AIR EMISSION TEST REPORT
FOR THE
VERIFICATION OF AIR POLLUTANT EMISSIONS
FROM
NATURAL GAS FIRED BOILERS

Prepared for:

Nexteer Automotive Corporation
SRN A6175

ICT Project No.: 2100136
January 31, 2022

IMPACT
COMPLIANCE & TESTING

Report Certification

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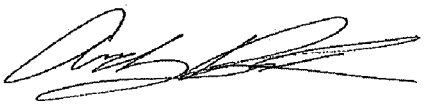
NATURAL GAS FIRED BOILERS

Nexteer Automotive Corporation
Saginaw, Michigan

The material and data in this document were prepared under the supervision and direction of the undersigned.

Impact Compliance & Testing, Inc.



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1.0 Introduction

Nexteer Automotive Corporation (Nexteer), State Registration No.: A6175, operates four (4) natural gas fired boilers at its facility in Saginaw, Saginaw County, Michigan. The boilers are fueled by pipeline natural gas and used to provide steam to various processes located at the facility.

The Michigan Department of Environment, Great Lakes and Energy-Air Quality Division (EGLE-AQD) has issued a Renewable Operating Permit (MI-ROP-A6175-2014b) to Nexteer. The steam generation equipment owned and operated by Nexteer and specified in the ROP consists of:

- One (1) 77 MMBtu/hr natural gas fired boiler (EUBR02);
- One (1) 150 MMBtu/hr natural gas fired boiler (EUBR03); and
- Two (2) 180 MMBtu/hr natural gas fired boilers (EUBR05 and EUBR06).

Air emission compliance testing was performed pursuant to ROP No. MI-ROP-A6175-2014b which specifies:

Within 3 years of the most recent stack test, and thereafter every three years (34 – 38 months), permittee shall verify the NOx emission rate from EUBR02 by testing at permittee's expense in accordance with Department requirements.; and

Within 3 years of the most recent stack test, and thereafter every three years (34 – 38 months), the permittee shall verify CO and NOx emission rates from [EUBR03, EUBR05, EUBR06] by testing at owner's expense, in accordance with Department requirements.

The testing consisted of triplicate, one-hour sampling periods for nitrogen oxides (NOx) and carbon monoxide (CO), as required, on each boiler.

The compliance testing was performed by Impact Compliance & Testing, Inc. (ICT) representatives Andy Rusnak and Clay Gaffey. The exhaust gas sampling and analysis was performed using procedures specified in the Test Plan dated August 20, 2021 that was submitted to EGLE-AQD. Ms. Lindsey Wells and Mr. Ben Witkopp from the EGLE-AQD were on-site to observe portions of the test event.

Questions regarding this emission test report should be directed to:

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2.0 Summary of Test Results and Operating Conditions

2.1 Purpose and Objective of the Tests

The conditions for EUBR02 in ROP No. MI-ROP-A6175-2014b state:

Within 3 years of the most recent stack test, and thereafter every three years (34 – 38 months), permittee shall verify the NOx emission rate from EUBR02 by testing at permittee's expense in accordance with Department requirements.

The conditions for EUBR03, EUBR05 and EUBR06 in ROP No. MI-ROP-A6175-2014b state:

Within 3 years of the most recent stack test, and thereafter every three years (34 – 38 months), the permittee shall verify CO and NOx emission rates from [EUBR03, EUBR05, EUBR06] by testing at owner's expense, in accordance with Department requirements.

Prior emission testing was completed on January 8 – 10, 2019.

2.2 Operating Conditions During the Compliance Tests

The testing was performed while EUBR03, EUBR05 and EUBR06 were operated at maximum operating conditions (within +/- 20% of maximum rated steam output). EUBR02 was not able to be operated within 20% of maximum rated steam output. EUBR02 was operated at the maximum achievable load. ICT representatives recorded steam output data at 15-minute intervals for each test period.

Fuel flowrate (cubic feet per hour) and total fuel flow (cubic feet) was also recorded by ICT representatives at 15-minute intervals for each test period.

Appendix 1 provides operating records recorded by ICT representatives for the test periods.

Table 2.1 presents a summary of the average boiler operating conditions during the test periods.

The heat input (MMBtu/hr) of the boiler was calculated using the measured natural gas use rate (scf/hr) and the higher heat content (HHV) of the fuel. The fuel used in the boilers is pipeline-quality natural gas which has a published heating value (e.g., 40 CFR Part 98 Table C-1). The default heating value for natural gas is 1.028E-03 MMBtu/scf.

Boiler Heat Input (MMBtu/hr) = fuel use (scf/hr) * (1.028E-3 MMBtu/scf)

2.3 Summary of Air Pollutant Sampling Results

The gases exhausted from each boiler were sampled for three (3) one-hour test periods during the compliance testing performed January 11 – 13, 2022.

Tables 2.2 – 2.4 present the average measured CO and NOx exhaust gas emission rates for each boiler (average of the three test periods) and applicable emission limits.

Results of the boiler performance tests demonstrate compliance with emission limits specified in ROP No. MI-ROP-A6175-2014b.

Results and data for each one-hour sampling period are presented in Section 6.0 of this report.

Table 2.1 Average boiler operating conditions during the test periods

Emission Unit	Fuel Use (scfh)	Heat Input (MMBtu/hr)	Steam Output (lb/hr)
EUBR02	55,907	57.5	43,586
EUBR03	122,417	125.8	116,560
EUBR05	127,958	131.5	135,348
EUBR06	155,833	160.2	159,401

Table 2.2 Average measured exhaust gas concentrations for EUBR02 (three-test average)

Emission Unit	NOx Emissions (lb/MMscf)	NOx Emissions (TpY)
EUBR02	132	32.4
Permit Limit	*210*	*39.4*

Table 2.3 Average measured exhaust gas concentrations for EUBR03 (three-test average)

Emission Unit	NOx Emissions (lb/MMBtu)	NOx Emissions (lb/hr)	CO Emissions (lb/MMBtu)	CO Emissions (lb/hr)
EUBR03	0.10	12.5	1.7E-04	0.02
Permit Limit	*0.12*	*18.0*	*0.10*	*15.0*

Table 2.4 Average measured exhaust gas concentrations for EUBR05 and EUBR06 (three-test average)

Emission Unit	NOx Emissions (lb/MMBtu)	NOx Emissions (lb/hr)	CO Emissions (lb/MMBtu)	CO Emissions (lb/hr)
EUBR05	0.08	10.3	2.7E-05	3.6E-03
EUBR06	0.09	14.8	7.0E-05	0.01
Permit Limit	*0.12*	*21.6*	*0.10*	*18.0*

3.0 Source and Sampling Location Description

3.1 General Process Description

Nexteer operates four (4) natural gas fired steam boilers at its Saginaw facility. The units are identified in ROP No.: MI-ROP-A6175-2014b as EUBR02, EUBR03, EUBR05 and EUBR06.

The boilers are fired exclusively on natural gas and provide steam to the facility for process and building heat. The boilers are typically operated at the required load to meet the steam demand of the facility. Therefore, the actual natural gas use rate is dependent on the steam requirement of the facility and is variable depending on season and processes in operation.

3.2 Rated Capacities and Air Emission Controls

Each boiler has the following maximum design steam production capacity:

- EUBR02 – 60,000 lb steam/hr;
- EUBR03 – 125,000 lb steam/hr;
- EUBR05 – 150,000 lb steam/hr; and
- EUBR06 – 150,000 lb steam/hr.

EUBR03, EUBR05 and EUBR06 are equipped with low NO_x burners. Low NO_x burners control air and fuel mixing to create staged combustion flames in an oxygen deficient atmosphere with lower combustion temperatures. The lower combustion temperature and oxygen deficient atmosphere reduces the amount of NO_x that is formed. Exhaust gas is exhausted directly to atmosphere through a vertical exhaust stack.

3.3 Sampling Locations

Each boiler exhaust gas stream is released to the atmosphere through a dedicated exhaust stack with a vertical release point.

The sampling port for EUBR02 is located in the vertical exhaust stack with an inner diameter of 48 inches. The sample ports provide a sampling location greater than 180 inches (>3.75 duct diameter) upstream and 156 inches (3.25 duct diameters) downstream from any flow disturbance and satisfies the USEPA Method 1 criteria for a representative sample location.

The sampling port for EUBR03 is located in the vertical exhaust stack with an inner diameter of 66 inches. The sample ports provide a sampling location 150 inches (2.27 duct diameter) upstream and 228 inches (3.45 duct diameters) downstream from any flow disturbance and satisfies the USEPA Method 1 criteria for a representative sample location.

The sampling port for EUBR05 is located in the vertical exhaust stack with an inner diameter of 60 inches. The sample ports provide a sampling location 112 inches (1.87 duct diameter) upstream and 264 inches (4.40 duct diameters) downstream from any flow disturbance and satisfies the USEPA Method 1 criteria for a representative sample location.

The sampling port for EUBR06 is located in the vertical exhaust stack with an inner diameter of 60 inches. The sample ports provide a sampling location 112 inches (1.87 duct diameter) upstream and 264 inches (4.40 duct diameters) downstream from any flow disturbance and satisfies the USEPA Method 1 criteria for a representative sample location.

Appendix 2 provides a diagram of the emission test sampling locations.

4.0 Sampling and Analytical Procedures

A test protocol for the air emission testing was reviewed and approved by the EGLE-AQD. This section provides a summary of the sampling and analytical procedures that were used during the testing periods.

4.1 Summary of Sampling Methods

USEPA Method 3A	Exhaust gas O_2 and CO_2 content was determined using paramagnetic and infrared instrumental analyzers, respectively.
USEPA Method 7E	Exhaust gas NOx concentration was determined using chemiluminescence instrumental analyzers.
USEPA Method 10	Exhaust gas CO concentration was measured using an infrared instrumental analyzer
USEPA Method 19	Mass emission rate calculation based on fuel F-factor

4.2 Exhaust Gas Molecular Weight Determination (USEPA Method 3A)

O_2 and CO_2 content in the boiler exhaust gas stream was measured continuously throughout each test period in accordance with USEPA Method 3A. The O_2 content of the exhaust was monitored using a Servomex Model 1440D gas analyzer that uses a paramagnetic sensor. The CO_2 content of the exhaust gas was monitored using a Servomex Model 1440D gas analyzer that uses an infrared sensor.

During each sampling period, a continuous sample of the boiler exhaust gas stream was extracted from the stack using a stainless-steel probe connected to a Teflon® heated sample line. The sampled gas was conditioned by removing moisture prior to being introduced to the analyzers; therefore, O_2 and CO_2 content measurements corresponds to standard dry gas conditions. Instrument response data were recorded using an ESC Model 8816 data acquisition system that monitored the analog output of the instrumental analyzer continuously and logged data as one-minute averages.

Prior to, and at the conclusion of each test, the instrument was calibrated using upscale calibration and zero gas to determine analyzer calibration error and system bias (described in Section 5.0 of this document). Sampling times were recorded on field data sheets.

Appendix 3 provides a summary of exhaust gas O2 and CO2 content measurements. Raw instrument response data are provided in Appendix 4.

4.3 NO_x and CO Concentration Measurements (USEPA Methods 7E and 10)

NO_x and CO pollutant concentrations in the boiler exhaust gas streams were determined using a Thermo Environmental Instruments, Inc. (TEI) Model 42i High Level chemiluminescence NOx analyzer and a TEI Model 48i infrared CO analyzer.

A continuous sample of the boiler exhaust gas was delivered to the instrumental analyzers using the sampling and conditioning system described previously in this section. Prior to, and at the conclusion of each test, the instruments were calibrated using appropriate upscale calibration and zero gas to determine analyzer calibration error and system bias.

Appendix 3 provides CO and NO_x calculation sheets. Raw instrument response data are provided in Appendix 4.

4.4 Mass Emission Rate Calculations (USEPA Method 19)

The NO_x and CO mass emission rate (lb/MMBtu, lb/MMscf and lb/hr) were calculated using the measured concentrations and natural gas fuel F factor (ratio of combustion gas volume to heat input) as described in USEPA Method 19.

The fuel used in the boilers is pipeline natural gas, which has a published default F-factor in USEPA Method 19, Table 19-2. Exhaust gas oxygen content, NO_x and CO concentrations were each measured on a dry gas basis. Therefore, the NO_x and CO emission factor, E (lb/MMBtu) were calculated using Equation 19-1:

$$E = (C_d) \times (F_d) \times (20.9) / (20.9 - \%O_2)$$

E	=	Calculated emission factor, lb/MMBtu
C_d	=	Measured concentration, dry basis, lb/scf
F_d	=	8,710 dscf/MMBtu for natural gas
$\%O_2$	=	Measured oxygen content, dry basis, %vol.

The boiler exhaust gas flowrate was be calculated using the calculated boiler heat input (as described in Section 3.2) in conjunction with USEPA Method 19 Equation 19-1:

$$Q_d = F_d * H * 20.9 / (20.9 - \%O_2) / 60 \text{ min/hr}$$

Q_d	=	Calculated flowrate, dscfm
H	=	Boiler heat input, MMBtu/hr
F_d	=	8,710 dscf/MMBtu for natural gas
$\%O_2$	=	Measured oxygen content, dry basis, %vol.

The hourly NO_x and CO mass emission rate (lb/hr and lb/MMscf) for each test period were calculated using the measured CO and NO_x concentrations and the calculated exhaust gas flowrate (and measured hourly natural gas use rate, MMscf/hr).

5.0 QA/QC Activities

5.1 NO_x Converter Efficiency Test

The NO_2 – NO conversion efficiency of the Model 42i analyzer was verified prior to the testing program. A USEPA Protocol 1 certified concentration of NO_2 was injected directly into the analyzer, following the initial three-point calibration, to verify the analyzer's conversion efficiency. The analyzer's NO_2 – NO converter uses a catalyst at high temperatures to convert the NO_2 to NO for measurement. The conversion efficiency of the analyzer is deemed acceptable if the measured NO_x concentration is within 90% of the expected value.

The NO_2 – NO conversion efficiency test satisfied the USEPA Method 7E criteria (measured NO_x concentration was 94.8% of the expected value).

5.2 Gas Divider Certification (USEPA Method 205)

A STEC Model SGD-710C 10-step gas divider was used to obtain appropriate calibration span gases. The ten-step STEC gas divider was NIST certified (within the last 12 months) with a primary flow standard in accordance with Method 205. When cut with an appropriate zero gas, the ten-step STEC gas divider delivered calibration gas values ranging from 0% to 100% (in 10% step increments) of the USEPA Protocol 1 calibration gas that was introduced into the system. The field evaluation procedures presented in Section 3.2 of Method 205 were followed prior to use of gas divider. The field evaluation yielded no errors greater than 2% of the triplicate measured average and no errors greater than 2% from the expected values.

5.3 Instrumental Analyzer Interference Check

The instrumental analyzers used to measure NO_X, CO, O_2 and CO_2 have had an interference response test preformed prior to their use in the field, pursuant to the interference response test procedures specified in USEPA Method 7E. The appropriate interference test gases (i.e., gases that would be encountered in the exhaust gas stream) were introduced into each analyzer, separately and as a mixture with the analyte that each analyzer is designed to measure. All of analyzers exhibited a composite deviation of less than 2.5% of the span for all measured interferent gases. No major analytical components of the analyzers have been replaced since performing the original interference tests.

5.4 Instrument Calibration and System Bias Checks

At the beginning of each day of the testing program, initial three-point instrument calibrations were performed for the NO_X, CO, CO_2 and O_2 analyzers by injecting calibration gas directly into the inlet sample port for each instrument. System bias checks were performed prior to and at the conclusion of each sampling period by introducing the upscale calibration gas and zero gas into the sampling system (at the base of the stainless steel sampling probe prior to the particulate filter and Teflon® heated sample line) and determining the instrument response against the initial instrument calibration readings.

The instruments were calibrated with USEPA Protocol 1 certified concentrations of CO_2, O_2, NO_x, and CO in nitrogen and zeroed using hydrocarbon free nitrogen. A STEC Model SGD-710C ten-step gas divider was used to obtain intermediate calibration gas concentrations as needed.

5.6 Determination of Exhaust Gas Stratification

A stratification test for each boiler exhaust stack was performed during the first performance test sampling period. The stainless steel sample probe was positioned at sample points correlating to 16.7, 50.0 (centroid) and 83.3% of the stack diameter. Pollutant concentration data were recorded at each sample point for a minimum of twice the maximum system response time.

The recorded data for each boiler exhaust stack gas indicate that the measured CO2, O2 and NOx concentrations did not vary by more than 5% of the mean across the stack diameter. Therefore, the boiler stack gas was considered to be non-stratified and the compliance test sampling was performed at a single sampling location within the boiler exhaust stack.

Appendix 5 presents test equipment quality assurance data (NO2 – NO conversion efficiency test data, instrument calibration and system bias check records, calibration gas and gas divider certifications, interference test results and stratification checks).

6.0 Results

6.1 Test Results and Allowable Emission Limits

Boiler operating data and air pollutant emission measurement results for each one-hour test period are presented in Tables 6.1 – 6.4.

Testing was performed to demonstrate compliance with the following air pollutant emission limits specified in MI-ROP-A6175-2014b for the boilers:

Emission Unit	CO		NOx	
	lb/MMBtu	lb/hr	lb/MMBtu	lb/hr
EUBR02	-	-	210 lb/MMscf	39.4 TpY
EUBR03	0.10	15.0	0.12	18.0
EUBR05	0.10	18.0	0.12	21.6
EUBR06	0.10	18.0	0.12	21.6

The measured CO and NOx exhaust gas concentrations and emission rates for each boiler demonstrate compliance with and are less than the limits specified in MI-ROP-A6175-2014b.

6.2 Variations from Normal Sampling Procedures or Operating Conditions

The testing for all pollutants was performed in accordance with USEPA methods and the approved test protocol.

The second test period on Boiler No. 6 was discarded. Approximately 20 minutes into the test period the sampling system plugged with ice. It was discovered that the heating element in the sample line went out and was not heating. The sample line was replaced. The three-test averages for Boiler No. 6 are based on the results of Test Run Nos. 1, 3 and 4.

The first test period on Boiler No. 5 was discarded. Approximately 53 minutes into the test period the boiler tripped a safety alarm and shut down. The boiler was brought back online and testing continued. The three-test averages for Boiler No. 5 are based on the results of Test Run Nos. 2, 3 and 4.

Appendix 4 contains the raw test run data for the discarded runs.

Table 6.1 Measured exhaust gas conditions and air pollutant emission rates for Boiler No. 2 (EUBR02)

Test No. Test date Test period (24-hr clock)	1 1/11/22 1325-1425	2 1/11/22 1443-1543	3 1/11/22 1559-1659	Three Test Average
Boiler Operating Parameters				
Steam output (lb/hr)	43,327	44,123	43,306	43,586
Fuel use (scfh)	56,780	55,584	55,357	55,907
Heat Input (MMBtu/hr)	58.4	57.1	56.9	57.5
Exhaust Gas Composition				
CO_2 content (% vol)	9.16	9.06	9.06	9.09
O_2 content (% vol)	5.53	5.61	5.63	5.59
Exhaust gas flowrate (dscfm)	11,519	11,338	11,303	11,387
Nitrogen Oxides				
NO_X conc. (ppmvd)	88.9	91.3	91.4	90.5
NO_X emissions (lb/hr)	7.34	7.42	7.41	7.39
NOx emissions (TpY)[1]	32.1	32.5	32.5	32.4
Permit Limit (TpY)	-	-	-	*39.4*
NO_X emissions (lb/MMscf)	129	134	134	132
Permit Limit (lb/MMscf)	-	-	-	*210*

Notes for Table 6.1:
1. Based on maximum 8,760 operating hours per year.

Table 6.2 Measured exhaust gas conditions and air pollutant emission rates for Boiler No. 3 (EUBR03)

Test No.	1	2	3	
Test date	1/13/22	1/13/22	1/13/22	Three Test
Test period (24-hr clock)	847-947	1004-1104	1119-1219	Average
Boiler Operating Parameters				
Steam output (lb/hr)	116,920	116,740	116,020	116,560
Fuel use (scfh)	122,000	122,625	122,625	122,417
Heat Input (MMBtu/hr)	125.4	126.1	126.1	125.8
Exhaust Gas Composition				
CO_2 content (% vol)	10.7	10.7	10.6	10.7
O_2 content (% vol)	2.91	2.96	3.14	3.00
Exhaust gas flowrate (dscfm)	21,146	21,321	21,530	21,332
Nitrogen Oxides				
NO_X conc. (ppmvd)	82.2	82.0	81.6	82.0
NO_X emissions (lb/hr)	12.5	12.5	12.6	12.5
Permit Limit (lb/hr)	-	-	-	*18.0*
NO_X emissions (lb/MMBtu)	0.10	0.10	0.10	0.10
Permit Limit (lb/MMBtu)	-	-	-	*0.12*
NO_X emissions (lb/MMscf)	102	102	103	102
Carbon Monoxide				
CO conc. (ppmvd)	0.15	0.26	0.27	0.23
CO emissions (lb/hr)	0.01	0.02	0.03	0.02
Permit Limit (lb/hr)	-	-	-	*15.0*
CO emissions (lb/MMBtu)	0.00	0.00	0.00	0.00
Permit Limit (lb/MMBtu)	-	-	-	*0.10*
CO emissions (lb/MMscf)	0.12	0.20	0.21	0.17

Table 6.3 Measured exhaust gas conditions and air pollutant emission rates for Boiler No. 5 (EUBR05)

Test No. Test date Test period (24-hr clock)	2 1/12/22 1140-1240	3 1/12/22 1255-1355	4 1/12/22 1415-1515	Three Test Average
Boiler Operating Parameters				
Steam output (lb/hr)	129,404	131,744	144,897	135,348
Fuel use (scfh)	122,250	124,750	136,875	127,958
Heat Input (MMBtu/hr)	125.7	128.2	140.7	131.5
Exhaust Gas Composition				
CO_2 content (% vol)	10.3	10.4	10.4	10.3
O_2 content (% vol)	3.61	3.54	3.57	3.58
Exhaust gas flowrate (dscfm)	22,056	22,416	24,633	23,035
Nitrogen Oxides				
NO_X conc. (ppmvd)	63.0	62.5	62.0	62.5
NO_X emissions (lb/hr)	10.0	10.0	10.9	10.3
Permit Limit (lb/hr)	-	-	-	*21.6*
NO_X emissions (lb/MMBtu)	0.08	0.08	0.08	0.08
Permit Limit (lb/MMBtu)	-	-	-	*0.12*
NO_X emissions (lb/MMscf)	81.5	80.6	79.9	80.7
Carbon Monoxide				
CO conc. (ppmvd)	0.03	0.04	0.04	0.04
CO emissions (lb/hr)	0.00	0.00	0.00	0.00
Permit Limit (lb/hr)	-	-	-	*18.0*
CO emissions (lb/MMBtu)	0.00	0.00	0.00	0.00
Permit Limit (lb/MMBtu)	-	-	-	*0.10*
CO emissions (lb/MMscf)	0.02	0.03	0.03	0.03

Table 6.4 Measured exhaust gas conditions and air pollutant emission rates for Boiler No. 6 (EUBR06)

Test No.	1	3	4	
Test date	1/11/22	1/11/22	1/11/22	Three Test
Test period (24-hr clock)	714-814	1000-1100	1115-1215	Average
Boiler Operating Parameters				
Steam output (lb/hr)	155,915	161,969	160,319	159,401
Fuel use (scfh)	161,750	152,812	153,017	155,916
Heat Input (MMBtu/hr)	166.3	157.1	157.2	160.2
Exhaust Gas Composition				
CO_2 content (% vol)	9.92	10.1	10.1	10.1
O_2 content (% vol)	4.31	3.92	3.93	4.05
Exhaust gas flowrate (dscfm)	30,404	28,063	28,115	28,861
Nitrogen Oxides				
NO_X conc. (ppmvd)	69.6	72.5	72.3	71.5
NO_X emissions (lb/hr)	15.2	14.6	14.6	14.8
Permit Limit (lb/hr)	-	-	-	*21.6*
NO_X emissions (lb/MMBtu)	0.09	0.09	0.09	0.09
Permit Limit (lb/MMBtu)	-	-	-	*0.12*
NO_X emissions (lb/MMscf)	93.8	95.5	95.3	94.9
Carbon Monoxide				
CO conc. (ppmvd)	0.10	0.09	0.08	0.09
CO emissions (lb/hr)	0.01	0.01	0.01	0.01
Permit Limit (lb/hr)	-	-	-	*18.0*
CO emissions (lb/MMBtu)	0.00	0.00	0.00	0.00
Permit Limit (lb/MMBtu)	-	-	-	*0.10*
CO emissions (lb/MMscf)	0.08	0.07	0.06	0.07

APPENDIX 1

- Boiler Operating Records

Natural Gas Fueled Boiler
Process Operating Data

Facility: Nexteer
Location: Saginaw, MI
Date: 1/13/22
Unit ID: Boiler No. 3

Date	Boiler No. 3	Test #	Steam Load (kpph)	Fuel Use Rate (kscfh)	Total Fuel Use (kscf)
1/13/2022	8:47	1	113.9	121.3	1495975.4
	9:02	1	117.7	121.9	1496005.5
	9:17	1	119.7	122.4	1496036.0
	9:32	1	116.5	122.7	1496066.8
	9:47	1	116.8	122.9	1496097.4

1/13/2022	Boiler No. 3	Test #	Steam Load (kpph)	Fuel Use Rate (kscfh)	Total Fuel Use (kscf)
	10:04	2	117.6	122.6	1496132.1
	10:19	2	113.5	122.6	1496162.8
	10:34	2	116.7	122.7	1496193.5
	10:49	2	117.6	122.7	1496224.1
	11:04	2	118.3	122.8	1496254.8

1/13/2022	Boiler No. 3	Test #	Steam Load (kpph)	Fuel Use Rate (kscfh)	Total Fuel Use (kscf)
	11:19	3	117.3	122.5	1496285.5
	11:34	3	115.7	122.6	1496316.1
	11:49	3	114.3	122.7	1496346.8
	12:04	3	115.7	122.6	1496377.5
	12:19	3	117.1	122.9	1496408.1

Natural Gas Fueled Boiler
Process Operating Data

Facility: Nexteer
Location: Saginaw, MI
Date: 1/11/22
Unit ID: Boiler No. 6

Date	Boiler No. 6	Test #	Steam Load (pph)	Fuel Use Rate (scfh)	Total Fuel Use (kscf)
1/11/2022	7:14	1	158783	161825	603400.4
	7:29	1	156541	161150	603440.8
	7:44	1	154353	161975	603481.3
	7:59	1	158201	161363	603521.8
	8:14	1	151699	162150	603562.1

1/11/2022	Boiler No. 6	Test #	Steam Load (pph)	Fuel Use Rate (scfh)	Total Fuel Use (kscf)
	10:00	2	165544	153700	603836.4
	10:15	2	169936	153125	603874.6
	10:30	2	157513	153413	603912.8
	10:45	2	159903	153000	603951.1
	11:00	2	156951	151950	603989.3

1/11/2022	Boiler No. 6	Test #	Steam Load (pph)	Fuel Use Rate (scfh)	Total Fuel Use (kscf)
	11:15	3	165833	153163	604027.4
	11:30	3	170000	153125	604065.7
	11:45	3	156187	152788	604103.8
	12:00	3	157512	152813	604142.0
	12:15	3	152062	153195	604180.3

Natural Gas Fueled Boiler
Process Operating Data

Facility: Nexteer
Location: Saginaw, MI
Date: 1/11/22
Unit ID: Boiler No. 2

Date	Boiler No. 2	Test #	Steam Load (pph)	Fuel Use Rate (kscfh)	Total Fuel Use (kscf)
1/11/2022	13:25	1	45074	57.9	316.2
	13:40	1	40059	56.9	330.8
	13:55	1	40940	57.9	345.0
	14:10	1	40080	56.3	359.0
	14:25	1	50483	56.8	373.0

1/11/2022	Boiler No. 2	Test #	Steam Load (pph)	Fuel Use Rate (kscfh)	Total Fuel Use (kscf)
	14:43	2	43000	55.4	389.8
	14:58	2	46081	56.2	403.7
	15:13	2	45205	55.4	417.6
	15:28	2	42141	57.0	431.5
	15:43	2	44188	56.2	445.4

1/11/2022	Boiler No. 2	Test #	Steam Load (pph)	Fuel Use Rate (kscfh)	Total Fuel Use (kscf)
	15:59	3	46133	56.4	460.1
	16:14	3	42436	55.0	474.0
	16:29	3	41889	56.4	487.9
	16:44	3	43147	54.1	501.7
	16:59	3	42927	54.4	515.5

Natural Gas Fueled Boiler
Process Operating Data

Facility: Nexteer
Location: Saginaw, MI
Date: 1/12/22
Unit ID: Boiler No. 5

Date	Boiler No. 5	Test #	Steam Load (pph)	Fuel Use Rate (scfh)	Total Fuel Use (kscf)
1/12/2022	11:40	2	126740	120950	1579611.0
	11:55	2	132499	120725	1579641.3
	12:10	2	130280	120475	1579671.3
	12:25	2	130895	124288	1579702.3
	12:40	2	126606	124450	1579733.3

1/12/2022	Boiler No. 5	Test #	Steam Load (pph)	Fuel Use Rate (scfh)	Total Fuel Use (kscf)
	12:55	3	126301	123925	1579764.4
	13:10	3	134966	124625	1579795.4
	13:25	3	135644	124613	1579826.4
	13:40	3	136205	126075	1579857.8
	13:55	3	125602	126200	1579889.1

1/12/2022	Boiler No. 5	Test #	Steam Load (pph)	Fuel Use Rate (scfh)	Total Fuel Use (kscf)
	14:15	4	122340	126025	1579931.1
	14:30	4	134131	134988	1579964.9
	14:45	4	151777	128600	1579998.8
	15:00	4	161510	137913	1580033.3
	15:15	4	154727	138150	1580068.0