

## **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)	or a function of annia and a second s
8/12/2022	Crusher Operations	Opacity	EPA 9	11	30	Macana and a second second

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.

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#### 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



#### **Testing Company Information**

Testing Firm:	Montrose Air Quality Services, LLC	
Contact:	Jeffrey Peitzsch	Robert J. Lisy, Jr.
Title:	Field Technician/VE Observer	Reporting Hub Manager
Telephone:	248-548-8070	440-262-3760
Email:	jbpeitzsch@montrose-env.com	rlisy@montrose-env.com

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

## Table 1-3 Test Personnel and Observers

Name	Affiliation	Role/Responsibility
Jeffrey Peitzsch	Montrose	Visible Emissions Observer, QI
John Marshall	Angelo Iafrate Construction	Observer/Client Liaison/Test Coordinator

## 2.0 Plant and Sampling Location Descriptions

## **2.1 Process Description**

The Angelo Iafrate Construction Company crushes concrete for use in new road construction. Raw materials are received and crushed, and the product is trucked from the Angelo plant at 13751 Hamilton Avenue in Highland Park, Michigan. The Crusher Operations processing plant equipment consists of one crusher, two feeders, one screen, and five belt conveyors.

## 2.2 Operating Conditions

Emission tests were performed during normal Crusher Operations.



## 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 Av	erage Opacity		**************************************		No Provident NEO CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRA	
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 Av	erage 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 Av	erage Opacity	diananananan kananan kanan k	Aur da dar en		de a menter en	
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 Av	erage Opacity	(b))	all na bha ann ann ann ann ann ann ann ann ann a		6v z tr + + / / / / / / / / / / / / / / / / /	
opacity, %	0.0	0.0	0.0	0.0	0.0	0.0

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## 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 Av	erage Opacity	An	5nd1=er581001000000000000000000000000000000000	n för sett den skan den en e		
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 Av	erage Opacity		422222044	(historesistensisten) variaten konstanta kan kan kan kan kan kan kan kan kan ka	Readministration ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	
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 Av	erage Opacity	de an d'a sen à continue à clinique de la laborar d'activa de la succe demonsion de montanes de				
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 Av	erage Opacity	Den a sense non a delse sense non a verse sons al de d'avenad d'hren Cohorna bah				
opacity, %	0.0	1.0	0.2	0.8	0.6	0.5

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## 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 Av	erage Opacity		An	Read Constant and Constant Const		
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 Av	erage Opacity	diana internet and a second		***************************************		
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 Av	erage Opacity	Annany,	nine hann ei bei de			
opacity, %	0.0	0.0	0.0	0.0	0.0	0.0

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## 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).