

## 1.0 INTRODUCTION

### 1.1 SUMMARY OF TEST PROGRAM

DTE Energy - Trenton Channel Power Plant contracted Montrose Air Quality Services, LLC (Montrose) to perform a compliance emissions test program on the Boiler No. 9A (EG09) at the DTE Energy - Trenton Channel Power Plant facility located in Trenton, Michigan. The tests were conducted to satisfy the emissions testing requirements as required by 40 CFR Part 63, Subpart UUUU.

The specific objectives were to:

- Verify the hydrogen chloride (HCl) emissions from the Exhaust Stack serving EG09
- Conduct the test program with a focus on safety

Montrose performed the tests to measure the emission parameters listed in Table 1-1.

**TABLE 1-1  
SUMMARY OF TEST PROGRAM**

<b>Test Date(s)</b>	<b>Unit ID/ Source Name</b>	<b>Activity/ Parameters</b>	<b>Test Methods</b>	<b>No. of Runs</b>	<b>Duration (Minutes)</b>
12/22/2020	EG09	HCl	ASTM D6348-12	3	60

To simplify this report, a list of Units and Abbreviations is included in Appendix D.1. Throughout this report, chemical nomenclature, acronyms, and reporting units are not defined. Please refer to the list for specific details.

This report presents the test results and supporting data, descriptions of the testing procedures, descriptions of the facility and sampling locations, and a summary of the quality assurance procedures used by Montrose. The average emission test results are summarized and compared to their respective permit limits in Table 1-2. Detailed results for individual test runs can be found in Section 4.0. All supporting data can be found in the appendices.

The testing was conducted by the Montrose personnel listed in Table 1-3.

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**TABLE 1-2**  
**SUMMARY OF AVERAGE COMPLIANCE RESULTS -**  
**EG09**  
**DECEMBER 22, 2020**

<b>Parameter/Units</b>	<b>Average Results</b>	<b>Emission Limits</b>
<b>Hydrogen Chloride (HCl)</b> lb/MMBtu*	<0.0003	0.002

\* The "<" symbol indicates that compound was below the Minimum Detection Limit (MDL) of the analytical method. See Section 4.2 for details.



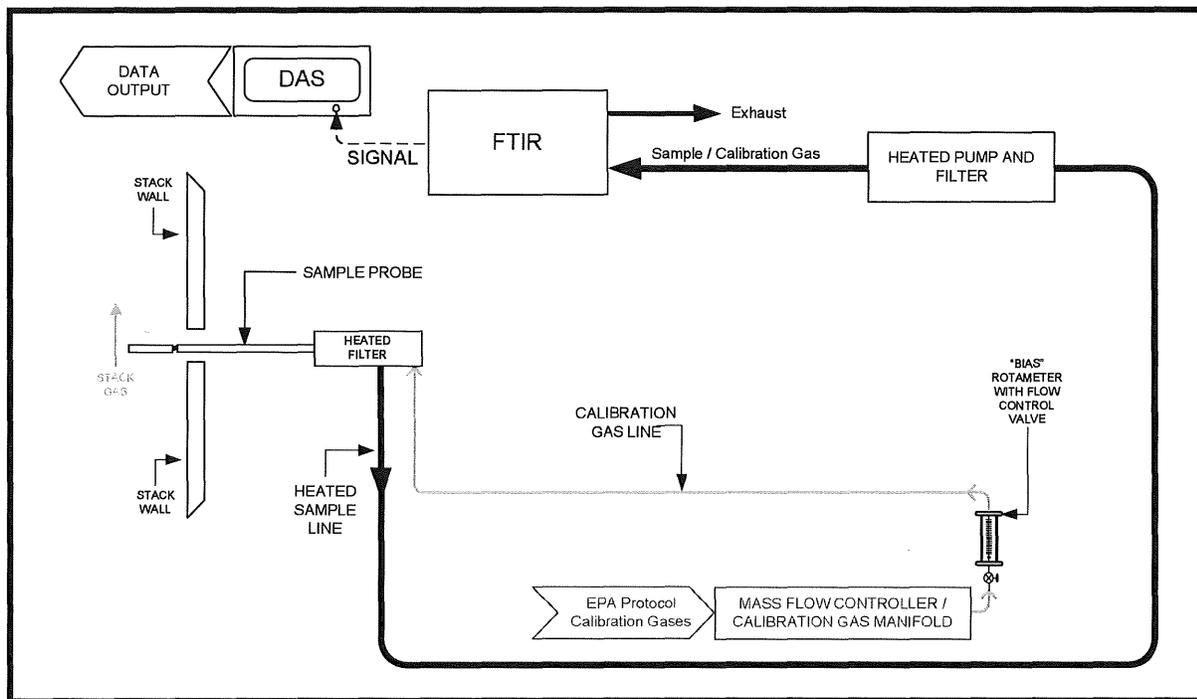
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Test personnel and observers are summarized in Table 1-3.

**TABLE 1-3  
TEST PERSONNEL AND OBSERVERS**

<b>Name</b>	<b>Affiliation</b>	<b>Role/Responsibility</b>
Matthew Young	Montrose	District Manager, QI
David Schuberg	Prism / Montrose	FTIR Analysis, QI
Kailyn Johnson	DTE Energy	Observer/Client Liaison/Test Coordinator

**FIGURE 3-1**  
**ASTM METHOD D6348-12 SAMPLING TRAIN**



### 3.2 PROCESS TEST METHODS

Process samples of coal were taken by DTE Energy personal and analyzed for Proximate and Ultimate fuel analysis.

## **4.0 TEST DISCUSSION AND RESULTS**

### **4.1 FIELD TEST DEVIATIONS AND EXCEPTIONS**

No field deviations or exceptions from the test plan or test methods occurred during this test program.

### **4.2 PRESENTATION OF RESULTS**

The average results are compared to the permit limits in Table 1-2. The results of individual compliance test runs performed are presented in Table 4-1. Emissions are reported in units consistent with those in the applicable regulations or requirements. Additional information is included in the appendices as presented in the Table of Contents.

Concentration values in Tables 1-2 and 4-1 denoted with a '<' were measured to be below the minimum detection limit (MDL) of the applicable analytical method. Emissions denoted with a '<' in Tables 1-2 and 4-1 were calculated utilizing the applicable MDL concentration value instead of the "as measured" concentration value.

The %R correction stated in 40 CFR Part 63 Subpart UUUUU is not applicable for the HCl due to the HCl results being below the MDL.

**TABLE 4-1  
HCl EMISSIONS RESULTS -  
EG09**

Run Number	1	2	3	Average
<b>Date</b>	12/22/2020	12/22/2020	12/22/2020	--
<b>Time</b>	8:45-9:45	9:53-10:53	11:00-12:00	--
<b>Process Data</b>				
F-factor, scf/MMBtu	1,905	1905	1905	1905
<b>Flue Gas Parameters</b>				
CO <sub>2</sub> , % volume wet	11.0	10.9	11.0	11.0
moisture content, % volume	10.5	10.5	10.4	10.5
<b>Hydrogen Chloride (HCl)</b>				
ppmvw*	<0.20	<0.20	<0.20	<0.20
lb/MMBtu*	<0.000328	<0.000331	<0.000328	<0.000329

\* The "<" symbol indicates that compound was below the Minimum Detection Limit (MDL) of the analytical method. See Section 4.2 for details.

## 5.0 INTERNAL QA/QC ACTIVITIES

### 5.1 QA/QC AUDITS

ASTM Method D6348-12 analytical QA/QC results are included in the laboratory report. The method QA/QC criteria were met.

### 5.2 QA/QC DISCUSSION

All QA/QC criteria were met during this test program.

### 5.3 QUALITY STATEMENT

Montrose is qualified to conduct this test program and has established a quality management system that led to accreditation with ASTM Standard D7036-04 (Standard Practice for Competence of Air Emission Testing Bodies). Montrose participates in annual functional assessments for conformance with D7036-04 which are conducted by the American Association for Laboratory Accreditation (A2LA). All testing performed by Montrose is supervised on site by at least one Qualified Individual (QI) as defined in D7036-04 Section 8.3.2. Data quality objectives for estimating measurement uncertainty within the documented limits in the test methods are met by using approved test protocols for each project as defined in D7036-04 Sections 7.2.1 and 12.10. Additional quality assurance information is included in the report appendices. The content of this report is modeled after the EPA Emission Measurement Center Guideline Document (GD-043).

### EG09 PROCESS AND SAMPLING LOCATION SCHEMATIC

