

COMPLIANCE TEST REPORT

for

VISIBLE EMISSIONS OBSERVATIONS (VE)

Chem-Mod Coal Handling System

Monroe Power Plant
Monroe, Michigan

April 19, 2018

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AIR QUALITY DIVISION

Prepared By
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EXECUTIVE SUMMARY

DTE Energy's Environmental Management and Resources (EM&R) Field Services Group, performed visible emissions (VE) observations of the Chem-Mod Coal Handling System, at the DTE Electric, Monroe Power Plant, located in Monroe, Michigan. The fieldwork, performed on April 19, 2018, was conducted to satisfy requirements of the New Source Performance Standard (NSPS) under 40 CFR 60, Subparts A & Y and the Michigan Department of Environmental Quality (MDEQ) Permit to Install No. 63-11. Visible emissions observations were conducted on three (3) sources.

The results of the VE observations are highlighted below:

**Visible Emissions Observations Summary
Monroe Chem-Mod System
April 19, 2018**

Source	Visible Emissions (%)
Dust Collector No. 1	0
Dust Collector No. 2	0
S-Sorb Silo Bin Vent	0



1.0 INTRODUCTION

DTE Energy's Environmental Management and Resources (EM&R) Field Services Group, performed visible emissions (VE) observations of the Chem-Mod Coal Handling System at the DTE Electric, Monroe Power Plant, located in Monroe, Michigan. The fieldwork, performed on May 13, 2013, was conducted to satisfy requirements of the New Source Performance Standard (NSPS) under 40 CFR 60, Subparts A & Y and the Michigan Department of Environmental Quality (MDEQ) Permit to Install No. 63-11. Visible emissions observations were conducted on three (3) sources.

All observations were performed for 30-minutes. Each observation consisted of five 6-minute averages as per the requirements in 40CFR 60.257 (a)(ii). All of the stipulations of 40CFR 60.257 were met.

The fieldwork was performed in accordance with EPA Reference Methods and EM&R's test plan that was submitted to MDEQ (Appendix A). The following EM&R personnel participated in the observation program: Mr. Thomas Snyder, Environmental Specialist. Mr. Vincent Verschueren, Monroe Fuels Company, provided process coordination for the testing program.

2.0 SOURCE DESCRIPTION

The Monroe Power Plant (MONPP), located at 3500 E. Front Street, Monroe, Michigan, employs the use of four (4) coal-fired boilers referred to as Units 1, 2, 3 and 4. These Units were placed in service between 1971 and 1974, and have a total electric generating capacity of 3,135 gross megawatts (GMW).

The Monroe Fuels Company (MFC) is a Refined Coal facility located at the Monroe Power Plant. MFC produces Reduced Emission Fuel (REF) for use at Monroe Power Plant. The operation consists of mixing coal with S-sorb and MerSorb additives to produce REF that when combusted results in lower emissions than when burning untreated coal. The REF system process equipment consists of the following, which require VE testing as part of 40 CFR 60, Subpart A and Y regulations and MDEQ Permit No. 63-11. The visible emissions observations were performed on the equipment listed below (See Figures 1 through 3):

1) Dust Collector No.1 (SV-DUSTCOLL-1)

Dust Collector No. 1 controls emissions from the new 60" conveyors receiving coal from existing conveyors FE-11 and FE-12.

**2) Dust Collector No. 2 (SV-DUSTCOLL-2)**

Dust Collector No. 2 controls emissions from existing conveyors CV-19 and CV-20, which receive REF from the new conveyors, and transfers REF to the plant's coal handling system.

3) Silo Bin Vent (SV-SSORBSILO)

The Silo Bin Vent controls emissions from the 750-ton S-Sorb Silo.

The ChemMod system operates as needed to service the treated refined coal needs of the plant.

3.0 SAMPLING AND ANALYTICAL PROCEDURES

DTE Energy obtained emissions measurements in accordance with procedures specified in the USEPA *Standards of Performance for New Stationary Sources*. The sampling and analytical methods used in the testing program are indicated in the table below

Sampling Method	Parameter	Analysis
USEPA Method 9	Visible Emissions	Field data analysis

3.1 VISIBLE EMISSIONS (USEPA METHOD 9)**3.1.1 Sampling Method**

VE observations were conducted in accordance with the procedures outlined in USEPA, "Standards of Performance for New Stationary Sources" (*Federal Register*, 40 CFR 60), Method 9, "Visible Determination of the Opacity of Emissions from Stationary Sources."

3.1.2 Sampling Equipment

VE sampling equipment consisted of EPA Method 9 data sheets, clipboard & pen, compass, and stopwatch. Meteorological data was obtained from the local airport via cell phone and the internet.



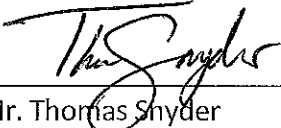
4.0 RESULTS


All observations were performed for 30-minutes. Each observation consisted of five 6-minute averages as per the requirements in 40CFR 60.257(a)(ii). All of the stipulations of 40CFR 60.257 were met. No visible emissions were observed during the testing of the 3 sources. Field data sheets associated with the testing are included in Appendix A.

The ChemMod operations were maintained at their normal operating loads during all VE observations. Process data for the test periods is included in Appendix B.

The observers USEPA Method 9 certification sheets are included in Appendix C.

Results presented in this report are representative of the VE emissions from each source under normal operating conditions.

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