COASTAL AIR CONSULTING INC.

1531 Wyngate Drive • DeLand, FL 32724
Phone (386) 451-0169 • coastalair123@aol.com

COMPLETE EMISSIONS TESTING SERVICES • PERMITTING ASSISTANCE • CEMS CERTIFICATION • AMBIENT AIR MONITORING

COMPLIANCE TEST REPORT

No. 191-009

MIDLAND COGENERATION VENTURE
MIDLAND MICHIGAN

EUENGINE61

Prepared for:

Midland Cogeneration Venture
100 Progress Place
Midland, Michigan 48640

Prepared by:

Coastal Air Consulting, Inc.
1531 Wyngate Dr.
DeLand, FL 32724
(386) 451-0169

Completed On:

November 29, 2023

STATEMENT OF VALIDITY

All testing activities and results represented herein were conducted and obtained in accordance with the approved EPA protocols listed in 40 CFR Part 60. The contents have been reviewed and verified to be true and correct.

Stephen C. Webb

Stephen Webb

Digitally signed by Stephen Webb
DN: cn=Stephen Webb, o=Coastal Air Consulting, ou=CAC, email=coastalair123@aol.com, c=US
Date: 2024.01.04 11:40:55 -05'00'

President
Coastal Air Consulting, Inc.

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PROJECT STATISTICS

Client:	Midland Cogeneration Venture (MCV)
Facility:	Midland Michigan Generating Station
Location:	100 ProgressPlace Midland, Michigan 48640
Type of Process Tested:	EUENGINE61
Test Protocols Performed:	Oxygen/Carbon Dioxide-EPA Method 3A Nitrogen Oxides-EPA Method 7E
Testing Firm:	Coastal Air Consulting, Inc. 1531 Wyngate Dr. DeLand, FL 32724
Test Personnel:	Stephen Webb
Test Dates:	November 29, 2023
Client Representative:	Chad Elrod
Observers:	Dan Droste - MDEQ

1.0 Introduction

Coastal Air Consulting, Inc. (Coastal) was contracted by Midland Cogeneration Venture (MCV) to perform the initial compliance testing for Nitrogen Oxides. Testing was performed to satisfy the requirements contained in the Michigan Department of Environmental Quality (MDEQ) State Registration Number B6527 PTI #80-22.

The testing was performed by Coastal personnel, with the assistance of personnel assigned by Midland Cogeneration Venture (MCV).

2.0 Test Program Summary

A summary of test results developed by this source sampling program is presented in Table 1.

TABLE 1
SUMMARY OF EMISSIONS Unit EUENGINE61 DIESEL ONLY 11/29/2023

Run #	Start	End	Load KW	O2 %	CO2 %	NOx ppm	NOx lb/hr	Fuel Usage / hr
1	1135	1235	4400	13.64	6.01	982.49	140.67	251
2	1245	1345	4400	13.49	6.17	977.06	145.54	250
3	1400	1500	4400	13.34	6.35	982.41	147.59	286
Avg	-	-	4400	13.49	6.18	980.55	144.60	262.33
Permit Limit	-	-	-	-	-	-	260.2	-

3.0 Results of Testing

The testing was conducted according to the procedures in the Code of Federal Regulations, Title 40, Part 60 (40CFR60), Appendix A, Reference Methods 3A and 7E, for Oxygen (O2), Carbon Dioxide (CO2) and Nitrogen Oxides (NOx) respectively. Emissions data analysis was performed according to 40 CFR 60 Appendix B.

A 3-point stratification test was performed and no stratification was found. Sampling and analysis of the stack effluent stream was performed by the Coastal Air Consulting Reference Method analyzer system. NOx, O2 and CO2 in-line analyzers measured NOx, O2 and CO2 concentrations. Initial calibrations of the analyzers with EPA Protocol 1 gases were conducted. Appropriate analyzer calibrations and analyzer bias and drift measurements were performed as required before, during, and after testing.

Three one-hour runs were performed on EUENGINE61. Reference Method NOx, O2 and CO2 analyzer measurements were recorded on a one-minute continuous basis by

the Reference Method CEMS. An average of the NOx, O2 and CO2 concentrations is calculated for each run.

These results indicate that EUENGINE61 passed the compliance testing at the time of testing under normal operating conditions.

4.0 Description of Source

Midland Cogeneration Venture (MCV) is a dual fuel engine generator with maximum hourly rated capacity of 7,385 horsepower, installed August 1979. The engine generator will serve both as a black start unit (utilizing diesel fuel).

5.0 Sampling Procedures

EPA testing methods utilized during this test program include the following;

EPA Method 3A	Gas Analysis for CO_2, O_2, Excess Air and Dry Molecular Weight (Instrumental Analyzer Method)
EPA Method 7E	Determination of Nitrogen Oxide Emissions From Stationary Sources

6.0 Operating Conditions

MCV personnel monitored operating conditions throughout the duration of the sampling program. The data is included in Appendix 2 "Plant Data".

7.0 Quality Assurance Procedures

Quality assurance procedures followed during these testing activities were applied consistent with the requirements outlined by the EPA methods referenced in 40 CFR Parts 60.