



**Mercury and Air Toxics Standard
Filterable Particulate Matter
Emissions Test Report**

**We Energies
Presque Isle Power Plant
TOXECON Outlet Duct
Marquette, Michigan
September 7, 2016**

**Report Submittal Date
September 22, 2016**

© Copyright 2016
All rights reserved in
Mostardi Platt

Project No. M160301B



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

RECEIVED

SEP 28 2016

RENEWABLE OPERATING PERMIT
REPORT CERTIFICATION

AIR QUALITY DIV.

Authorized by 1994 P.A. 451, as amended. Failure to provide this information may result in civil and/or criminal penalties.

Reports submitted pursuant to R 336.1213 (Rule 213), subrules (3)(c) and/or (4)(c), of Michigan's Renewable Operating Permit (ROP) program must be certified by a responsible official. Additional information regarding the reports and documentation listed below must be kept on file for at least 5 years, as specified in Rule 213(3)(b)(ii), and be made available to the Department of Environmental Quality, Air Quality Division upon request.

Source Name Presque Isle Power Plant County Marquette
Source Address 2701 N. Lakeshore Blvd. City Marquette
AQD Source ID (SRN) B4261 ROP No. MI-ROP-B4261-2013b ROP Section No. NA

Please check the appropriate box(es):

Annual Compliance Certification (Pursuant to Rule 213(4)(c))
Reporting period (provide inclusive dates): From _____ To _____
 1. During the entire reporting period, this source was in compliance with ALL terms and conditions contained in the ROP, each term and condition of which is identified and included by this reference. The method(s) used to determine compliance is/are the method(s) specified in the ROP.
 2. During the entire reporting period this source was in compliance with all terms and conditions contained in the ROP, each term and condition of which is identified and included by this reference, EXCEPT for the deviations identified on the enclosed deviation report(s). The method used to determine compliance for each term and condition is the method specified in the ROP, unless otherwise indicated and described on the enclosed deviation report(s).

Semi-Annual (or More Frequent) Report Certification (Pursuant to Rule 213(3)(c))
Reporting period (provide inclusive dates): From _____ To _____
 1. During the entire reporting period, ALL monitoring and associated recordkeeping requirements in the ROP were met and no deviations from these requirements or any other terms or conditions occurred.
 2. During the entire reporting period, all monitoring and associated recordkeeping requirements in the ROP were met and no deviations from these requirements or any other terms or conditions occurred, EXCEPT for the deviations identified on the enclosed deviation report(s).

Other Report Certification
Reporting period (provide inclusive dates): From 9/07/2016 To 9/07/2016
Additional monitoring reports or other applicable documents required by the ROP are attached as described:
Toxecon Outlet MATS PM Compliance Demonstration Test Report M160301B 9/07/16

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this report and the supporting enclosures are true, accurate and complete

Leslie D. Kowalski Asset Manager - PIPP (906) 226-5757
Name of Responsible Official (print or type) Title Phone Number
Leslie D. Kowalski Signature of Responsible Official 09/26/2016 Date

1.0 EXECUTIVE SUMMARY

MOSTARDI PLATT conducted a Mercury and Air Toxics Standards (MATS) Filterable Particulate Matter emissions test program for We Energies at the Presque Isle Power Plant on the TOXECON Outlet Duct in Marquette, Michigan on September 7, 2016. This report summarizes the results of the test program and test methods used.

The test location, test date, and test parameter are summarized below.

TEST INFORMATION		
Test Location	Test Date	Test Parameter
TOXECON Outlet Duct	September 7, 2016	Filterable Particulate Matter (FPM)

The purpose of the test program was to document the FPM emissions to qualify for the LEE designation as required by 40 CFR Part 63, Subpart UUUUU. Selected results of the test program are summarized below. A complete summary of emission test results follows the narrative portion of this report.

TEST RESULTS			
Test Location	Test Parameter	Emission Limit	Emission Rate
TOXECON Outlet Duct	FPM	≤0.030 lb/mmBtu	0.0047 lb/mmBtu

Emissions on lb/mmBtu basis were determined using a standard F_d -Factor of 9,820 dscf/mmBtu for sub-bituminous coal. Plant operating data as provided by We Energies is included in Appendix A.

The identifications of individuals associated with the test program are summarized below.

TEST PERSONNEL INFORMATION		
Location	Address	Contact
Test Facility	We Energies Presque Isle Power Plant 2701 Lakeshore Boulevard, North Marquette, Michigan 49885	Mr. Rob Bregger (414) 221-4772 (phone) rob.bregger@we-energies.com
Testing Company Representative	Mostardi Platt 888 Industrial Drive Elmhurst, Illinois 60126	Mr. Timothy E. Russ Senior Project Manager (630) 993-2100 (phone) truss@mp-mail.com

The test crew consisted of Messrs. P. Lyons, S. Muskovits, S. Cronin, and T. Russ of Mostardi Platt.

RECEIVED

SEP 28 2016

AIR QUALITY DIV.

2.0 TEST METHODOLOGY

Emissions testing was conducted following the methods specified in 40CFR60, Appendix A. A schematic of the test section diagram is found in Appendix B and schematics of the sampling trains used are included in Appendix C. Calculation nomenclature and sample calculations are included in Appendix D. Laboratory analysis data are found in Appendix E. Copies of analyzer print-outs for each test run are included in Appendix F and field data sheets are found in Appendix G.

The following methodologies were used during the test program:

Method 1 Sample and Velocity Traverse Determination

Test measurement points were selected in accordance with Method 1. The characteristics of the measurement location are summarized below.

TEST POINT INFORMATION				
Location	Upstream Diameters	Downstream Diameters	Test Parameter	Number of Sampling Points
TOXECON Outlet Duct	> 0.5	> 2.0	PM	30

Method 2 Volumetric Flowrate Determination

Gas velocity was measured following Method 2, for purposes of calculating stack gas volumetric flow rate. An S-type pitot tube, differential pressure gauge, thermocouple and temperature readout were used to determine gas velocity at each sample point. All of the equipment used was calibrated in accordance with the specifications of the Method. Calibration data are presented in Appendix H.

Method 3A Oxygen (O₂)/Carbon Dioxide (CO₂) Determination

Stack gas molecular weight was determined in accordance with Method 3A. An ECOM analyzer was used to determine stack gas oxygen and carbon dioxide content and, by difference, nitrogen content. All of the equipment used was calibrated in accordance with the specifications of the Method. Calibration data are presented in Appendix H and copies of the gas cylinder certifications are found in Appendix I.

Method 5 Filterable Particulate Matter (FPM) Determination

Stack gas FPM concentrations and emission rates were determined in accordance with USEPA Method 5, 40CFR60, Appendix A. An Environmental Supply Company, Inc. sampling train was used to sample stack gas at an isokinetic rate, as specified in the Method. Filter and probe temperatures were elevated to 320° Fahrenheit as described in 40CFR63, Subpart UUUUU. Particulate matter in the sample probe was recovered using an acetone rinse. The probe wash and filter catch were analyzed by Mostardi Platt in accordance with the Method in the Elmhurst, Illinois laboratory. Sample analysis data are found in Appendix E. All of the equipment used was calibrated in accordance with the specifications of the Method. Calibration data are presented in Appendix H.

3.0 TEST RESULT SUMMARY

Client: We Energies
Facility: Presque Isle Power Plant
Test Location: TOXECON Outlet Duct
Test Method: 5 MATS

	Source Condition	Normal	Normal	Normal
	Date	9/7/16	9/7/16	9/7/16
	Start Time	8:15	10:12	12:37
	End Time	9:31	11:25	13:49
	Run 1	Run 2	Run 3	Average
Stack Conditions				
Average Gas Temperature, °F	341.0	351.9	346.1	346.3
Flue Gas Moisture, percent by volume	10.6%	11.6%	13.3%	11.8%
Average Flue Pressure, in. Hg	29.34	29.34	29.34	29.34
Gas Sample Volume, dscf	65.822	41.804	41.488	49.705
Average Gas Velocity, ft/sec	56.776	57.636	56.859	57.090
Gas Volumetric Flow Rate, acfm	1,148,049	1,165,421	1,149,716	1,154,395
Gas Volumetric Flow Rate, dscfm	663,477	656,736	640,126	653,446
Gas Volumetric Flow Rate, scfm	742,002	743,087	738,378	741,156
Average %CO ₂ by volume, dry basis	14.4	14.3	14.3	14.3
Average %O ₂ by volume, dry basis	5.4	5.3	5.3	5.3
Isokinetic Variance	102.4	102.5	104.3	103.1
Standard Fuel Factor Fd, dscf/mmBtu	9,820.0	9,820.0	9,820.0	9,820.0
Filterable Particulate Matter (Method 5 MATS)				
grams collected	0.0044	0.0065	0.0108	0.0072
mg/dscm	2.361	5.491	9.193	5.682
mg/wscm	2.110	4.854	7.970	4.978
mg/acm at stack conditions	1.364	3.096	5.119	3.193
grains/acf	0.0006	0.0014	0.0022	0.0014
grains/dscf	0.0010	0.0024	0.0040	0.0025
lb/hr	5.866	13.505	22.039	13.803
lb/mmBtu (Standard Fd Factor)	0.0020	0.0045	0.0075	0.0047

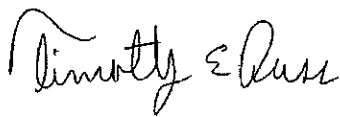
4.0 CERTIFICATION

MOSTARDI PLATT is pleased to have been of service to We Energies. If you have any questions regarding this test report, please do not hesitate to contact us at 630-993-2100.

CERTIFICATION

As project manager, I hereby certify that this test report represents a true and accurate summary of emissions test results and the methodologies employed to obtain those results, and the test program was performed in accordance with the methods specified in this test report.

MOSTARDI PLATT



Timothy E. Russ

Program Manager



Scott W. Banach

Quality Assurance