

1.0 Introduction

1.1 Summary of Test Program

Angelo Iafrate Construction Company (State Registration No.: P1296) contracted Montrose Air Quality Services, LLC (Montrose) to perform a fugitive emissions (FE) test program on the Crusher Operations at the Angelo Iafrate Construction facility located in Highland Park, Michigan. Testing was performed on August 12, 2022, for the purpose of satisfying the emission testing requirements pursuant to Michigan Department of Environment, Great Lakes, and Energy (EGLE) General Permit-to-Install (PTI) and 40 CFR Part 60, Subpart 000.

The specific objectives were to:

- Verify the percent opacity of FE at eleven (11) emission points associated with Crushing Operations
- 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

Test Date(s)	Unit ID/ Source Name	Activity/Parameters	Test Methods	No. of Emission Points	Duration (Minutes)
8/12/2022	Crusher Operations	Opacity	EPA 9	11	30

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. The tests were conducted according to the test plan dated July 19, 2022, that was submitted to the EGLE.

RECEIVED

AUG 30 2022

AIR QUALITY DIVISION

Table 1-2
Summary of Fugitive Emissions Results – Crushing Operations
August 12, 2022

Sources	Parameter/Units	Average Results*	Emission Limits
Fugitive Emissions (FE)			
Crusher	% opacity	4.2	12
Conveyor 3	% opacity	0.0	7
Conveyor 3 Transfer Point	% opacity	0.0	7
Conveyor 1	% opacity	0.0	7
Conveyor 1 Transfer Point	% opacity	0.0	7
Conveyor 2 Transfer Point	% opacity	0.0	7
Conveyor 4	% opacity	0.0	7
Conveyor 4 Transfer Point	% opacity	0.5	7
Conveyor 5	% opacity	0.0	7
Conveyor 5 Transfer Point	% opacity	0.7	7
Storage Pile	% opacity	0.0	7

* Results are based on the average of five 6-minute averages, as stipulated in 40 CFR 60.675(c)(3).

1.2 Key Personnel

A list of project participants is included below:

Facility Information

Source Location: Angelo Iafrate Construction Company
 13751 Hamilton Avenue
 Highland Park, MI 48203

Project Contact: John Marshall
 Role: Site Supervisor
 Company: Angelo Iafrate Construction
 Telephone: 810-217-5139

Agency Information

Regulatory Agency: EGLE
 Agency Contact: Tammy Bell
 Telephone: 313-330-0105
 Email: bellT4@michigan.gov

3.0 Sampling and Analytical Procedures

EPA Method 9, Visual Determination of the Opacity of Emissions

EPA Method 9 is used to observe the visual opacity of emissions (opacity). The observer stands at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140° sector to their back. The line of vision is perpendicular to the plume direction and does not include more than one plume diameter. Observations are recorded at 15-second intervals and are made to the nearest 5% opacity. The qualified observer is certified according to the requirements of EPA Method 9, section 3.1.

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 Tables 4-1 through 4-11. 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.

**Table 4-1
Fugitive Emissions Results -
Crusher**

	1	2	3	4	5	Average
Date	8/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022	--
Time	7:15-7:21	7:21-7:31	7:31-7:37	7:37-7:43	7:43-7:49	--
Six-Minute Average Opacity						
opacity, %	3.8	2.5	4.6	5.0	5.0	4.2

**Table 4-2
Fugitive Emissions Results -
Conveyor 3**

	1	2	3	4	5	Average
Date	8/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022	--
Time	7:15-7:21	7:21-7:31	7:31-7:37	7:37-7:43	7:43-7:49	--
Six-Minute Average Opacity						
opacity, %	0.0	0.0	0.0	0.0	0.0	0.0

**Table 4-3
Fugitive Emissions Results -
Conveyor 3 Transfer Point**

	1	2	3	4	5	Average
Date	8/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022	--
Time	7:15-7:21	7:21-7:31	7:31-7:37	7:37-7:43	7:43-7:49	--
Six-Minute Average Opacity						
opacity, %	0.0	0.0	0.0	0.0	0.0	0.0

**Table 4-4
Fugitive Emissions Results -
Conveyor 1**

	1	2	3	4	5	Average
Date	8/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022	--
Time	7:50-7:56	7:56-8:02	8:02-8:08	8:08-8:14	8:14-8:20	--
Six-Minute Average Opacity						
opacity, %	0.0	0.0	0.0	0.0	0.0	0.0

**Table 4-5
Fugitive Emissions Results -
Conveyor 1 Transfer Point**

	1	2	3	4	5	Average
Date	8/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022	--
Time	7:50-7:56	7:56-8:02	8:02-8:08	8:08-8:14	8:14-8:20	--
Six-Minute Average Opacity						
opacity, %	0.0	0.0	0.0	0.0	0.0	0.0

**Table 4-6
Fugitive Emissions Results -
Conveyor 2 Transfer Point**

	1	2	3	4	5	Average
Date	8/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022	--
Time	7:50-7:56	7:56-8:02	8:02-8:08	8:08-8:14	8:14-8:20	--
Six-Minute Average Opacity						
opacity, %	0.0	0.0	0.0	0.0	0.0	0.0

**Table 4-7
Fugitive Emissions Results -
Conveyor 4**

	1	2	3	4	5	Average
Date	8/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022	--
Time	8:20-8:26	8:26-8:42	8:42-8:48	8:48-8:56	8:56-9:02	--
Six-Minute Average Opacity						
opacity, %	0.0	0.0	0.0	0.0	0.0	0.0

**Table 4-8
Fugitive Emissions Results -
Conveyor 4 Transfer Point**

	1	2	3	4	5	Average
Date	8/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022	--
Time	8:20-8:26	8:26-8:42	8:42-8:48	8:48-8:56	8:56-9:02	--
Six-Minute Average Opacity						
opacity, %	0.0	1.0	0.2	0.8	0.6	0.5

**Table 4-9
Fugitive Emissions Results -
Conveyor 5**

	1	2	3	4	5	Average
Date	8/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022	--
Time	8:20-8:26	8:26-8:42	8:42-8:48	8:48-8:56	8:56-9:02	--
Six-Minute Average Opacity						
opacity, %	0.0	0.0	0.0	0.0	0.0	0.0

**Table 4-10
Fugitive Emissions Results -
Conveyor 5 Transfer Point**

	1	2	3	4	5	Average
Date	8/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022	--
Time	9:02-9:08	9:08-9:14	9:14-9:20	9:20-9:26	9:26-9:32	--
Six-Minute Average Opacity						
opacity, %	0.0	0.0	0.6	1.3	1.5	0.7

**Table 4-11
Fugitive Emissions Results -
Storage Pile**

	1	2	3	4	5	Average
Date	8/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022	--
Time	9:02-9:08	9:08-9:14	9:14-9:20	9:20-9:26	9:26-9:32	--
Six-Minute Average Opacity						
opacity, %	0.0	0.0	0.0	0.0	0.0	0.0

RECEIVED
AUG 30 2022
AIR QUALITY DIVISION

5.0 Internal QA/QC Activities

5.1 QA/QC Audits

EPA Method 9 was performed by a certified Visible Emissions Evaluator. For quality assurance, the observer obtained a view of the emissions with the best available contrasting background and with the sun oriented in the 140° sector to their back. Readings were taken every 15 seconds and made to the nearest 5% opacity.

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).