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REPORT ON COMPLIANCE TESTING

Zug Island

Pushing Emissions Control System Stack (PECS)

EES Coke Battery, Inc.

1400 Zug Island Road

River Rouge, MI 48218

Client Reference No. 4701874091

CleanAir Project No. 15257

A2LA ISO 17025 Certificate No. 4342.01

A2LA / STAC Certificate No. 4342.02

Revision 0, Final Report

November 1, 2024

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COMMITMENT TO QUALITY

To the best of our knowledge, the data presented in this report are accurate, complete, error free and representative of the actual emissions during the test program. Clean Air Engineering operates in conformance with the requirements of ASTM D7036-04 Standard Practice for Competence of Air Emission Testing Bodies.

Report Submittal:

November 1, 2024

Date

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I hereby certify that the information contained within the final test report has been reviewed and, to the best of my ability, verified as accurate.

Independent Report Review:

November 1, 2024

Date

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Draft	D0a	10/24/24	All	Draft version of original document.
Final	0	11/01/24	All	Final version of original document.

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ACRONYMS & ABBREVIATIONS

AAS (atomic absorption spectrometry)
acfm (actual cubic feet per minute)
ACI (activated carbon injection)
ADL (above detection limit)
AIG (ammonia injection grid)
APC (air pollution control)
AQCS (air quality control system(s))
ASME (American Society of Mechanical Engineers)
ASTM (American Society for Testing and Materials)
BDL (below detection limit)
Btu (British thermal units)
CAM (compliance assurance monitoring)
CARB (California Air Resources Board)
CCM (Controlled Condensation Method)
CE (capture efficiency)
°C (degrees Celsius)
CEMS (continuous emissions monitoring system(s))
CFB (circulating fluidized bed)
CFR (Code of Federal Regulations)
cm (centimeter(s))
COMS (continuous opacity monitoring system(s))
CT (combustion turbine)
CTI (Cooling Technology Institute)
CTM (Conditional Test Method)
CVAAS (cold vapor atomic absorption spectroscopy)
CVAFS (cold vapor atomic fluorescence spectrometry)
DI H_2O (de-ionized water)
%dv (percent, dry volume)
DLL (detection level limited)
DE (destruction efficiency)
DCI (dry carbon injection)
DGM (dry gas meter)
dscf (dry standard cubic feet)
dscfm (dry standard cubic feet per minute)
dscm (dry standard cubic meter)
ESP (electrostatic precipitator)
FAMS (flue gas adsorbent mercury speciation)
°F (degrees Fahrenheit)
FB (field blank)
FCC (fluidized catalytic cracking)
FCCU (fluidized catalytic cracking unit)
FEGT (furnace exit gas temperatures)
FF (fabric filter)
FGD (flue gas desulfurization)
FIA (flame ionization analyzer)
FID (flame ionization detector)
FPD (flame photometric detection)
FRB (field reagent blank)
FSTM (flue gas sorbent total mercury)
ft (feet or foot)
ft^2 (square feet)
ft^3 (cubic feet)
ft/sec (feet per second)
FTIR (Fourier Transform Infrared Spectroscopy)
FTRB (field train reagent blank)
g (gram(s))
GC (gas chromatography)
GFAAS (graphite furnace atomic absorption spectroscopy)
GFC (gas filter correlation)
gr/dscf (grains per dry standard cubic feet)
> (greater than)/ ≥ (greater than or equal to)
g/s (grams per second)
H_2O (water)
HAP(s) (hazardous air pollutant(s))
HI (heat input)
hr (hour(s))
HR GC/MS (high-resolution gas chromatography and mass spectrometry)
HRVOC (highly reactive volatile organic compounds)
HSRG(s) (heat recovery steam generator(s))
HVT (high velocity thermocouple)
IC (ion chromatography)
IC/PCR (ion chromatography with post column reactor)
ICP/MS (inductively coupled argon plasma mass spectroscopy)
ID (induced draft)
in. (inch(es))
in. H_2O (inches water)
in. Hg (inches mercury)
IPA (isopropyl alcohol)
ISE (ion-specific electrode)
kg (kilogram(s))
kg/hr (kilogram(s) per hour)
< (less than)/ ≤ (less than or equal to)
L (liter(s))
lb (pound(s))
lb/hr (pound per hour)
lb/MMBtu (pound per million British thermal units)
lb/TBtu (pound per trillion British thermal units)
lb/lb-mole (pound per pound mole)
LR GC/MS (low-resolution gas chromatography and mass spectrometry)
m (meter)
m^3 (cubic meter)
MACT (maximum achievable control technology)
MASS® (Multi-Point Automated Sampling System)
MATS (Mercury and Air Toxics Standards)
MDL (method detection limit)
µg (microgram(s))
min. (minute(s))
mg (milligram(s))
ml (milliliter(s))
MMBtu (million British thermal units)
MW (megawatt(s))
NCASI (National Council for Air and Stream Improvement)
ND (non-detect)
NDIR (non-dispersive infrared)
NDO (natural draft opening)
NESHAP (National Emission Standards for Hazardous Air Pollutants)
ng (nanogram(s))
Nm^3 (Normal cubic meter)
% (percent)
PEMS (predictive emissions monitoring systems)
PFGC (pneumatic focusing gas chromatography)
pg (picogram(s))
PJFF (pulse jet fabric filter)
ppb (parts per billion)
PPE (personal protective equipment)
ppm (parts per million)
ppmdv (parts per million, dry volume)
ppmwv (parts per million, wet volume)
PSD (particle size distribution)
psi (pound(s) per square inch)
PTE (permanent total enclosure)
PTFE (polytetrafluoroethylene)
QA/QC (quality assurance/quality control)
QI (qualified individual)
QSTI (qualified source testing individual)
QSTO (qualified source testing observer)
RA (relative accuracy)
RATA (relative accuracy test audit)
RB (reagent blank)
RE (removal or reduction efficiency)
RM (reference method)
scf (standard cubic feet)
scfm (standard cubic feet per minute)
SCR (selective catalytic reduction)
SDA (spray dryer absorber)
SNCR (selective non-catalytic reduction)
STD (standard)
STMS (sorbent trap monitoring system)
TBtu (trillion British thermal units)
TEOM (Tapered Element Oscillating Microbalance)
TEQ (toxic equivalency quotient)
ton/hr (ton per hour)
ton/yr (ton per year)
TSS (third stage separator)
USEPA or EPA (United States Environmental Protection Agency)
UVA (ultraviolet absorption)
WFGD (wet flue gas desulfurization)
%wv (percent, wet volume)

1. PROJECT OVERVIEW

TEST PROGRAM SUMMARY

EES Coke Battery, Inc. contracted CleanAir Engineering (CleanAir) to complete testing at the Zug Island EES Coke Battery facility located in River Rouge, Michigan.

The objective of the test program was to perform particulate and NOx testing to demonstrate compliance with Michigan Permit to Install 51-08C (MI-PTI-51-08C).

The PECS Stack has a baghouse to control particulate emissions during each oven push. EES provided the following process conditions:

- oven number
- push time
- amount of coke pushed
- coke volatile matter content
- fan amps
- baghouse pressure-drop

A summary of the test program results is presented below. Section 2 Results provides a more detailed account of the test conditions and data analysis.

Table 1-1:
Summary of Results / Permit Limits

Source **Constituent**	**Sampling Method**	**Average Emission**	**Permit Limit[1]**
PECS Stack			
PM (lb/Ton Coke)	EPA 201A	0.004	0.02
PM (ton/yr)	EPA 201A	1.9	9.7
PM_{10} (lb/hr)[2]	EPA 201A/202	0.67	0.69
$PM_{2.5}$ (lb/hr)[2]	EPA 201A/202	0.52	0.69
Oxides of Nitrogen (lb/hr)[2]	EPA 7E	2.40	2.61

[1] Permit limits obtained from Michigan Permit to Install number: MI-PTI-51-08C.

[2] The source does not emit continuously; lb/hr values are operating hour of the PECS exhaust fan.

TEST PROGRAM DETAILS

PARAMETERS

The test program included the following measurements:

- particulate matter less than 10 microns in diameter (PM_{10})
- particulate matter less than 2.5 microns in diameter ($PM_{2.5}$)
- condensable particulate matter (CPM)
- nitrogen oxide (NO_x)
- flue gas composition (e.g., O_2, CO_2, H_2O)
- flue gas temperature
- flue gas flow rate

SCHEDULE

Testing was performed on September 24 through 26, 2024. Table 1-2 outlines the on-site schedule followed during the test program.

Table 1-2:
Test Schedule

Run Number	Location	Method	Analyte	Date	Start Time	End Time
1	PECS Stack	USEPA Method 201A/202	PM, PM_{10}, $PM_{2.5}$	09/24/24	08:29	15:51
2	PECS Stack	USEPA Method 201A/202	PM, PM_{10}, $PM_{2.5}$	09/25/24	08:02	15:38
3	PECS Stack	USEPA Method 201A/202	PM, PM_{10}, $PM_{2.5}$	09/26/24	08:08	15:16
1	PECS Stack	USEPA 3A, 7E	O_2/CO_2, NO_x	09/24/24	08:29	15:54
2	PECS Stack	USEPA 3A, 7E	O_2/CO_2, NO_x	09/25/24	08:02	15:41
3	PECS Stack	USEPA 3A, 7E	O_2/CO_2, NO_x	09/26/24	08:01	15:18

DISCUSSION

Emission Calculation Explanation

Due to the intermittent operations of the facility, the approach to the emission calculations has been appropriately adjusted. Each PM test run consisted of approximately 95 minutes of sampling time. However, it required up to 8 hours to obtain each sample since sampling could only occur while the PECS exhaust fan was operating. A ratio of the metered sample time to elapsed test time was applied to the emission rate values to ensure representative results based on the process operations. Emissions shown in pounds per hour are therefore corrected to be pounds per hour (lb/hr) of clock time.

Test Program Summary

The test program was completed over the span of three test days with each day completing one test run. Due to the intermittent nature of the process at current operations, up to 8 hours was required to complete one test run. This did not account for any delays in operations. A push occurred approximately every 12 minutes and during each push roughly three minutes of sample were collected.

Each Method 201A/202 test run was completed so that 12 total points were sampled with each point sampled for approximately eight minutes. Samples were collected at a constant rate but Method 201A isokinetics were followed so that a minimum of 35 dry standard cubic feet (dscf) of sample were collected.

CEMS testing for O_2, CO_2 and NO_x was performed throughout the duration of the particulate testing. This provided more than 60 minutes of total sample.

In previous discussions with Tom Gasloli of MDEQ, now EGLE, it was determined that ambient readings for all analytes would be eliminated. The O_2/CO_2 values would be displayed only when pushing gas was being measured and this was the same for the NO_x values. All CEMS results are provided with the non-push readings omitted from the average results calculations.

PM_{10} / $PM_{2.5}$ – USEPA Method 201A/202

EPA Method 201A, "Determination of PM_{10} and $PM_{2.5}$ Emissions", was followed for the particulate matter measurements along with EPA Method 202, "Dry Impinger Method for Determining Condensable Particulate Emissions from Stationary Sources". These methods are contained in Appendix M of 40 CFR 51.

Method 201A defines PM_{10} as particulate emissions equal to or less than an aerodynamic diameter of nominally 10 microns, and $PM_{2.5}$ as particulate emissions equal to or less than an aerodynamic diameter of nominally 2.5 microns.

The sampling apparatus utilized stainless steel in-stack cyclones followed by a Gelman filter holder. The cyclones were constructed according to the design specifications provided in Method 201A. When operated at a specified flow rate, the first cyclone is designed to collect particles greater than 10 microns while allowing particles less than or equal to 10 microns to pass through. The second cyclone is designed to collect particles greater than 2.5 microns while allowing particles less than or equal to 2.5 microns to pass through. The exit of the second cyclone connected directly to a 45-mm stainless steel filter holder that contained a high-efficiency quartz fiber filter to collect the $PM_{2.5}$ particles.

Sampling was performed at a constant flow rate that maintained the required 10/2.5-micron cut points of the cyclones. The sampling time (dwell time) at each traverse point varied proportionally with the velocity at each point, as determined from a pre-test velocity traverse. The pre-test velocity for Run 1 occurred on Monday, September 23, 2024. Subsequent pre-test velocities utilized the test run measurements from the previous day due to the intermittent nature of the process. All particulate analyses were performed gravimetrically following EPA Method 5 procedures at CleanAir's accredited laboratory in Palatine, Illinois.

The condensable particulate matter was collected in dry impingers after the gas traveled through the Method 201A cyclone. Total CPM was represented by the impinger fractions and the CPM filter. Immediately following a test run, Method 202 sample trains were purged with Ultra High Purity Nitrogen at a rate of 14 liters per minute for 60 minutes to remove any potential dissolved sulfur dioxide gases from the impingers.

The CPM fractions were used for the PM_{10} and $PM_{2.5}$ results.

Continuous Emissions Testing – USEPA Methods 3A and 7E

O_2, CO_2 and NO_x were continuously measured from a heated probe, filter, and sample line assembly run from the stack location to the test trailer. The heat was maintained at a level that prevented condensation of the sample in the sample lines. The sample was extracted and conditioned prior to being sent to a flow panel, which diverted a sufficient flow rate to the dry analyzers.

Test runs were conducted at a three-point traverse with points located at 15.75 in., 39.37 in and 78.74 in. In previous test mobilizations, the three points showed that the location met the requirements for single-point testing. However, during on-site discussions in December 2014 between Tom Gasloli (MDEQ, now EGLE) and Josh Childers (CleanAir), it was agreed that due to the nature of the process, the CEMS sampling would continue to be performed at three points, not one. A total of three test runs were performed.

Modifications to Test Methodology

Due to the extended nature of the test runs, CleanAir proposed to perform a mid-test bias calibration of the CEMS system. An attempt was made for this to occur only during non-push periods to avoid missing peaks during each push.

Michigan Department of Environment, Great Lakes, and Energy (EGLE) addressed bias/drift check procedures in an email dated September 9, 2016:

"The proposal to check the calibration of the analyzers mid run, during non-push periods is appropriate. To simplify calculations, the data may be corrected using the initial and final drift/bias checks, provided that all intermediate checks are within the acceptable range. (i.e. if the run is 6 hours long and drift bias checks were done every hour, and all are acceptable you may use the 1st and last calibration checks to correct all pushing data.)"

End of Section

2. RESULTS

This section summarizes the test program results. Additional results are available in the report appendices.

Table 2-1:
PECS Stack – Particulate Matter (PM)

Run No.		1	2	3	Average
Date (2024)		Sep 24	Sep 25	Sep 26	
Start Time (approx.)		08:29	08:02	08:08	
Stop Time (approx.)		15:51	15:38	15:16	
Process Conditions					
R_P	Production rate (ton/hr)	101	101	98	**100**
P_1	Starting Oven Number	11	53	18	
P_2	Elapsed pushing time (minutes)	465	479	451	**465**
P_3	Amount of coke pushed (tons)	783	802	735	**773**
P_4	Coke volatile matter content (%)	.54	.48	.69	**.57**
θ	Sample time (minutes)	96	95	95	**95**
Cap	Capacity factor (hours/year)	8,760	8,760	8,760	**8,760**
Gas Conditions					
O_2	Oxygen (dry volume %)	20.7	20.8	20.7	**20.7**
CO_2	Carbon dioxide (dry volume %)	0.4	0.4	0.4	**0.4**
T_s	Stack temperature (°F)	111	114	115	**114**
B_w	Actual water vapor in gas (% by volume)	2.3	2.5	2.5	**2.4**
Gas Flow Rate					
Q_a	Volumetric flow rate, actual (acfm)	201,000	206,000	202,000	**203,000**
Q_s	Volumetric flow rate, standard (scfm)	189,000	193,000	188,000	**190,000**
Q_{std}	Volumetric flow rate, dry standard (dscfm)	184,000	188,000	184,000	**185,000**
Sampling Data					
V_{mstd}	Volume metered, standard (dscf)	39.30	39.35	39.00	**39.21**
%I	Isokinetic sampling (%)	102.4	100.9	102.5	**101.9**
Laboratory Data					
m_n	Total FPM (g)	0.00574	0.00241	0.00207	
n_{MDL}	Number of non-detectable fractions	1 out of 4	2 out of 4	1 out of 4	
DLC	Detection level classification	DLL	DLL	DLL	
FPM Results					
$E_{lb/hr}$	Particulate Rate (lb/hr)	0.7313	0.3025	0.2715	**0.4351**
$E_{T/yr}$	Particulate Rate (Ton/yr)	3.2032	1.3249	1.1891	**1.9057**
E_{Rp}	Particulate Rate - Production-based (lb/ton)	0.0072	0.0030	0.0028	**0.0043**

Average includes 3 runs.

Detection level classification is defined as follows:

DLL = Detection Level Limited - some fractions are below detection limit

Table 2-2:
PECS Stack – $PM_{10}/PM_{2.5}$

Run No.		1	2	3	Average
Date (2024)		Sep 24	Sep 25	Sep 26	
Start Time (approx.)		08:29	08:02	08:08	
Stop Time (approx.)		15:51	15:38	15:16	
Process Conditions					
R_P	Production rate (ton/hr)	101	101	98	**100**
P_1	Starting Oven Number	11	53	18	**27**
P_2	Elapsed pushing time (minutes)	465	479	451	**465**
P_3	Amount of coke pushed (tons)	783	802	735	**773**
P_4	Coke volatile matter content (%)	.54	.48	.69	**.57**
θ	Sample time (minutes)	96	95	95	**95**
Cap	Capacity factor (hours/year)	8,760	8,760	8,760	**8,760**
Gas Conditions					
O_2	Oxygen (dry volume %)	20.7	20.8	20.7	**20.7**
CO_2	Carbon dioxide (dry volume %)	0.4	0.4	0.4	**0.4**
T_s	Stack temperature (°F)	111	114	115	**114**
B_w	Actual water vapor in gas (% by volume)	2.3	2.5	2.5	**2.4**
Gas Flow Rate					
Q_a	Volumetric flow rate, actual (acfm)	201,000	206,000	202,000	**203,000**
Q_s	Volumetric flow rate, standard (scfm)	189,000	193,000	188,000	**190,000**
Q_{std}	Volumetric flow rate, dry standard (dscfm)	184,000	188,000	184,000	**185,000**
Sampling Data					
V_{mstd}	Volume metered, standard (dscf)	39.30	39.35	39.00	**39.21**
%I	Isokinetic sampling (%)	102.4	100.9	102.5	**101.9**
Total PM10 Laboratory Data					
$m_{n\text{-}10}$	Total FPM < 10 µm (g)	0.00285	0.00131	0.00120	
m_{CPM}	Total CPM (g)	0.00467	0.00480	0.00091	
$m_{Part\text{-}10}$	Total PM < 10 µm (g)	0.00752	0.00611	0.00211	
n_{MDL}	Number of Non-Detectable Fractions	1 out of 5	2 out of 5	1 out of 5	
DLC	Detection Level Classification	DLL	DLL	DLL	
Total PM10 Results					
$E_{lb/hr}$	Particulate Rate (lb/hr)	0.9581	0.7669	0.2767	**0.6672**
Total PM2.5 Laboratory Data					
$m_{n\text{-}2.5}$	Total FPM < 2.5 µm (g)	0.00066	0.00055	0.00060	
m_{CPM}	Total CPM (g)	0.00467	0.00480	0.00091	
$m_{Part\text{-}2.5}$	Total PM < 2.5 µm (g)	0.00533	0.00535	0.00151	
n_{MDL}	Number of Non-Detectable Fractions	1 out of 4	2 out of 4	1 out of 4	
DLC	Detection Level Classification	DLL	DLL	DLL	
Total PM2.5 Results					
$E_{lb/hr}$	Particulate Rate (lb/hr)	0.6791	0.6715	0.1980	**0.5162**

Average includes 3 runs.

Detection level classification is defined as follows:

DLL = Detection Level Limited - some fractions are below detection limit

Table 2-3:
PECS Stack – NO_x

Run No.		1	2	3	Average
Date (2024)		Sep 24	Sep 25	Sep 26	
Start Time (approx.)		08:29	08:02	08:01	
Stop Time (approx.)		15:54	15:41	15:18	
Gas Conditions					
O_2	Oxygen (dry volume %)	20.7	20.8	20.7	**20.7**
CO_2	Carbon dioxide (dry volume %)	0.36	0.37	0.43	**0.38**
T_s	Sample temperature (°F)	111	114	115	**114**
B_w	Actual water vapor in gas (% by volume)	2.28	2.53	2.52	**2.44**
Gas Flow Rate					
Q_a	Volumetric flow rate, actual (acfm)	200,935	206,318	201,676	**202,977**
Q_s	Volumetric flow rate, standard (scfm)	188,622	192,687	188,283	**189,864**
Q_{std}	Volumetric flow rate, dry standard (dscfm)	184,317	187,812	183,543	**185,224**
Nitrogen Oxides (NOX)					
C_d	Concentration (ppmdv)	4.34	4.77	5.29	**4.80**
$E_{lb/hr}$	Mass Rate (lb/hr)	2.09	2.52	2.58	**2.40**

Average includes 3 runs.

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End of Section

3. DESCRIPTION OF INSTALLATION

PROCESS DESCRIPTION

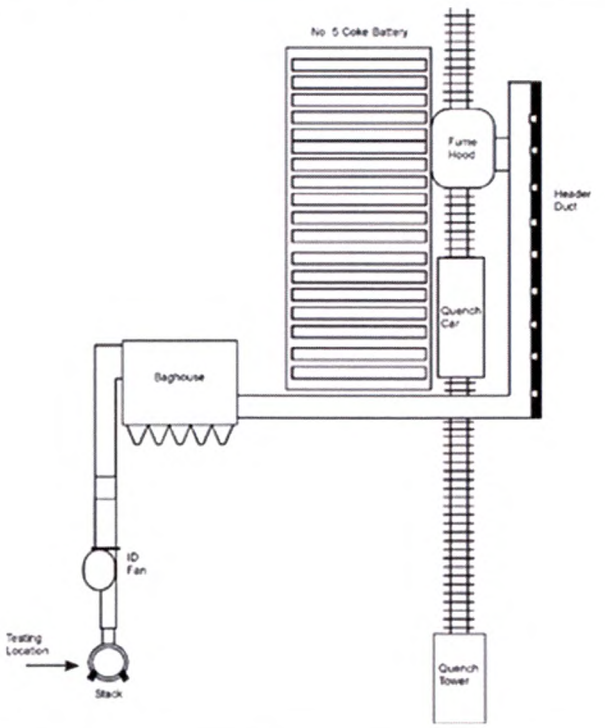
EES Coke Battery, LLC is located on Zug Island in River Rouge, Michigan. The process includes the PECS baghouse, Pushing Stack (PECS Stack), and a Combustion Stack.

The No. 5 Coke Battery consists of 85 six-meter-high ovens producing furnace coke. A coal blend is used to charge each oven at timed intervals depending on the current production of the battery. Coking of the coal occurs in an oxygen free environment for 17 to 30 hours and the gases produced are collected, cleaned, and used to under fire the battery and supply fuel for other site sources.

The current permit limits allow for the charging of up to 1.3 million dry tons of coal. The design capacity heating requirement of the battery is approximately 375 MMBtu per hour. Also, the heating requirements of the battery at the current production rate are approximately 325 MMBtu per hour. Process source description information above was taken directly from written information provided by EES Coke.

The testing reported in this document was performed at the PECS Stack. A schematic of the process is shown in Figure 3-1.

Figure 3-1:
Process Schematic



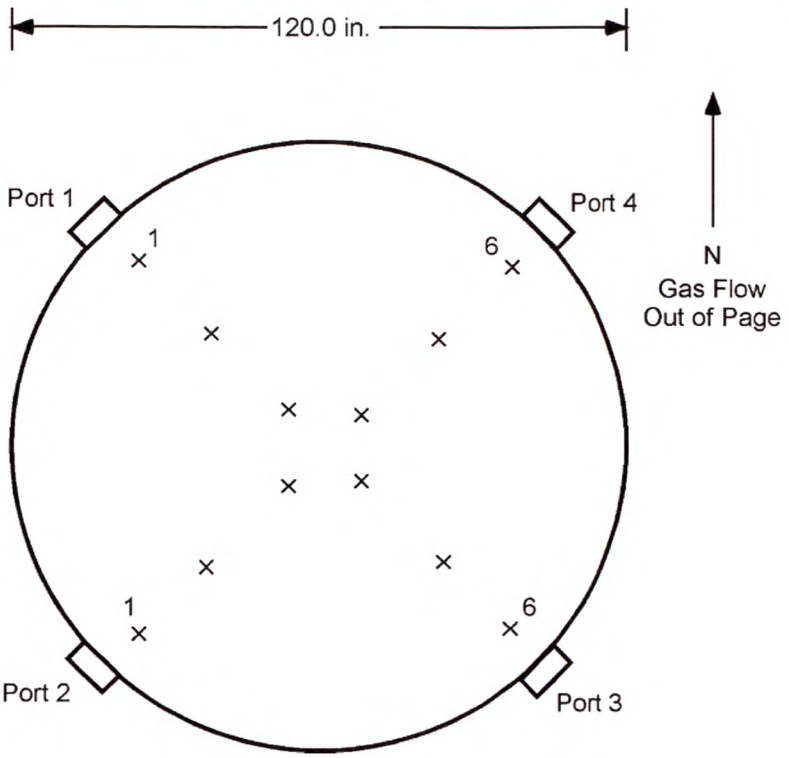
TEST LOCATION

The sample point placement was determined by EPA Method 1 specifications and EPA Method 7E. Table 3-1 presents the sampling information for the test location. The figures shown below represent the layout of the test location.

Table 3-1:
Sampling Information

Source Constituent	Method	Run No.	Ports	Points per Port	Minutes per Point	Total Minutes	Figure
PECS Stack							
Total PM	EPA 201A/202	1-3	2	6	~8	~95	3-2
O_2, CO_2, NO_X	EPA 3A, 7E	1-3	1	3	20 (minimum)	60 (minimum)	3-3

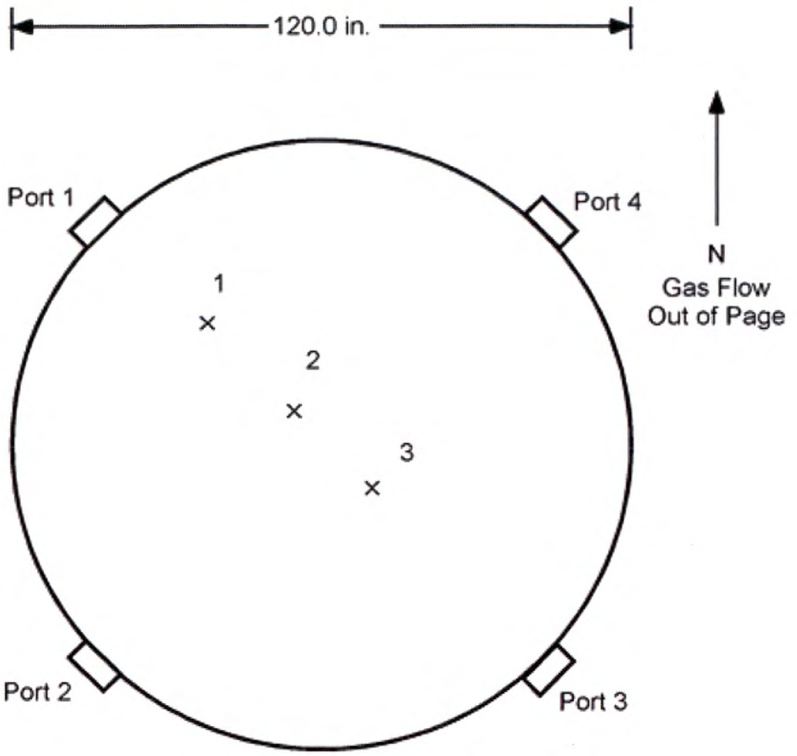
Figure 3-2:
PECS Stack Sample Point Layout (EPA Method 1)



Sampling Point	% of Stack Diameter	Port to Point Distance (inches)
1	95.6	114.7
2	85.4	102.5
3	70.4	84.5
4	29.6	35.5
5	14.6	17.5
6	4.4	5.3

Duct diameters upstream from flow disturbance (A): 2.0 Limit: 0.5
Duct diameters downstream from flow disturbance (B): 8.0 Limit: 2.0

Figure 3-3:
PECS Stack Sample Point Layout (EPA Method 7E)



Sampling Point	Method 7E Long Line Distance (m)	Port to Point Distance (inches)
1	0.4	15.7
2	1.0	39.4
3	2.0	78.7

Duct diameters upstream from flow disturbance (A): 2.0 Limit: 0.5
Duct diameters downstream from flow disturbance (B): 8.0 Limit: 2.0

End of Section

4. METHODOLOGY

PROCEDURES AND REGULATIONS

The test program sampling measurements followed procedures and regulations outlined by the USEPA and Michigan Department of Environment, Great Lakes, and Energy (EGLE). These methods appear in detail in Title 40 of the CFR and at https://www.epa.gov/emc.

Appendix A includes diagrams of the sampling apparatus, as well as specifications for sampling, recovery, and analytical procedures. Any modifications to standard test methods are explicitly indicated in this appendix. In accordance with ASTM D7036 requirements, CleanAir included a description of any such modifications along with the full context of the objectives and requirements of the test program in the test protocol submitted prior to the measurement portion of this project. Modifications to standard methods are not covered by the ISO 17025 and TNI portions of CleanAir's A2LA accreditation.

CleanAir follows specific QA/QC procedures outlined in the individual methods and in USEPA "Quality Assurance Handbook for Air Pollution Measurement Systems: Volume III Stationary Source-Specific Methods," EPA/600/R-94/038C. Appendix D contains additional QA/QC measures, as outlined in CleanAir's internal Quality Manual.

TITLE 40 CFR PART 60, APPENDIX A

Method 1	"Sample and Velocity Traverses for Stationary Sources"
Method 2	"Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)"
Method 3A	"Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources (Instrumental Analyzer Procedure)"
Method 4	"Determination of Moisture Content in Stack Gases"
Method 7E	"Determination of Nitrogen Oxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)"

TITLE 40 CFR PART 51, APPENDIX M

Method 201A	"Determination of PM_{10} and $PM_{2.5}$ Emissions from Stationary Sources (Constant Sampling Rate Procedure)"
Method 202	"Dry Impinger Method for Determining Condensable Particulate Emissions from Stationary Sources"

End of Section

5. APPENDIX

Appendix A: Test Method Specifications

Appendix B: Sample Calculations

Appendix C: Parameters

Appendix D: QA/QC Data

Appendix E: Field Data

Appendix F: Field Data Printouts

Appendix G: Monitor Data

Appendix H: Laboratory Data

Appendix I: Facility Operating Data

Appendix J: CleanAir Resumes and Certifications