

FINAL REPORT



CLEVELAND CLIFFS

DEARBORN, MICHIGAN

QUARTER 3 (Q3) 2023 RETEST SOURCE TESTING REPORT: BASIC OXYGEN FURNACE (EUBOF) AND BASIC OXYGEN FURNACE SHOP OPERATIONS (FGBOFSHOP)

RWDI #2303982.03

October 27, 2023

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 CLEVELAND CLIFFS - DEARBORN WORKS**



RWDI#2303982.03
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EXECUTIVE SUMMARY

RWDI USA LLC (RWDI) was retained by Cleveland-Cliffs Dearborn Works (CCDW) to complete the Quarter 3 (Q3) 2023 Retest emission sampling program at their facility located at 4001 Miller Road, Dearborn, Michigan. The purpose of the emissions test program was to verify emissions required by Michigan Department of Environment, Great Lakes, and Energy (EGLE) Renewable Operating Permit MI-ROP-A8640-2016a, and to comply with the testing requirements specified within the current draft First Material Modification to the consent decree, Civil Action No. 15-cv-11804, DJ # 90-5-2-1-10702. The test program consisted of testing for particulate matter, particulate matter less than 10 microns (PM₁₀), particulate matter less than 2.5 microns (PM_{2.5}), lead (Pb), manganese (Mn), and visible emissions (VE) from the Electrostatic Precipitator (ESP) (SVBOFESP) and Pb and Mn from the Secondary Emission Control (SEC) Baghouse (SVBOFBH). In addition, visible emission observations were conducted on the BOF Roof Monitor at the request of EGLE. Pb and Mn testing was performed simultaneously on the ESP and the SEC Baghouse. Condensable Particulate Emissions (CPM) was measured from the ESP along with the FPM testing and PM_{2.5} and PM₁₀ emissions are reported as the sum of FPM and CPM. The original test was completed the week of July 31st, 2023. The original test resulted in an elevated level of manganese that was judged by Cleveland-Cliffs to be an anomalous result. The retest was conducted under almost identical ESP operating conditions.

Executive Table i: Test Results

Source	Parameter	Concentration	
		Average Emission Rate	Emission Limit
BOF ESP	PM (Filterable only)	0.0021 gr/dscf	0.0152 gr/dscf
		7.83 lb/hr	62.6 lb/hr
	PM ₁₀ (Filterable + Condensable)	13.68 lb/hr	47.5 lb/hr
	PM _{2.5} (Filterable + Condensable)	13.68 lb/hr	46.85 lb/hr
	Lead	0.017 lb/hr	--
	Manganese	0.061 lb/hr	--
	Visible Emissions	1%, 6-minute average ⁽¹⁾⁽²⁾	20%, 6-minute average ⁽¹⁾
BOF SEC Baghouse	Lead	0.0034 lb/hr	--
	Manganese	0.0087 lb/hr	0.07 lb/hr
BOF ESP & SEC Baghouse Combined	Lead	0.020 lb/hr	0.067 lb/hr
	Manganese	0.070 lb/hr	0.10 lb/hr
BOF Roof Monitor	Visible Emissions	4%, 3-minute Average ⁽²⁾	15% 3-minute Average (FGBOFSHOP) 20% 3-minute Average (EUBOF)

Notes: (1) One 6-minute average opacity of up to 27% is exempt per hour
 (2) Reported as maximum 3-minute average observed for BOF Roof Monitor and 6-minute average for ESP during all observations





TABLE OF CONTENTS

1	INTRODUCTION.....	1
1.1	Location and Dates of Testing.....	1
1.2	Purpose of Testing.....	1
1.3	Description of Source.....	1
1.4	Personnel Involved in Testing.....	2
2	SUMMARY OF RESULTS.....	3
2.1	Operating Data.....	3
2.2	Applicable Permit Number.....	3
3	SOURCE DESCRIPTION.....	3
3.1	Description of Process and Emission Control Equipment.....	3
3.2	Process Flow Sheet or Diagram (if applicable).....	3
3.3	Type and Quantity of Raw and Finished Materials.....	4
3.4	Normal Rated Capacity of Process.....	4
3.5	Process Instrumentation Monitored During the Test.....	4
4	SAMPLING AND ANALYTICAL PROCEDURES.....	5
4.1	Description of Sampling Train and Field Procedures.....	5
4.1.1	Stack Velocity, Temperature, and Volumetric Flow Rate Determination USEPA Method 1-4.....	5
4.1.2	Particulate Matter and Condensable Particulate Matter USEPA Method 5/202.....	6
4.1.3	Metals (Lead and Manganese) USEPA Method 29.....	6
4.1.4	Visible Emissions USEPA Method 9.....	6
4.1.5	Method Deviations and Comments.....	7
4.2	Description of Recovery and Analytical Procedures.....	7
4.3	Sampling Port Description.....	8
5	TEST RESULTS AND DISCUSSION.....	8
5.1	Detailed Results.....	8
5.1.1	Discussion of Results.....	8



**QUARTER 3 (Q3) 2023 RETEST SOURCE TESTING REPORT:
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 CLEVELAND CLIFFS - DEARBORN WORKS**



RWDI#2303982.03
 October 27, 2023

5.2	Process Upset Conditions During Testing.....	9
5.3	Maintenance Performed in Last Three Months	9
5.4	Audit Samples.....	9
5.5	Calibration Sheets	9
5.6	Field Data Sheets	9
5.7	Laboratory Data	9
5.8	Sample Calculations	9

LIST OF TABLES (IN REPORT)

Table 1.4:	List of Testing Personnel.....	1
Table 5.1:	Table of Results.....	4

LIST OF TABLES (TABLE TAB)

Table 1:	Summary of Sampling Parameters and Methodology
Table 2A:	Sampling Summary and Sample Log (SVBOFESP)
Table 2B:	Sampling Summary and Sample Log (SVBOFBH)
Table 3A:	Sampling Summary – Flow Characteristics – SVBOFESP
Table 3B:	Sampling Summary – Flow Characteristics - SVBOFBH
Table 4A:	Total Particulate Matter and Metals – Averaged Results – SVBOFESP
Table 4B:	Metals – Averaged Results - SVBOFBH
Table 4C:	Metals – Averaged Results – SVBOFESP + SVBOFBH
Table 5:	Visible Emissions Results – SVBOFESP





FIGURES (FIGURE TAB)

- Figure 1:** Sampling Locations and Traverse Points - SVBOFESP
- Figure 2:** Sampling Locations and Traverse Points - SVBOFBH
- Figure 3:** Schematic of USEPA Method 5/202 Sampling Train
- Figure 4:** Schematic of USEPA Method 29 Sampling Train

LIST OF APPENDICES

- Appendix A:** Process Data
- Appendix B:** ESP (SVBOFESP) Particulate and Metals Results
 - Appendix B1:** ESP (SVBOFESP) Particulate Emissions Results
 - Appendix B2:** ESP (SVBOFESP) Metal Emissions Results
- Appendix C:** Secondary Baghouse (SVBOFBH) Metals Emissions Results
- Appendix D:** O₂ CO₂ Data
- Appendix E:** Calibration Data
- Appendix F:** Field Data
 - Appendix F1:** ESP (SVBOFESP) – Particulate and Metals Field Notes
 - Appendix F2:** Secondary Baghouse (SVBOFBH) – Metal Field Notes
 - Appendix F3:** ESP (SVBOFESP) & Secondary Baghouse (SVBOFBH) – Oxygen/Carbon Dioxide Field Notes
- Appendix G:** Laboratory Data
- Appendix H:** Example Calculations
- Appendix I:** Visible Emissions Data
- Appendix J:** EGLE Correspondence & Source Testing Plan





1 INTRODUCTION

RWDI USA LLC (RWDI) was retained by Cleveland-Cliffs Dearborn Works (CCDW) to complete the Quarter 3 (Q3) 2023 emission sampling retest program at their facility located at 4001 Miller Road, Dearborn, Michigan. The test program consisted of testing for total particulate matter (TPM), particulate matter less than 10 microns (PM₁₀), particulate matter less than 2.5 microns (PM_{2.5}), lead (Pb), manganese (Mn), and visible emissions (VE) from the Electrostatic Precipitator (ESP) and Pb and Mn from the Secondary Emission Control (SEC) Baghouse. In addition, VE observations were conducted on the BOF Roof Monitor at the request of EGLE. Pb and Mn testing was performed simultaneously on the ESP and the SEC Baghouse. Condensable Particulate Emissions (CPM) was measured from the ESP along with the FPM testing, and PM_{2.5} and PM₁₀ emissions are reported as the sum of FPM and CPM. Original testing was completed the week of July 31st, 2023.

1.1 Location and Dates of Testing

The test program was completed on September 19th and 20th, 2023.

1.2 Purpose of Testing

The purpose of the emissions test program was to verify emissions required by Michigan Department of Environment, Great Lakes, and Energy (EGLE) Renewable Operating Permit MI-ROP-A8640-2016a and to comply with the testing requirements specified within the current draft First Material Modification to the consent decree, Civil Action No. 15-cv-11804, DJ # 90-5-2-1-10702. This was a retest due to elevated manganese emissions that were measured in the previous test. This was judged by Cleveland-Cliffs to be an anomaly and the retest was conducted under almost identical ESP operating conditions. The original testing was completed the week of July 31st, 2023.

1.3 Description of Source

CCDW is a steel-producing facility. Scrap metal is charged into the basic oxygen furnace (BOF) vessel and then molten iron is charged into the vessel on top of the scrap. Fluxing agents are also added during the steelmaking process. Oxygen is blown into the molten iron/scrap mixture causing the scrap to melt and refining the iron into steel by reducing the carbon content. The heat from the steelmaking process comes from the reaction of oxygen with the dissolved carbon in the molten iron.



3.3 Type and Quantity of Raw and Finished Materials

Approximately 250 tons of molten steel and 30 tons of slag is produced at the BOF during each heat. A typical heat will process approximately 200 tons of liquid iron and 60-80 tons of scrap. Lime is added as a flux and various alloys are added based on the final specifications of the steel being produced.

3.4 Normal Rated Capacity of Process

Approximately 250 tons steel per batch.

3.5 Process Instrumentation Monitored During the Test

The process data recorded during the testing can be found in **Appendix A**. The following parameters were recorded:

- Steel Production Rate, TPH
- Start and stop time of each steel production cycle and oxygen blow
- Average oxygen blow rate per heat
- Start and stop time of charging, tapping, and reladling per heat
- Number and identification of the ESP casings, compartments, and fields in operation per heat
- Average ESP inlet draft during oxygen blowing measured per heat
- Average primary louver position of the blowing vessel per heat
- ESP COMS 1-hour and 6-minute block average data per run
- Baghouse pressure drop and bag leak detection readings per heat
- Identification of baghouse compartments in operation per heat
- Manganese and lead concentration in hot metal per heat
- Analysis of a dust sample for Pb and Mn from the ESP hopper per test run

4 SAMPLING AND ANALYTICAL PROCEDURES

4.1 Description of Sampling Train and Field Procedures

4.1.1 Stack Velocity, Temperature, and Volumetric Flow Rate Determination USEPA Method 1-4

The exhaust velocities and flow rates were determined following the US EPA Method 2, "Determination of Stack Gas Velocity and Flow Rate (Type S Pitot Tube)". Velocity measurements were taken with a pre-calibrated S-Type pitot tube. Volumetric flow rates were determined following the equal area method as outlined in US EPA Method 1. Temperature measurements were made simultaneously with the velocity measurements and were conducted using a chromel-alumel type "k" thermocouple in conjunction with a digital temperature indicator.

The dry molecular weight of the stack gas was determined following calculations outlined in U.S. EPA Method 3/3A, "Gas Analysis for the Determination of Dry Molecular Weight (Instrumental) for the ESP and SEC. RWDI collected integrated sample bags for each of the ESP and SEC using the orsat pump from the sampling consoles. The integrated bag samples were collected over the duration of each test period. The bag samples were delivered to a continuous monitoring system for CO₂ and O₂ measurements. The CO₂ and O₂ analyzers were operated according to USEPA Method 3A. Prior to testing, a 3-point analyzer calibration error check was conducted using USEPA protocol gases. The calibration error check was performed by introducing zero, mid and high-level calibration gases directly into the analyzer. The calibration error check was performed to confirm that the analyzer response is within $\pm 2\%$ of the certified calibration gas introduced. Prior to each test run, a system-bias test was performed where known concentrations of calibration gases were introduced at the probe tip to measure if the analyzers response was within $\pm 5\%$ of the introduced calibration gas concentrations. At the conclusion of each set of bag samples a system-bias check was performed to evaluate the percent drift from pre and post-test system bias checks. The system bias checks were used to confirm that the analyzer did not drift greater than $\pm 3\%$ throughout a test run.

Zero and upscale calibration checks were conducted both before and after each set of bag samples in order to quantify measurement system calibration drift and sampling system bias. Upscale is either the mid- or high-range gas, whichever most closely approximates the flue gas level. During these checks, the calibration gases were introduced into the sampling system at a conjunction where the sample bag would be introduced to ensure that system was working properly. The analyzers were calibrated on-site using EPA Protocol No. 1 certified calibration mixtures.

Stack moisture content was determined through direct condensation from the PM or metals sampling trains according to U.S. EPA Method 4, "Determination of Moisture Content of Stack Gases".



4.1.2 Particulate Matter and Condensable Particulate Matter USEPA Method 5/202

Filterable particulate matter was collected isokinetically by USEPA Method 5, and the condensable particulate matter was sampled by USEPA Method 202. The sampling train consisted of a stainless-steel nozzle, glass-lined probe, filter, pot belly impinger, empty impinger, CPM filter, water knockout impinger, and silica gel impinger. Samples were sent to the laboratory for analysis. A schematic of the sampling train is included in **Figure Section (Figure 3)**.

For the Total Particulate, only the filterable results were used for comparison to the Permit Limits. For PM₁₀ and PM_{2.5}, filterable + condensable results were used for comparison to applicable Permit Limits.

4.1.3 Metals (Lead and Manganese) USEPA Method 29

A sample of stack gas was drawn from the stack isokinetically to measure metals. The sampling train consisted of a Teflon coated nozzle, a glass-lined probe, quartz filter, and five impingers in series. Particulate metals were collected in the nozzle, probe, and filter. The gaseous emissions were collected in the impinger train with the first impinger being empty, the next two impingers containing acidified hydrogen peroxide, an empty fourth impinger, and a final impinger containing silica gel. The recovery process followed USEPA Method 29, and all samples were sent to the laboratory for analysis. A schematic of the sampling train is included in **Figure Section (Figure 4)**.

4.1.4 Visible Emissions USEPA Method 9

Visible emissions were determined in accordance with U.S. EPA Reference Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources". For the visible emission observations, readings were observed every 15 seconds over a continuous period of time. A certified observer stood at a distance that provided a clear view of the emissions with the sun oriented in the 140 degree sector at their back. Observations were taken every 15 seconds. A minimum of one 60-minute, 1 heat observation was conducted during each particulate matter test run on the ESP.

Visible emissions readings for the ESP were taken by RWDI staff. Additional VE measurements were taken by a 3rd party vendor for the BOF Roof Monitor. These readings covered 7 heats and were conducted while sampling was taking place on the ESP. All results are provided in this report (See **Appendix I**).

4.1.5 Method Deviations and Comments

The following modifications were provided and accepted in the Source Testing Plan. All modifications were applied during the testing.

1. CCDW operates two BOF Vessels that exhaust to the common ESP. While oxygen blowing can only take place on one vessel at a time, oxygen blowing could be occurring on a vessel while performing charging, tapping, and deslagging on the other vessel. Some overlapping into a heat on the other vessel at the end of a production cycle could occur. All tests ended at the end of the production cycle regardless of what is taking place on the other vessel. Production will be prorated to account for these occurrences where there is overlap.
2. No port changes took place during oxygen blowing on the ESP. When it was time for a port change, the probe was left at the same port and the points were re-traversed until the oxygen blow was completed. The probe was then moved to the next port and testing was resumed at the first point.
3. In cases where the end of the sampling run did not correspond with the end of a heat, the points were traversed in reverse order until the heat was completed.

The following modification was provided and accepted in the Source Testing Plan. It did not apply during this testing event.

4. Each batch consists of 5 steps: 1) scrap charge; 2) hot metal charge; 3) oxygen blowing; 4) tapping; and 5) deslagging. It is a common occurrence for the scrap charge to take place at a time that is far in advance of charging hot metal. For this reason, there could be occasions where starting the test on a hot metal charge is desirable as it is a better indicator of when the batch is actually starting. In these cases, Cleveland-Cliffs is proposing that the integral heat requirement be satisfied by testing during the scrap charge of the following heat.

The following modification was accepted by EGLE onsite. This was not specified in the test plan for this test but will be specified as a modification to the test method for subsequent tests.

5. The dry molecular weight of the stack gas was determined following calculations outlined in U.S. EPA Method 3/3A, "Gas Analysis for the Determination of Dry Molecular Weight (Instrumental) for the ESP and SEC. RWDI collected integrated sample bags for each of the ESP and SEC using the orsat pump from the sampling consoles. The integrated bag samples were collected over the duration of each test period. The bag samples were delivered to our continuous monitoring system for CO₂ and O₂ measurements. The CO₂ and O₂ analyzers were operated according to USEPA Method 3A.

In addition, field blank samples were collected prior to each test to provide an indication of whether sample contamination took place. Since the results showed no anomalous results, these samples were not analyzed.

4.2 Description of Recovery and Analytical Procedures

The recovery followed USEPA Method 5, 202, and 29.



4.3 Sampling Port Description

EUBOF ESP (SVBOFESP) is a circular stack with an inner diameter of 204". 4 ports are used for testing.

FGBOFSHOP (SVBOFBH) is a circular stack with an inner diameter of 222". 4 ports are used for testing.

5 TEST RESULTS AND DISCUSSION

5.1 Detailed Results

Table 5.1: Test Results

Source	Parameter	Concentration	
		Average Emission Rate	Emission Limit
BOF ESP	PM (Filterable only)	0.0021 gr/dscf	0.0152 gr/dscf
		7.83 lb/hr	62.6 lb/hr
	PM ₁₀ (Filterable + Condensable)	13.68 lb/hr	47.5 lb/hr
	PM _{2.5} (Filterable + Condensable)	13.68 lb/hr	46.85 lb/hr
	Lead	0.017 lb/hr	--
	Manganese	0.061 lb/hr	--
	Visible Emissions	1%, 6-minute average ⁽¹⁾⁽²⁾	20%, 6-minute average ⁽¹⁾
BOF SEC Baghouse	Lead	0.0034 lb/hr	--
	Manganese	0.0087 lb/hr	0.07 lb/hr
BOF ESP & SEC Baghouse Combined	Lead	0.020 lb/hr	0.067 lb/hr
	Manganese	0.070 lb/hr	0.10 lb/hr
BOF Roof Monitor	Visible Emissions	4%, 3-minute Average ⁽²⁾	15% 3-minute Average (FGBOFSHOP) 20% 3-minute Average (EUBOF)

Notes: (1) One 6-minute average opacity of up to 27% is exempt per hour
 (2) Reported as maximum 3-minute average observed for BOF Roof Monitor and 6-minute average for ESP during all observations

5.1.1 Discussion of Results

Detailed results for the program are provided in the following Appendices:

- SVBOFESP (ESP) Particulate Matter and Metals – **Appendix B**
- SVBOFBH (Secondary Baghouse) Metals – **Appendix C**
- Visible Emissions – **Appendix I**



5.2 Process Upset Conditions During Testing

There were no process upsets during testing.

5.3 Maintenance Performed in Last Three Months

The final phase of the ESP Rebuild Project was completed on March 31, 2023 when ESP casing 3 was placed into service. Other than the completion of the ESP rebuild project, only routine maintenance was performed within the last three months.

5.4 Audit Samples

This test did not require any audit samples.

5.5 Calibration Sheets

Calibration sheets can be found in **Appendix E**.

5.6 Field Data Sheets

Field data sheets can be found in **Appendix F**.

5.7 Laboratory Data

Laboratory data can be found in **Appendix G**.

5.8 Sample Calculations

Sample calculations can be found in **Appendix H**.



TABLES

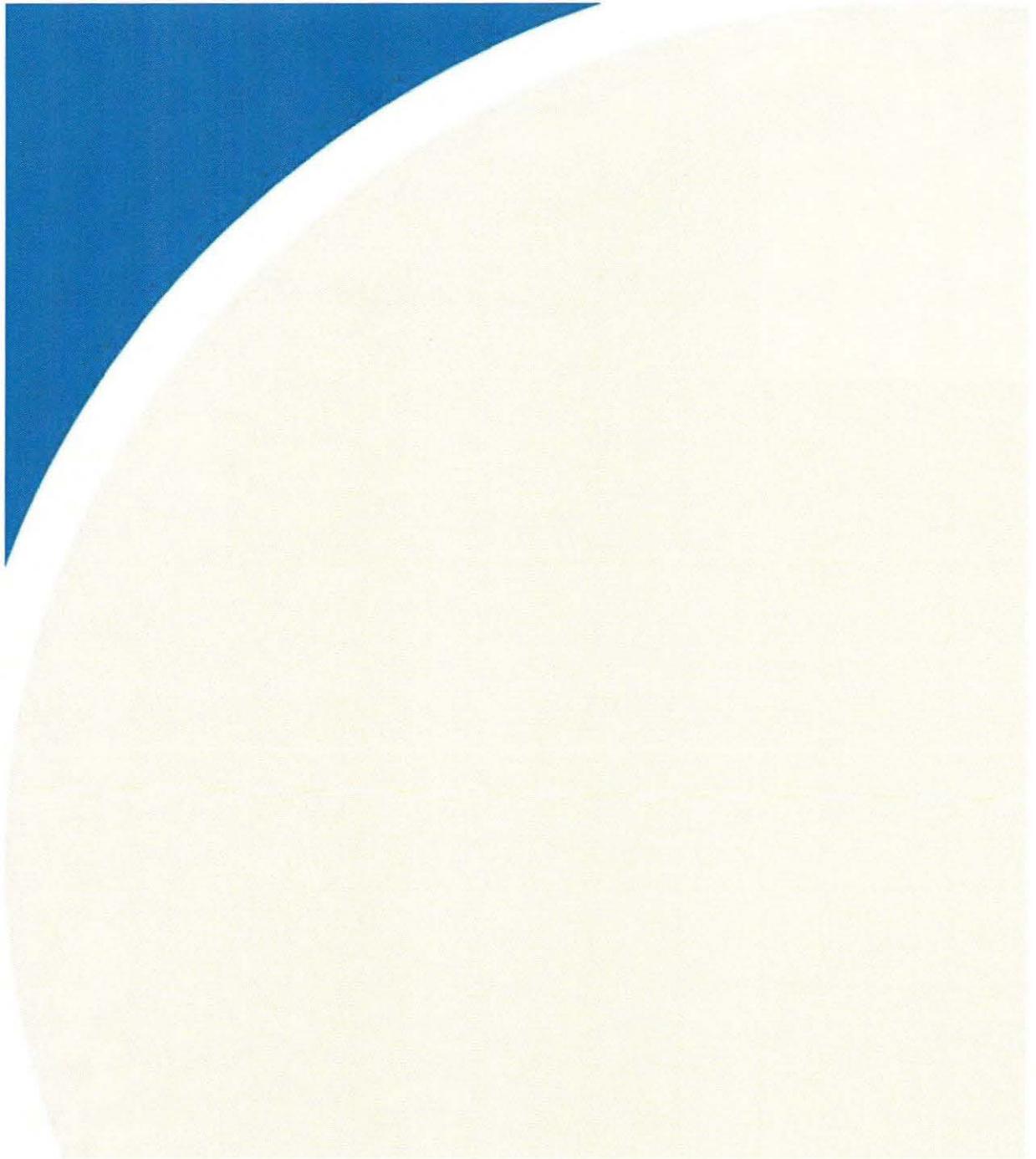




Table 1: Summary of Sampling Parameters and Methodology

Source Location	No. of Tests per Stack	Sampling Parameter	Sampling Method
ESP (SVBOFESP)	3	Velocity, Temperature and Flow Rate	U.S. EPA ^[1] Methods 1, 2, and 4
	3	PM / PM ₁₀ / PM _{2.5}	U.S. EPA ^[1] Method 5/202
	3	Lead / Manganese	U.S. EPA ^[1] Method 29
	3	Oxygen / Carbon Dioxide	U.S. EPA ^[1] Method 3A
	3	Visible Emission	U.S. EPA ^[1] Method 9
Secondary Baghouse (SVBOFBH)	3	Velocity, Temperature and Flow Rate	U.S. EPA ^[1] Methods 1, 2 and 4
	3	Lead / Manganese	U.S. EPA ^[1] Method 29
	3	Oxygen / Carbon Dioxide	U.S. EPA ^[1] Method 3A

Notes:

[1] U.S. EPA - United States Environmental Protection Agency



Table 2A: Sampling Summary and Sample Log (SVBOFESP)

Source and Test #	Sampling Date	Start Time	End Time	Filter ID / Trap ID
SVBOFESP - Velocity / Total Particulate				
Blank	19-Sep-23	-	-	QZ4
Test #1	19-Sep-23	8:57 AM	11:08 AM	QZ109
Test #2	19-Sep-23	12:56 PM	3:12 PM	QZ26
Test #3	20-Sep-23	8:25 AM	10:52 AM	QZ25
SVBOFESP - Velocity / Lead / Manganese				
Blank	19-Sep-23	-	-	M29-Blank
Test #1	19-Sep-23	8:57 AM	11:08 AM	QZ112
Test #2	19-Sep-23	12:56 PM	3:12 PM	QZ21
Test #3	20-Sep-23	8:25 AM	10:52 AM	QZ27
SVBOFESP - Visible Emissions				
Test #1	19-Sep-23	8:57 AM	9:57 AM	--
Test #2	19-Sep-23	12:56 PM	1:56 PM	--
Test #3	20-Sep-23	8:25 AM	9:35 AM	--



Table 2B: Sampling Summary and Sample Log (SVBOFBH)

Source and Test #	Sampling Date	Start Time	End Time	Filter ID / Trap ID
SVBOFBH - Velocity / Lead / Manganese				
Blank	19-Sep-23	-	-	M29-Blank
Test #1	19-Sep-23	8:57 AM	11:10 AM	QZ110
Test #2	19-Sep-23	12:56 PM	3:10 PM	QZ28
Test #3	20-Sep-23	8:25 AM	10:52 AM	QZ9



Table 3A: Sampling Summary - Flow Characteristics - SVBOFESP

Stack Gas Parameter		Test No. 1		Test No. 2		Test No. 3		Average
		Particulate	Lead/Manganese	Particulate	Lead/Manganese	Particulate	Lead/Manganese	
Testing Date		19-Sep-23		19-Sep-23		20-Sep-23		
Stack Temperature	°F	270	272	279	281	278	281	277
Moisture	%	16.5%	16.7%	16.5%	17.2%	16.1%	15.5%	16.4%
Velocity	ft/s	55.9	53.7	55.6	53.1	56.8	53.2	54.7
Referenced Flow Rate	CFM	451,164	431,259	443,049	418,580	456,530	428,505	438,181
Oxygen	%	18.1	18.7	18.0	17.8	19.0	19.8	19.0
Carbon Dioxide	%	4.4	3.7	4.2	4.2	2.8	1.6	2.9
Sampling Isokinetic Rate	%	104.2	103.0	99.6	100.5	98.6	97.5	100.6

Notes:

[1] Referenced flow rate expressed as dry at 101.3 kPa, 68 °F, and Actual Oxygen



Table 3B: Sampling Summary - Flow Characteristics - SVBOFBH

Stack Gas Parameter		Test No. 1	Test No. 1	Test No. 3	Average
		Lead/Manganese	Lead/Manganese	Lead/Manganese	
Testing Date		19-Sep-23	19-Sep-23	20-Sep-23	
Stack Temperature	°F	100	113	105	106
Moisture	%	1.8%	1.8%	2.0%	1.9%
Velocity	ft/s	33.8	34.4	37.4	35.2
Referenced Flow Rate	CFM	494,154	490,986	540,972	508,704
Oxygen	%	21.0	20.9	21.0	21.0
Carbon Dioxide	%	0.2	0.2	0.2	0.2
Sampling Isokinetic Rate	%	101.1	101.0	99.6	100.6

Notes:

[1] Referenced flow rate expressed as dry at 101.3 kPa, 68 °F, and Actual Oxygen



Table 4A: Total Particulate Matter and Metals – Averaged Results - SVBOFESP

SVBOFESP	Test 1		Test 2		Test 3		Average		Emission Limit			
	Concentration	Emission Rate	Concentration	Emission Rate	Concentration	Emission Rate	(gr/dscf)	(lb/hr)	(gr/dscf)	PM lb/hr	PM ₁₀ lb/hr	PM _{2.5} lb/hr
Particulate	(gr/dscf)	(lb/hr)	(gr/dscf)	(lb/hr)	(gr/dscf)	(lb/hr)	(gr/dscf)	(lb/hr)	(gr/dscf)	PM lb/hr	PM ₁₀ lb/hr	PM _{2.5} lb/hr
PM (Filterable only)	0.0021	8.04	0.0023	8.81	0.0017	6.64	0.0021	7.83	0.0152	62.6	--	--
PM (Filterable + Condensable)	0.0035	13.41	0.0041	15.67	0.0031	11.96	0.0036	13.68	--	--	47.5	46.85
Metals	(gr/dscf)	(lb/hr)	(gr/dscf)	(lb/hr)	(gr/dscf)	(lb/hr)	(gr/dscf)	(lb/hr)		lb/hr		
Total Lead (Pb)	4.41E-06	0.016	4.53E-06	0.016	5.04E-06	0.019	4.66E-06	0.017		--		
Total Manganese (Mn)	1.85E-05	0.069	1.71E-05	0.062	1.44E-05	0.053	1.67E-05	0.061		--		

Table 4B: Metals – Averaged Results (SVBOFBH)

SVBOFBH	Test 1		Test 2		Test 3		Average		Emission Limit
	Concentration	Emission Rate	Concentration	Emission Rate	Concentration	Emission Rate	(gr/dscf)	(lb/hr)	lb/hr
Metals	(gr/dscf)	(lb/hr)	(gr/dscf)	(lb/hr)	(gr/dscf)	(lb/hr)	(gr/dscf)	(lb/hr)	lb/hr
Total Lead (Pb)	7.59E-07	0.0032	7.98E-07	0.0034	7.64E-07	0.0036	7.73E-07	0.0034	--
Total Manganese (Mn)	1.98E-06	0.0080	1.77E-06	0.0070	2.29E-06	0.0110	2.01E-06	0.0087	0.07

Table 4C: Metals – Averaged Results (SVBOFESP + SVBOFBH)

SVBOFESP + SVBOFBH	Test 1		Test 2		Test 3		Average		Emission Limit
	Concentration	Emission Rate	Concentration	Emission Rate	Concentration	Emission Rate	(gr/dscf)	(lb/hr)	lb/hr
Metals	(gr/dscf)	(lb/hr)	(gr/dscf)	(lb/hr)	(gr/dscf)	(lb/hr)	(gr/dscf)	(lb/hr)	lb/hr
Total Lead (Pb)	5.17E-06	0.019	5.33E-06	0.019	5.80E-06	0.023	5.43E-06	0.020	0.067
Total Manganese (Mn)	2.05E-05	0.077	1.89E-05	0.069	1.67E-05	0.064	1.87E-05	0.070	0.10



Table 5: Opacity- Averaged Results - SVBOFESP

SVBOFESP	Opacity						Average Opacity	Maximum 6-Min Opacity	Average 6-Min Opacity Limit
	Average	Max 6-Min Reading	Average	Max 6-Min Reading	Average	Max 6-Min Reading			
	Test 1		Test 2		Test 3				
Parameter	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
Opacity	0	1	0	0	0	0	0	20	



FIGURES

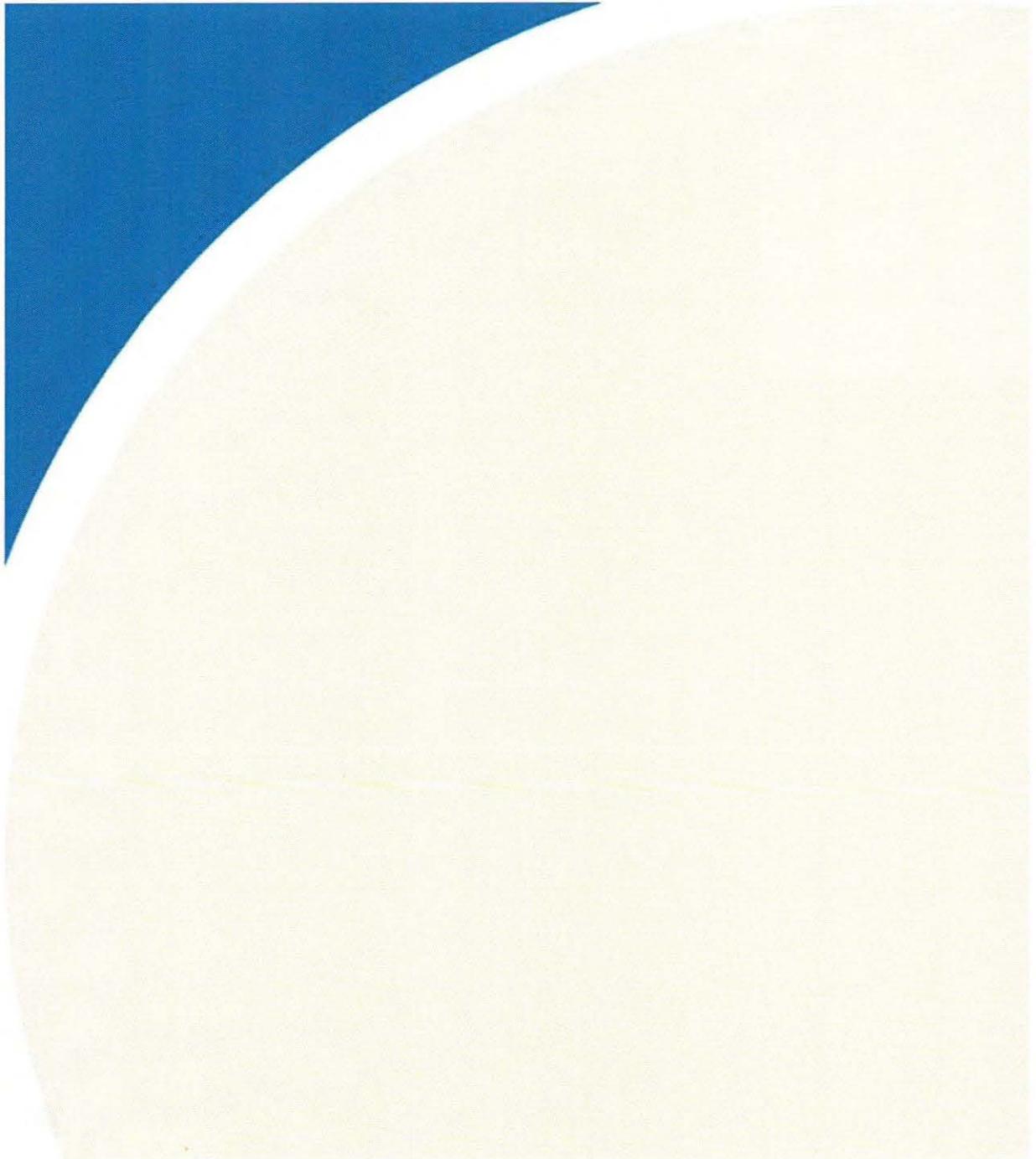
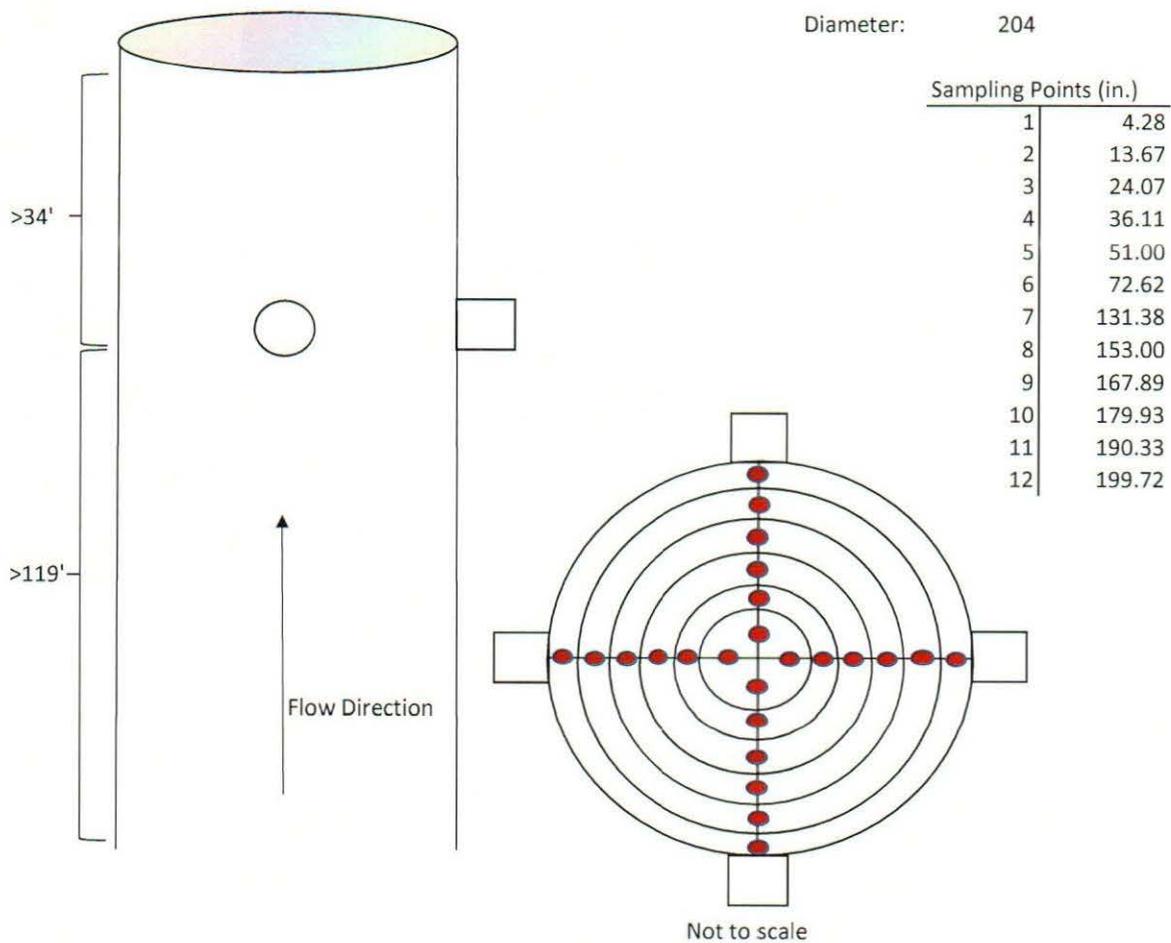






Figure 1: Sampling Points and Configuration - SVBOFESP



ESP (SVBOFESP)
Cleveland-Cliffs
Dearborn Works
Dearborn, Michigan

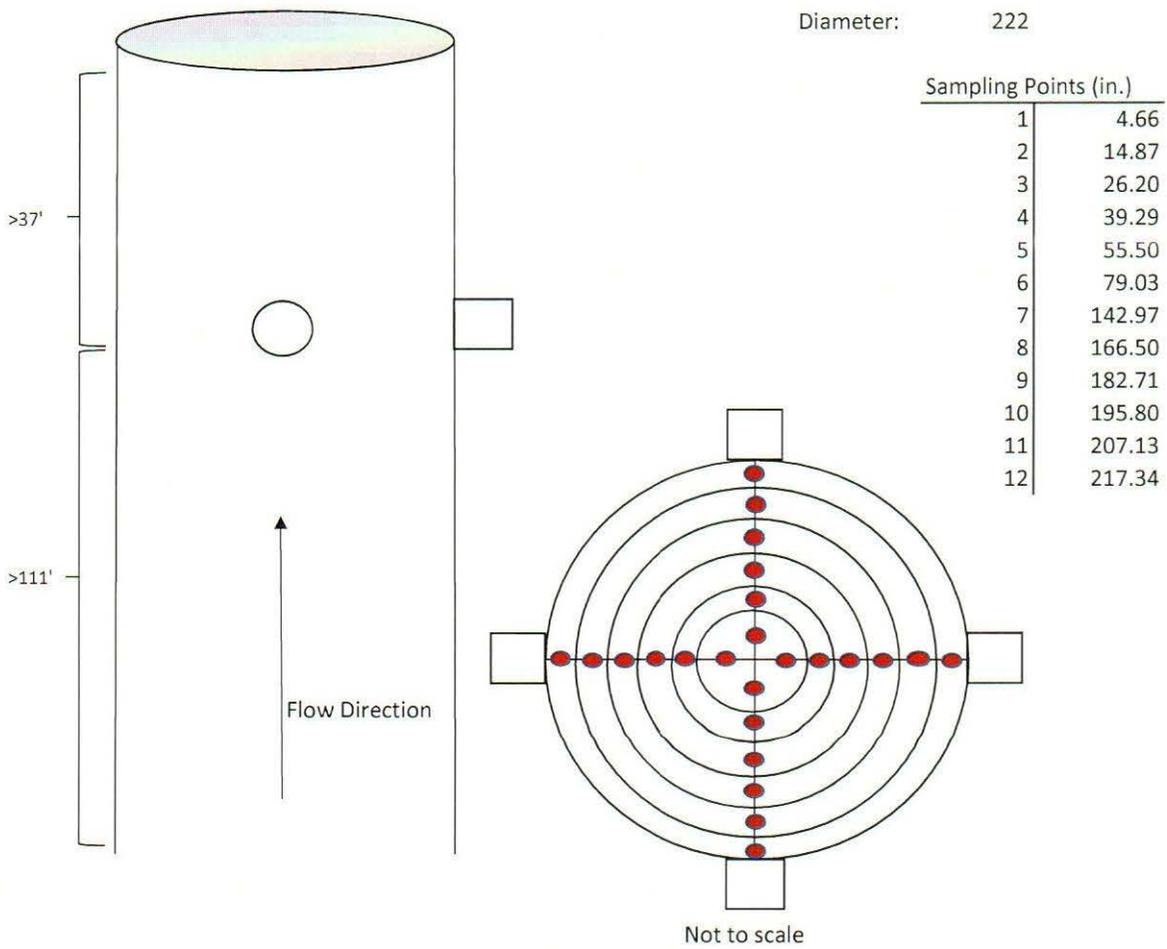
Date:
Sept. 19 to 20, 2023

RWDI USA LLC
2239 Star Court
Rochester Hills, MI 48309





Figure 2: Sampling Points and Configuration (SVBOFBH)

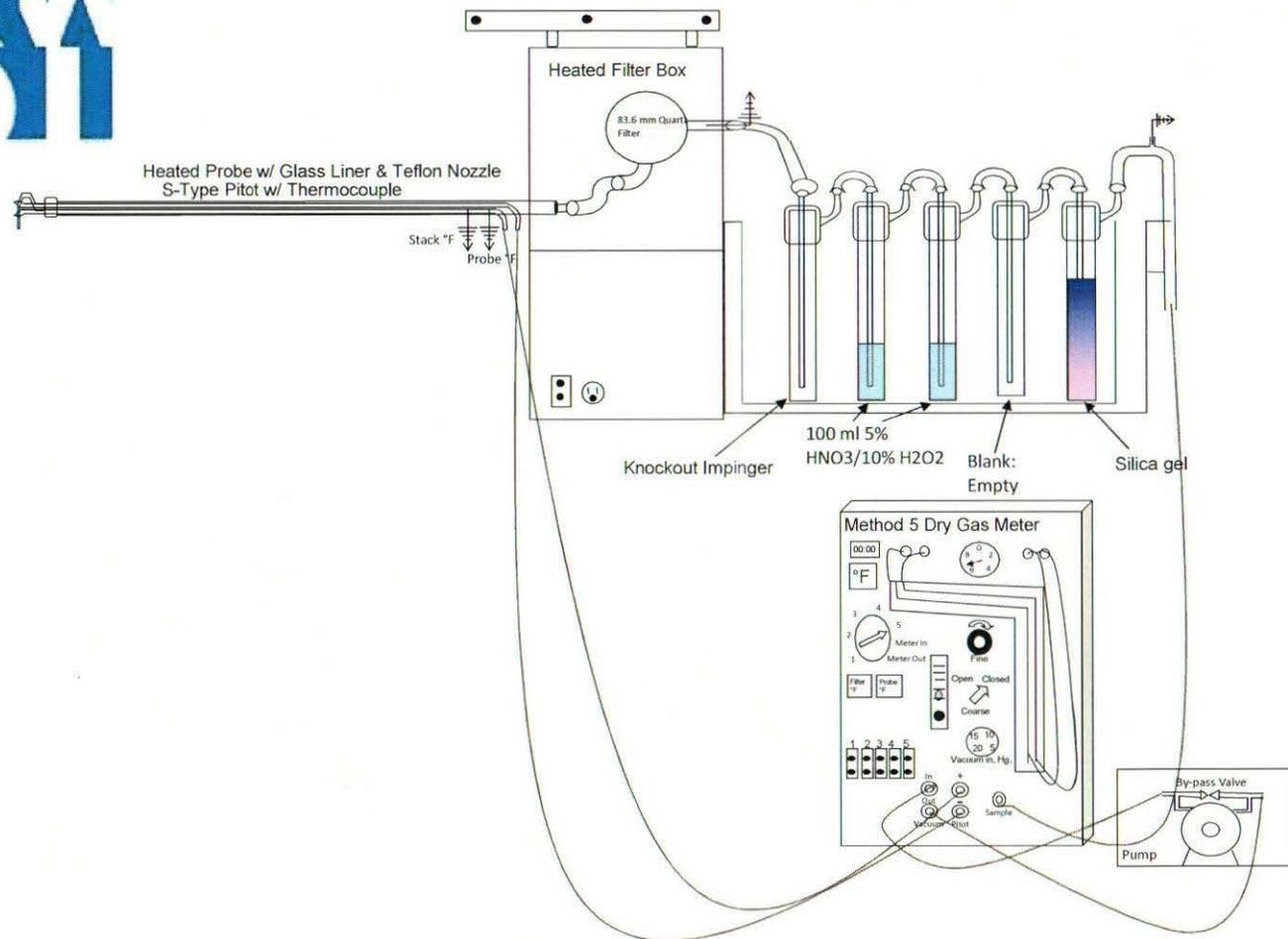


SEC Baghosue (SVBOFBH)
Cleveland-Cliffs
Dearborn Works
Dearborn, Michigan

Date:
Sept. 19 to 20, 2023

RWDI USA LLC
2239 Star Court
Rochester Hills, MI 48309





USEPA Method 29

Cleveland-Cliffs
Dearborn Works
Dearborn, Michigan

Figure 4:
Schematic of USEPA Method 29
Sept. 19 to 20, 2023



