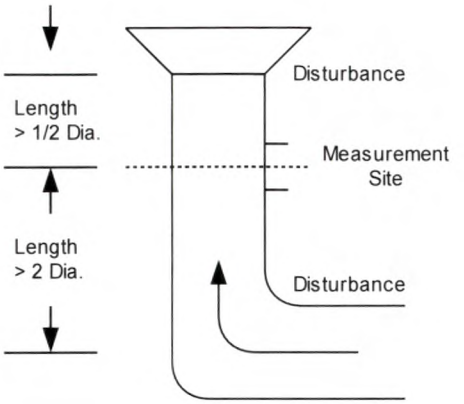
Port Length: 10 Inches

©Mostardi Platt

EQUAL AREA TRAVERSE FOR ROUND DUCTS

Particulate Sampling





Job: Lansing Board of Water & Light

Delta Energy Park

Lansing, MI

Date: HRSG 3

Test Location: Stack

Stack Diameter: 10 Feet

Stack Area: 78.54 Square Feet

No. Points Across Diameter: 12

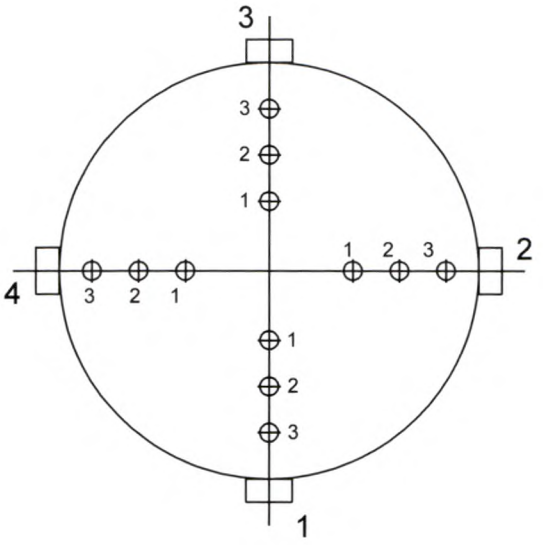
No. of Ports: 4

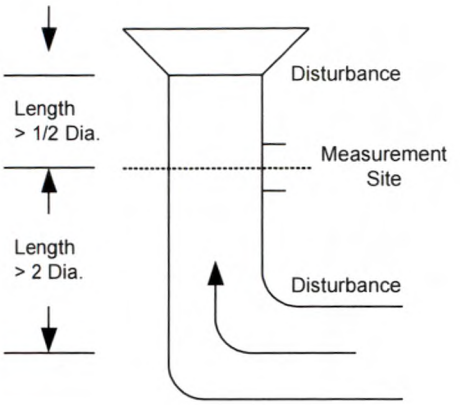
Port Length: 10 Inches

©Mostardi Platt

EQUAL AREA TRAVERSE FOR ROUND DUCTS

Stratification Traverse





Job: Lansing Board of Water & Light

Delta Energy Park

Lansing, MI

Date: July 31, 2024

Test Location: HRSG 2 Stack

Duct Diameter: 10 Feet

Duct Area: 78.54 Square Feet

No. Points Across Diameter: 6

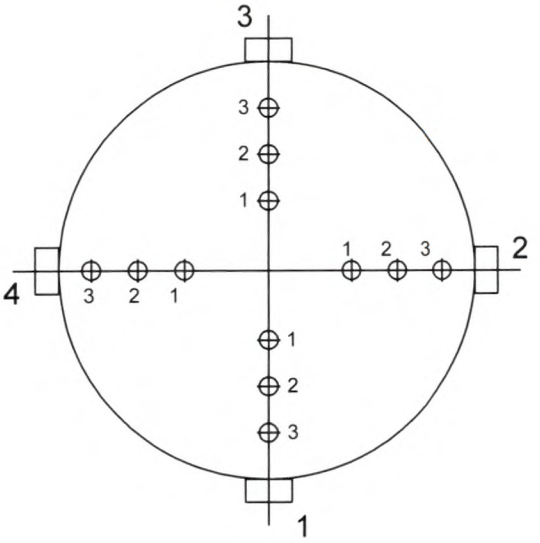
No. of Ports: 4

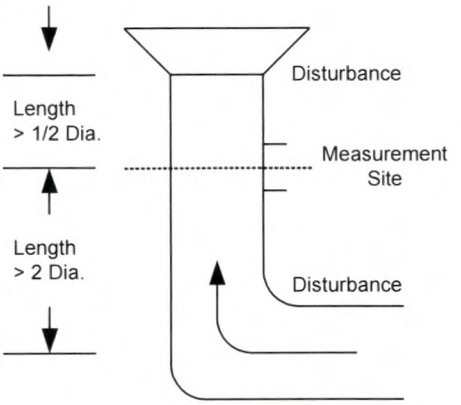
Port Length: 10 Inches

©Mostardi Platt

EQUAL AREA TRAVERSE FOR ROUND DUCTS

Stratification Traverse





Job: Lansing Board of Water & Light

Delta Energy Park

Lansing, MI

Date: August 1, 2024

Test Location: HRSG 3 Stack

Duct Diameter: 10 Feet

Duct Area: 78.54 Square Feet

No. Points Across Diameter: 6

No. of Ports: 4

Port Length: 10 Inches

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