NRC-14-0073

Response to License Renewal Environmental Request for Additional Information

Enclosure 2

WRSW-2 - ENFPP 2014 NPDES Permit Application

DTE Electric Company
One Energy Plaza, Detroit, MI 48226

DTE Energy

March 31, 2014

Michigan Department of Environmental Quality
Cashier's Office
WRD – NP1
5th Floor South, Constitution Hall
525 West Allegan
Lansing, Michigan 48933

Re: Application for Reissuance of NPDES Permit
Enrico Fermi 2 Power Plant
NPDES Permit No. MI0037028

Dear Sir or Madam:

In accordance with the Michigan Department of Environmental Quality Authorization to Discharge under NPDES Permit No. MI0037028, the DTE Electric Company is submitting the enclosed application for the reissuance of NPDES Permit No. MI0037028 for the Enrico Fermi 2 Power Plant. Also enclosed is the associated $750.00 application fee.

The Company would appreciate your expeditious review of this application and an acknowledgement of its receipt and administrative completeness as soon as practical.

If you have any questions relative to this application or desire additional information, please contact me at (313) 235-5569 or via e-mail at chueyn@dteenergy.com.

Sincerely,
DTE Energy Corporate Services, LLC

Nicholas J. Chuey

Nicholas J. Chuey
Senior Environmental Engineer
Environmental Management & Resources

Enclosure

Michigan Department of Environmental Quality – Water Resources Division

WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION I – General Information

Section I shall be completed by all permit applicants. Instructions for completing Section I, Pages 1 and 2, are on Page 2 of the Appendix. To submit additional information, see Page ii, Item 3.

Water Resources Division Use Only	Cashier Use Only: 6000-42203-9512-481000-00
Receipt #: _____	
Permit ID #: _____	

PLEASE TYPE OR PRINT

1. NPDES PERMIT NUMBER MI0037028

2. APPLICANT

Applicant Name: DTE Electric Company		
Address: One Energy Plaza	Address 2 or P.O. Box: Room 655 G.O.	
City: Detroit	State: Michigan	ZIP Code: 48226
Telephone (with area code): (313) 235-5569	FAX (with area code): (313)-235-5018	Applicant Web Site Address: www.dteenergy.com

3. FACILITY

Facility Name 1: Fermi 2 Power Plant		
Facility Name 2:		
Facility Name 3:		
Street Address (Do not use a P.O. Box Number): 6400 North Dixie Highway		
City: Newport	State: Michigan	ZIP Code: 48166
Telephone (with area code): (734) 586-5263	FAX (with area code):	Facility Web Site Address:

4. CONTACTS

☒ Application Contact ☐ Facility Contact ☐ Discharge Monitoring Reports ☒ Storm Water Billing ☐ Biosolids Billing ☒ NPDES Annual Billing	First Name: Nicholas	Last Name: Chuey	
	Title: Senior Engineer - Environmental	Business: DTE Energy Corporate Services, LLC	
	Address 1: One Energy Plaza	Address 2: Room 655 G.O.	
	City: Detroit	State: Michigan	ZIP Code: 48226
	Telephone (with area code): (313) 235-5569	Fax Number: (313) 235-5018	e-mail address: chueyn@dteenergy.com
☐ Application Contact ☒ Facility Contact ☐ Discharge Monitoring Reports ☐ Storm Water Billing ☐ Biosolids Billing ☐ NPDES Annual Billing	First Name: Kent	Last Name: Scott	
	Title: Director - Nuclear Production	Business: DTE Energy - Fermi 2 Power Plant	
	Address 1: 6400 North Dixie Highway	Address 2: OBA 280	
	City: Newport	State: Michigan	ZIP Code: 48166
	Telephone (with area code): (734) 586-5325	Fax Number: (734) 586-5295	e-mail address: scottkc@dteenergy.com
☐ Application Contact ☐ Facility Contact ☒ Discharge Monitoring Reports ☐ Storm Water Billing ☐ Biosolids Billing ☐ NPDES Annual Billing	First Name: Mary	Last Name: Hana	
	Title: Senior Engineer - Environmental	Business: DTE Energy Corporate Services, LLC	
	Address 1: 6400 North Dixie Highway	Address 2: 200 Fermi 2 TAC	
	City: Newport	State: Michigan	ZIP Code: 48166
	Telephone (with area code): (734) 586-1839	Fax Number:	e-mail address: hanamj@dteenergy.com

Michigan Department of Environmental Quality – Water Resources Division

WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION I – General Information

PLEASE TYPE OR PRINT

FACILITY NAME	NPDES PERMIT NUMBER
Fermi 2 Power Plant	MI0037028

5. PERMIT ACTION REQUESTED (Check one box only). Instructions for this item are on Page 2 of the Appendix.

- ☐ **NEW USE.** A proposed discharge.
- ☐ **EXISTING DISCHARGE** that is currently unpermitted.
- ☒ **REISSUANCE** of current permit.
- ☐ **MODIFICATION** of current permit. Attach a description of the proposed modification.

Note: Applications for **New Use** discharges, **Existing Discharges** that are currently unpermitted, and for either **Reissuance** or **Modification** that include an increased loading of pollutants to the receiving water are required to submit a Rule 98 Demonstration with the Application. See Item 6.

6. RULE 98 – ANTIDEGRADATION REQUIREMENTS. Instructions for this item are on Page 2 of the Appendix.

In accordance with Rule 323.1098 of the Michigan Water Quality Standards, the applicant is required to submit an Antidegradation Demonstration for any new or increased loading of pollutants to the surface waters of the state. An Antidegradation Demonstration must contain the information specified in Rule 1098, outlined on Pages 8-9 of the Appendix. For assistance in completing this item, contact the Permits Section.

Will this discharge be an increased loading of pollutants to the surface waters of the state? ☐ Yes, continue below. ☒ No.

☐ Antidegradation Demonstration provided. ☐ Increased loading of pollutants is exempt from Antidegradation Demonstration as indicated below:

- ☐ A short-term (weeks to months) or temporary lowering of water quality
- ☐ Bypasses that are not prohibited by regulations set forth in 40 CFR 122.41(m)
- ☐ Response actions undertaken to alleviate a release of pollutants into the environment that may pose an imminent and substantial danger to the public health or welfare
- ☐ Discharges of pollutant quantities from the intake water at a facility if the intake and discharge are to the same body of water
- ☐ Increases in flow at a POTW if the increase is within the design flow of the facility, there is no increased loading of BCCs that are not specifically limited in the current permit, and there is no significant change expected in the characteristics of the wastewater collected
- ☐ Intermittent increased loading related to wet-weather conditions
- ☐ New or increased loading due to DEQ-approved controls related to wet-weather conditions
- ☐ Discharges authorized by Certificates of Coverage (COC) and Notices of Coverage
- ☐ Increased loadings within the authorized levels of a limit in an existing control document, except those loadings that result from actions by the permittee that would otherwise require submittal of an increased use request
- ☐ Increased loadings of a pollutant which do not involve Bioaccumulative Chemicals of Concern and which use less than 10 percent of the unused loading capacity that exists at the time of the request

7. ADDITIONAL FACILITY LOCATION INFORMATION. Instructions for this item are on Page 2 of the Appendix.

A	Local Unit of Government (LUG): Frenchtown Charter Township				LUG e-mail address: julie@frenchtownchartertwp.org	
B	County: Monroe				Township: Frenchtown	
C.	Town: T6S	Range: R10E	Section: 21	¼:	¼, ¼:	Private (French) Land Claim:
D.	Latitude: 41 deg. 57' 45"				Longitude: 83 deg. 15' 30"	

8. CERTIFIED OPERATOR

Does the facility have a DEQ-certified operator? ☒ Yes ☐ No Instructions for this item are on Page 2 of the Appendix.

First Name: Kyle		Last Name: Bogle	
Certification Number: W6093		Certification Classification(s): A-1d, A-1h, B-2a, B-2c	
Address 1: 6400 North Dixie Highway		Address 2: 110 AIB	
City: Newport		State: Michigan	Zip Code: 48166
Telephone Number: (734) 586-5331	Fax Number:	e-mail address: boglek@dteenergy.com	

DTE Electric, Fermi 2 Personnel
Certifications with State of Michigan, Department of Environmental Quality
March 6, 2014

Attachment I
NPDES Permit Application for Reissuance
Fermi 2 Power Plant MI0037028

Name	Certificate #	A-1b	A-1d	A-1h	A-1i	A-1j	B-1b	B-2a	B-2c	Expiration
Kyle Bogle	W6093		X	X				X	X	2018
Mary J. Hana	I 12768				X					2019
	C 17100					X				2019
Mark A. Nederveld	I 05400				X					2017
John Tansek	W6149		X		X			X	X	2018
John M. Yokom	W3579	X	X	X			X	X	X	2016

Michigan Department of Environmental Quality – Water Resources Division

WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION I – General Information

PLEASE TYPE OR PRINT

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Fermi 2 Power Plant	MI0037028

9. OTHER ENVIRONMENTAL PERMITS

Provide the information requested below for any other federal, state, or local environmental permits in effect or applied for at the time of submittal of this Application, including, but not limited to, permits issued under any of the following programs: Air Pollution Control, Hazardous Waste Management, Wetlands Protection, Soil Erosion and Sedimentation Control, and other NPDES permits. To submit additional information, see Page ii, Item 3.

Issuing Agency	Permit or COC Number	Permit Type
MDEQ, Air Quality Division	MI-ROP-B4321-2013 MI-PTI-B4321-2013	Renewable Operating Permit Source-Wide Permit to Install
Monroe Metropolitan Water Pollution Control Facility	1020	Industrial User Discharge
Department of the Army, US Army Corps of Engineers	LRE-1998-1048 LRE-1988-10408-L13	Department of the Army
MDEQ, Water Resources Division	11-58-2012 13-58-0013-P	Dredging, Joint Permit Application
Office of Monroe County Drain Commissioner	4736	SESC

10. WATER FLOW DIAGRAM AND NARRATIVE DESCRIPTION

Provide a flow diagram **(using 8½" x 11" paper if possible)** and a narrative description that explains the diagram. The diagram should show the wastewater flow through the facility (from intake through discharge), including all processes, treatment units, including any lagoons or ponds (lagoon / pond construction and liner information should be included) used for wastewater treatment or storage (identify treatment units that operate intermittently), and bypass piping. Show all operations contributing wastewater and the locations of flow meters, chemical feeds, and monitoring and discharge points. The water balance shall show the daily average flow rates at the intake and discharge points, and approximate daily flow rates between treatment units, including influent and treatment rates. Use actual measurements whenever available, otherwise use the best estimate. Show all significant losses of water to products, atmosphere, and discharge. In addition, provide a flow diagram for any storm water discharges from secondary structures that are required by state or federal law and for storm water runoff from any Site of Environmental Contamination, pursuant to Part 201 of the Michigan Act. **Do not send blueprints. Provide black-and-white reproducible diagrams.**

Municipal Facilities – Include a narrative that briefly describes the history of the wastewater treatment facility and collection system, including the initial construction, facility improvements, future plans for upgrade, location of all constructed emergency overflows, and other pertinent information.

Industrial and Commercial Facilities – The diagram shall include all operations contributing wastewater, including process and production areas, sanitary flows, cooling water, and storm water runoff. **Include a narrative** that provides a brief description of the nature of the business and the manufacturing processes.

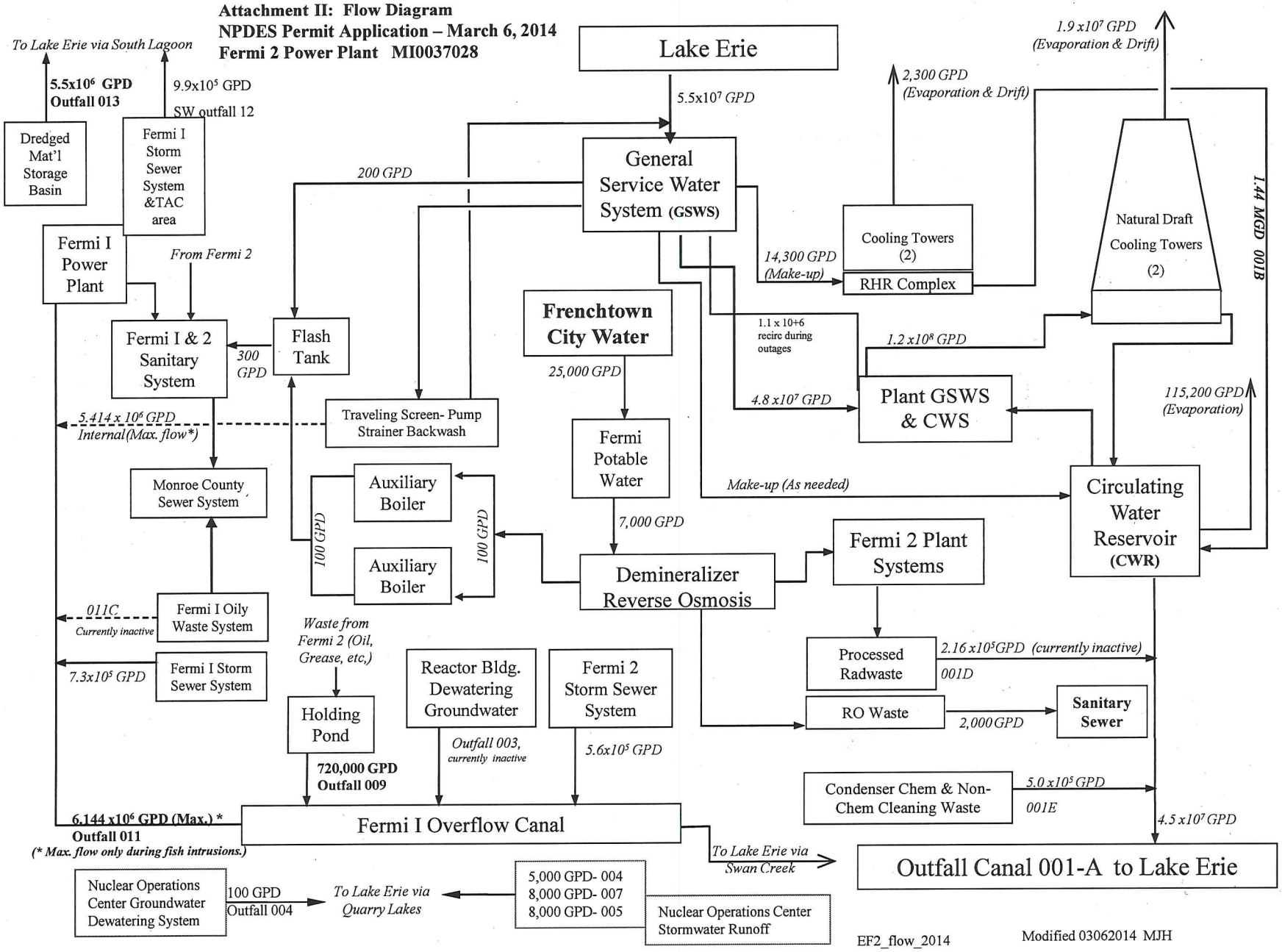
ATTACH THIS INFORMATION TO THIS APPLICATION. PLEASE DO NOT BIND THIS INFORMATION. Comments:

11. MAP OF FACILITY AND DISCHARGE LOCATION

Provide a detailed black-and-white reproducible map on 8½" x 11" paper showing the location of the existing or proposed facility, wastewater and biosolids treatment system(s), water intakes, wastewater monitoring, and wastewater discharge points into receiving waters (including bypasses). Include the exact location of the water intakes, wastewater monitoring and discharge point(s) and, if applicable, all areas through which the discharge flows (e.g., wetlands, open drains, storm sewers) between the discharge point and the receiving water. If the discharge is to a storm sewer, label the storm sewer and show its flow path to the receiving water. Also include the location of any water supply intakes or wells and groundwater monitoring wells. This map shall be a United States Geological Survey quadrangle (7.5 minute series) or other map of comparable detail, scale, and quality (which shows surface water bodies, roads, bathing beaches, and other pertinent landmarks). **It is preferred that the minimum area this map shall encompass be approximately one (1) mile beyond the property boundaries.**

ATTACH THIS INFORMATION TO THIS APPLICATION. Comments:

Attachment II: Flow Diagram
NPDES Permit Application – March 6, 2014
Fermi 2 Power Plant MI0037028



EF2_flow_2014 Modified 03062014 MJH

Attachment III: Narrative Description
NPDES Permit Application for Reissuance – March 6, 2014
Fermi 2 Power Plant MI0037028

Fermi 2 Power Plant is a 1,150-megawatt electric General Electric Boiling Water Reactor 4 Nuclear Power Plant. The Fermi 2 power block is situated in the Northeast Quarter of a 1,120-acre site that is located approximately 8 miles east-northeast of Monroe, Michigan.

The water sources for the Fermi 2 Power Plant are municipal water supplied by Frenchtown Township water and lake water withdrawn from Lake Erie.

Water discharges from the plant as a result of electric power generation and support processes include: cooling tower blowdown, reverse osmosis wastes, chemical and non-chemical metal cleaning wastes, processed radwaste waste, low volume wastes, storm water runoff, treated oily wastewater, intake and strainer backwash water, firefighting system pressurization water, settled water from dredge material storage, and sanitary waste water.

Cooling tower blowdown, residual heat removal system service water, chemical and non-chemical metal cleaning wastes, and processed radwaste water are permitted to discharge from Outfall 001 to Lake Erie.

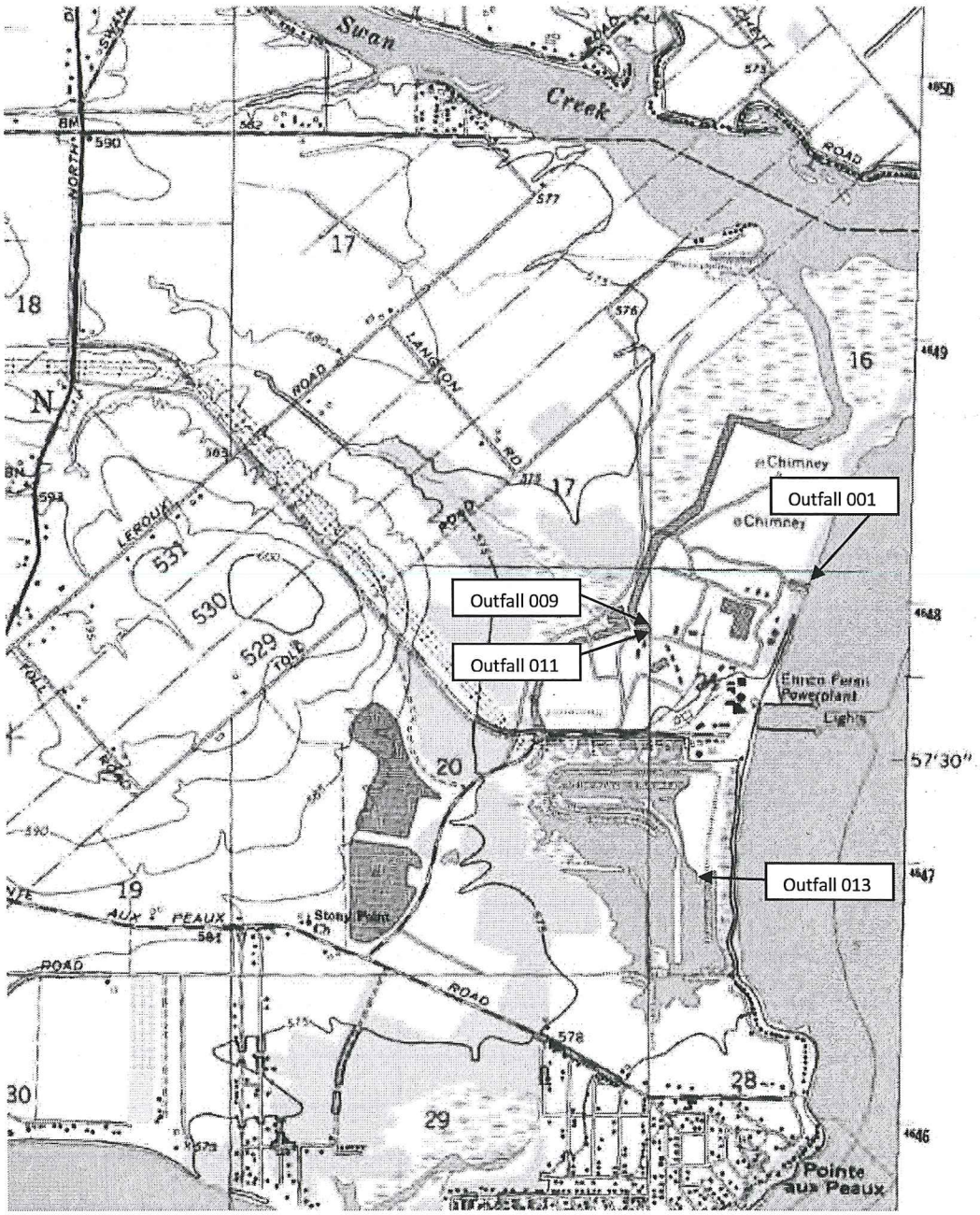
Storm water runoff, low volume wastes, and chemical and non-chemical metal cleaning wastes are permitted to discharge from Outfall 009 to Lake Erie via Swan Creek.

Treated oily waste water, firefighting system pressurization water, intake screen and strainer backwash water, and storm water are permitted to discharge from Outfall 011 to Lake Erie via Swan Creek.

Settled water from the dredge material storage basin is permitted to discharge from Outfall 013 to Lake Erie.

Sanitary wastewater is composed of treated oily waste water, oil/water separator discharge water and plant domestic waste. This waste is collected in a holding tank and forwarded to the City of Monroe Municipal Waste Water Treatment Plant for treatment and disposal.

Attachment IV
NPDES Permit Application for Reissuance – March 6, 2014
Fermi 2 Power Plant MI0037028



Michigan Department of Environmental Quality – Water Resources Division

WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION I – General Information

PLEASE TYPE OR PRINT

FACILITY NAME	NPDES PERMIT NUMBER
Fermi 2 Power Plant	MI0037028

12. CONTRACT LABORATORIES THAT PROVIDE ANALYTICAL SUPPORT

Provide the name and address of each contract laboratory or consulting firm that performed any analyses submitted as part of this Application. To submit additional information, see Page ii, Item 3.

Laboratory Name: TriMatrix Laboratories, Inc.			Laboratory Name		
Street Address: 5560 Corporate Exchange Court SE			Street Address		
City: Grand Rapids	State: Michigan	ZIP Code: 49512	City	State	ZIP Code
Telephone (with area code): (616) 975-4500	Fax (with area code): (616) 942-7463		Telephone (with area code)	Fax (with area code)	
Analysis Performed: SEE ATTACHED ANALYSES			Analysis Performed		
Laboratory Name			Laboratory Name		
Street Address			Street Address		
City	State	ZIP Code	City	State	ZIP Code
Telephone (with area code)	Fax (with area code)		Telephone (with area code)	Fax (with area code)	
Analysis Performed			Analysis Performed		

13. LIST ADJACENT PROPERTY OWNERS

List the names and mailing addresses of all property owners for all properties adjacent to the facility, treatment systems, and discharge locations. For vacant lots or empty buildings, supply the owner's mailing address – NOT the lot or building property address. To submit additional information, see Page ii, Item 3.

Name	Address	City	State	ZIP Code
See Attachment V				

Attachment V

NPDES Permit Application for Reissuance

Fermi 2 Power Plant MI0037028

Section I.13 - Adjacent Property Owners, 2014

5807 017 001 10
WICKENHEISER MARY ELLEN
11520 EXETER
CARLETON MI 48117

5807 017 002 00
INTERNATIONAL TRANSMISSION CO
ITC TRANSMISSION
C/O TAX DEPT
27175 ENERGY WAY
NOVI MI 48377

5807 017 300 26
FIX MICHAEL S & DEBRA L
6394 LEROUX
NEWPORT MI 48166

5807 017 501 10
FIX KEVIN M & WENDY L REV TRUST
5038 POST
NEWPORT MI 48166

5807 017 503 00
LANGTON VALARIAN
6445 LEROUX
NEWPORT MI 48166

5807 019 503 00
BODENMILLER EDWARD J
4771 POINTE AUX PEAUX
NEWPORT MI 48166

5807 019 504 00
BENNETT ALICE
14848 KINGSTON DR
EL PASO TX 79927

5807 019 504 40
BENNETT ALICE
14848 KINGSTON DR
EL PASO TX 79927

5807 020 501 00
BUTLER LONNIE & TAMARA
4981 POINTE AUX PEAUX
NEWPORT MI 48166

5807 020 502 00
MASSERANT ROBERT D & LISA S
5645 TROMBLEY
NEWPORT MI 48166

5807 020 502 30
PARKER ORVAL
5121 POINTE AUX PEAUX
NEWPORT MI 48166

5807 020 504 00
MONROE BANK AND TRUST
C/O SPECIAL ASSETS
102 E FRONT STREET
MONROE MI 48161

5807 020 504 10
TREMBLAY ROBERT & LOU ANN
5152 POINTE AUX PEAUX
NEWPORT MI 48166

5807 020 505 10
NOTHNAGEL DARLIN EDWARD
4704 ST CLAIR ST
NEWPORT MI 48166

5807 020 505 20
MCCARTY GORDON M
5194 POINTE AUX PEAUX
NEWPORT MI 48166

5807 020 505 21
HUDICK MARY LOU
MICHIGAN LAND CONTRACT VENDOR
P O BOX 351
NEWPORT MI 48166

5807 020 505 22
LAJINESS TERRANCE & LAJINESS M & J
C/O TERRANCE LAJINESS
5182 POINTE AUX PEAUX
NEWPORT MI 48166

5807 020 505 23
MCCARTY GORDON M
5194 POINTE AUX PEAUX
NEWPORT MI 48166

5807 028 501 00
ELLISON MICHAEL & LAURIE
4702 LONG
NEWPORT MI 48166

5807 028 509 00
CITY OF MONROE
WATER WORKS
120 E FIRST
MONROE MI 48161

5807 528 014 00
LYON SAND & GRAVEL COMPANY
8800 DIX AVE
DETROIT MI 48209

5807 529 001 00
MICHIGAN NATURE ASSOCIATION
326 E GRAND RIVER AVE
WILLIAMSTON MI 48895

5807 529 002 00
LAKE ERIE SHORELINE LIMITED LLC
C/O LAWRENCE J VANWASSHENOVA
2707 STEINER
MONROE MI 48162

5807 529 003 00
NOWICKI VIOLA
25000 RUBIN
WARREN MI 48089

5807 529 004 00
KOWALCHUK HELEN ESTATE
C/O PATRICIA WILSON
20661 WEDGEWOOD DRIVE
GROSSE POINTE WOODS MI 48236-1562

5807 529 005 00
UNITED STATES FISH & WILDLIFE SERVI
BISHOP HENRY WHIPPLE FEDERAL BLDG
C/O LOIS A LAWSON
1 FEDERAL DRIVE
SAINT PAUL MN 55111-4056

5807 529 006 00
POPEJOY ROBERT G
6171 AUSTRIAN BLVD
PUNTA GORDA FL 33982-2120

5807 529 007 00
HATHAWAY RODNEY
15175 S DIXIE HWY
MONROE MI 48161

5807 529 008 00
UNITED STATES FISH & WILDLIFE SERVI
BISHOP HENRY WHIPPLE FEDERAL BLDG
C/O LOIS A LAWSON
1 FEDERAL DRIVE
SAINT PAUL MN 55111-4056

5807 529 009 00
DELLEN WILLIAM M
PO BOX 1162
MONROE MI 48161-6162

5807 529 010 00
DELLEN WILLIAM M
PO BOX 1162
MONROE MI 48161-6162

5807 529 011 00
DELLEN WILLIAM M
PO BOX 1162
MONROE MI 48161-6162

5807 529 012 00
FULWIDER KAREN L & MACDONALD ARTHI
C/O KAREN L FULWIDER
1017 RIVERBANK
LINCOLN PARK MI 48146

5807 529 013 00
DELLEN WILLIAM M
PO BOX 1162
MONROE MI 48161-6162

5807 529 015 10
HOLMES JIMMY & REBECCA
6200 LANGTON
NEWPORT MI 48166

5807 529 015 20
NEWPORT BEACH MARINA
PETTY THOMAS
C/O FIRST EQUITY REALTY CORP
2170 E BIG BEAVER RD
TROY MI 48083-2315

5807 529 016 00
INTERNATIONAL TRANSMISSION CO
ITC TRANSMISSION
C/O TAX DEPT
27175 ENERGY WAY
NOVI MI 48377

5807 529 018 00
UNITED STATES FISH & WILDLIFE SERV
BISHOP HENRY WHIPPLE FED BLDG
C/O LOIS A LAWSON
1 FEDERAL DRIVE
FORT SNELLING MN 55111-4056

5807 529 018 10
MICHIGAN NATURE ASSOCIATION
326 E GRAND RIVER AVE
WILLIAMSTON MI 48895

5807 529 019 00
NOWICKI VIOLA
25000 RUBIN
WARREN MI 48089

5807 529 021 00
MASSERANT RANDY
6001 TOLL
NEWPORT MI 48166

5807 530 010 00
INTERNATIONAL TRANSMISSION CO
ITC TRANSMISSION
C/O TAX DEPT
27175 ENERGY WAY
NOVI MI 48377

5807 530 014 00
BARCZEWSKI JAMIE
5701 TOLL
NEWPORT MI 48166

5807 530 028 00
COUNTY OF MONROE
DRAIN COMMISSION
1005 S RAISINVILLE
MONROE MI 48161

5807 530 045 00
YOUNG DAVID & DEBRA
4957 RAYMOND
NEWPORT MI 48166

5807 530 049 00
SISUNG JAMES & HOLLY
5701 POST
NEWPORT MI 48166

5807 530 050 10
FLINT JERRY A & CINDY L
6577 LEROUX
NEWPORT MI 48166

5807 531 004 00
CHILDRESS CHARLES & BARBARA
6170 LEROUX
NEWPORT MI 48166

5807 531 007 00
DAUM KEVIN F & JACQUELINE E
6110 LEROUX
NEWPORT MI 48166

5807 532 038 40
VANWASHENOVA JOHN & MARGERY
4420 POINTE AUX PEAU
NEWPORT MI 48166

5807 765 244 00
JENKINS THOMAS D & SYLVIA S
4828 ELM
NEWPORT MI 48166

5807 789 001 00
DEWEY'S STONEY POINT ASSOC CORP
5878 SOUTH
NEWPORT MI 48166

5807 789 002 00
SQUIER BETH E ESTATE
C/O DONALD SQUIER
5820 POINTE AUX PEAUX
NEWPORT MI 48166

5807 789 005 00
STERLING DAVID L
5838 POINTE AUX PEAUX
NEWPORT MI 48166

5807 789 008 00
GONZALEZ SHIRLEY & GONZALEZ MARIA
3608 NAVAHO
MONROE MI 48162

5807 789 010 00
GONZALEZ SHIRLEY & GONZALEZ MARIA
3608 NAVAHO
MONROE MI 48162

5807 789 012 00
MCPEEK CHARLIE
4778 SUPERIOR
NEWPORT MI 48166

5807 789 061 00
MR INVESTMENTS LLC
C/O: ROBERT H DEGRAER
1555 HOLLYWOOD DRIVE
MONROE MI 48162

5807 789 063 00
MR INVESTMENTS LLC
C/O ROBERT H DEGRAER
1555 HOLLYWOOD DRIVE
MONROE MI 48162

5807 789 066 00
MCDEVITT KAY
2682 NADEAU RD
MONROE MI 48162

5807 789 068 00
ACHINGER JEFFREY & HEATHER
C/O JEFFREY ACHINGER
717 WHISPERLAKE RD
HOLLAND OH 43528-7877

5807 789 070 00
BOERNER LAUREN & KELLY
5884 POINTE AUX PEAUX
NEWPORT MI 48166

5807 789 073 00
STEWART VIRGIL & ROSALIE
4780 ST CLAIR
NEWPORT MI 48166

5807 789 075 00
ODOM PHYLLIS C
399 RABBIT RUN RD
CARLETON MI 48117-2100

5807 789 121 00
HAUT MICHELLE M
4775 HURON
NEWPORT MI 48166

5807 789 124 00
RORKE MICHAEL JAMES JR
5908 POINTE AUX PEAUX
NEWPORT MI 48166

5807 789 125 00
GONZALEZ MARIA & GONZALEZ SHIRLEY
3276 CHIPPEWA
MONROE MI 48162

5807 789 126 00
BROOKS KENNETH B (LL)
LIFE LEASE ESTATE HOLDER
17 OAK RDG E
MONROE MI 48161-5767

5807 789 129 00
WRIGHT JUSTIN C
5944 POINTE AUX PEAUX
NEWPORT MI 48166

5807 789 132 00
KOPSI CARL J
58816 US HIGHWAY 41
CALUMET MI 49913-6955

5807 789 173 00
DEWEYS STONY POINT ASSOC INC
P O BOX 66272
NEWPORT MI 48166

5807 789 174 00
QASSIS NABIH & JULIET
37119 MUIRFIELD DRIVE
LIVONIA MI 48152

5807 789 176 00
QASSIS NABIH & JULIET
37119 MUIRFIELD DRIVE
LIVONIA MI 48152

5807 789 183 00
GONZALEZ SHIRLEY C & GONZALEZ MARIA
C/O SHIRLEY C GONZALEZ
3608 NAVAHO
MONROE MI 48162

5807 789 215 01
QASSIS NABIH & JULIET
37119 MUIRFIELD DRIVE
LIVONIA MI 48152

5807 789 241 00
DEWEYS STONY POINT ASSOC INC
P O BOX 66272
NEWPORT MI 48166

5807 789 242 00
DEWEYS STONY POINT ASSOC INC
P O BOX 66272
NEWPORT MI 48166

5807 789 243 00
DEWEYS STONY POINT ASSOC INC
P O BOX 66272
NEWPORT MI 48166

5807 789 244 00
DEWEYS STONY POINT ASSOC INC
P O BOX 66272
NEWPORT MI 48166

5807 827 001 00
COSBY JACK W & CAROLE A
1201 LASALLE
MONROE MI 48162

5807 827 003 00
MASSERANT JEROME & JANIS
6255 HIGHLAND
NEWPORT MI 48166

5807 827 005 00
MOODY JASON L
6233 HIGHLAND
NEWPORT MI 48166

5807 827 007 00
BONDY ERIC & ROBIN
6211 HIGHLAND
NEWPORT MI 48166

5807 827 010 00
STYLES ELEANOR
6191 HIGHLAND
NEWPORT MI 48166

5807 827 012 00
DRUMMONDS PATRICIA
6148 POINTE AUX PEAUX
NEWPORT MI 48166

5807 827 014 00
STRINGHAM ROY D
5077 CLINTON STREET UNIT 1
BATAVIA NY 14020

5807 852 001 00
ORD DAVID H & BONNIE L TRUST
C/O DAVID & BONNIE ORD TRUSTEES
4720 LONG
NEWPORT MI 48166

5807 852 002 00
QUALEY JOHN & KENNEDY D & BAKER M
C/O: JOHN J QUALEY
4730 LONG
NEWPORT MI 48166

5807 852 008 00
DIEHL JOHN H & DEBORAH L
4772 LONG
NEWPORT MI 48166

5807 852 009 00
LIEDEL THOMAS D & ANNA L
4802 LONG
NEWPORT MI 48166

5807 852 011 00
SERES LONNY & LINDA
4834 LONG
NEWPORT MI 48166

5807 852 013 00
SERES LONNY & LINDA
4834 LONG
NEWPORT MI 48166

5807 852 015 00
MONROE FRENCHTOWN RAW WATER
SUPPLY CO-PARTNERSHIP
120 E FIRST ST
MONROE MI 48161

5807 852 018 00
LONG EST SUMMER RESORT ASSOC
C/O TREASURER
4802 LONG
NEWPORT MI 48166

5807 852 019 00
LONG EST SUMMER RESORT ASSOC
C/O TREASURER
4802 LONG
NEWPORT MI 48166

5807 852 101 00
ORD DAVID H & BONNIE L TRUST
C/O DAVID & BONNIE ORD TRUSTEES
4720 LONG
NEWPORT MI 48166

5807 852 102 00
QUALEY JOHN J &
KENNEDY DEBRA & BAKER MARILYN A
4730 LONG
NEWPORT MI 48166

5807 852 108 00
DIEHL JOHN & DEBORAH
4772 LONG
NEWPORT MI 48166

5807 852 109 00
LIEDEL THOMAS & ANNA
4802 LONG
NEWPORT MI 48166

5807 852 111 00
SERES LONNY & LINDA
4834 LONG
NEWPORT MI 48166

5807 852 113 00
SERES LONNY & LINDA
4834 LONG
NEWPORT MI 48166

5807 887 002 00
MCLAUGHLIN MICHAEL & BRIDGET
6108 POINTE AUX PEAUX
NEWPORT MI 48166

5807 887 003 00
LASKEY LARRY D
10623 TELEGRAPH
CARLETON MI 48117

5807 887 005 00
LASKEY LARRY D
10623 TELEGRAPH
CARLETON MI 48117

5807 887 007 00
YOAS LOWELL & ALICE
6060 POINTE AUX PEAUX
NEWPORT MI 48166

5807 887 009 00
FLIPPIN TODD D & DIANA J
9147 DOLD DRIVE
FINDLAY OH 45840-1684

5807 887 010 00
FLIPPIN TODD D & DIANA J
9147 DOLD DRIVE
FINDLAY OH 45840-1684

5807 887 023 00
OLIVER ROXANNE D
3938 LAKESHORE
NEWPORT MI 48166

5807 924 015 02
DAY CHRISTINE R
6444 TRAFALGAR DR
CANTON MI 48187

5807 924 016 02
DAY CHRISTINE R
6444 TRAFALGAR DR
CANTON MI 48187

5807 924 017 02
DAY CHRISTINE R
6444 TRAFALGAR DR
CANTON MI 48187

Michigan Department of Environmental Quality – Water Resources Division

WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION I – General Information

PLEASE TYPE OR PRINT

FACILITY NAME	NPDES PERMIT NUMBER
Fermi 2 Power Plant	MI0037028

14. APPLICATION CERTIFICATION

Rule 323.2114(1-4), promulgated under the Michigan Act, requires that **this Application must be signed as follows**:

A. For an organization, company, corporation, or authority, by a principal executive office, vice president, or higher
B. For a partnership, by a general partner
C. For a sole proprietor, by the proprietor
D. For a municipal, state, or other public facility, by a principal executive officer or ranking elected official (e.g., mayor, village president, city or village manager, or clerk)

Note: If the signatory is not listed above, but is authorized to sign the Application, please provide documentation of that authorization.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for having knowledge of violations."

The last Application for this facility was submitted on: April 1, 2009

I understand that my signature constitutes a legal agreement to comply with the requirements of the NPDES Permit. I certify under penalty of law that I possess full authority on behalf of the legal owner/permittee to sign and submit this Application.

Print Name: Kent C. Scott Title: Director - Nuclear Production

Signature: Date: 03/21/14

This completes Section I. Publicly-Owned Treatment Works discharging sanitary and industrial wastewater to the surface waters, and privately-owned treatment works discharging sanitary wastewater to the surface waters should complete Section II. Privately-owned treatment works include, but are not limited to, Mobile Home Parks, Campgrounds, Condominiums, Hotels and Motels, and Nursing Homes. All other applicants should complete Section III. If assistance is needed to complete this Application, contact the Permits Section.

Permit Application Submittal Checklist

Please confirm the following before submitting the Application:

- ☒ 1. Section I has been completed, including all diagrams, maps, and the treatment process narrative.
- ☐ 2. The Application has been signed as required above in Section I.14.A.-D. or a copy of the letter authorizing the signatory to sign the letter has been included, as appropriate.
- ☒ 3. Section II or Section III has been completed, including any additional information or submissions.
- ☒ 4. Section IV has been completed by any facility that discharges storm water.
- ☐ 5. Section V has been completed by any facility that is a Concentrated Animal Feeding Operation.
- ☒ 6. Section VI has been completed by any facility that has Cooling Water Intake Structures.
- ☐ 7. A check or money order for the appropriate application fee has been made out to the "State of Michigan" and has been included with the Application submittal.
- ☒ 8. E-mail addresses have been provided.

Michigan Department of Environmental Quality – Water Resources Division

WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION III – Industrial and Commercial Wastewater

Section III is to be completed by all facilities classified as Industrial or Commercial facilities. Industrial and Commercial facilities include, but are not limited to, facilities that discharge or propose to discharge a wastewater generated by a production process, a service provided, or through a remediation project. Municipal and public facilities are not required to complete Section III (unless requesting authorization for discharges other than sanitary wastewater).

A. Facility Information

PLEASE TYPE OR PRINT

FACILITY NAME	NPDES PERMIT NUMBER
Fermi 2 Power Plant	MI0037028

1. BUSINESS INFORMATION

A. Provide up to four Standard Industrial Classification (SIC) or North American Industry Classification System (NAICS) codes, in order of economic importance, which best describe the major products or services provided by this facility

1.	2.	3.	4.
4911			

B. Indicate if this facility is a primary industry (refer to Table 1 of the Appendix to determine if this facility is a primary industry).

☒ Yes. This facility is a primary industry. Indicate the primary industry as identified in Table 1 of the Appendix: Steam Electric Power Generation

☐ No. This facility is not a primary industry.

2. WATER SUPPLY AND DISCHARGE TYPE

A. Identify all water sources entering the facility and treatment systems, and provide average flows. The volume may be estimated from water supply meter readings, pump capacities, etc. Provide the name of the source where appropriate (i.e., Grand River, Lake Michigan, City of, Millpond). To submit additional information, see Page ii, Item 3.

	Name and Location of Source	Average Volume or Flow Rate	Units
Municipal Supply	Frenchtown Township	25	MGY
Surface Water Intake	Lake Erie	55	MGD
Private Well			
Other: ____	Precipitation	5	MGD

B. Identify water discharged by the facility and treatment systems, and provide average flows. If water is first used for one purpose and then is subsequently used for another purpose, indicate the type and amount of the last use. For example, if water is initially used for noncontact cooling water and then for process water, indicate the amount of process water. The amount of water from sources should approximate the amount of water usage. If the amounts are different, provide an explanation.

	Average Flow Rate	Units		Average Flow Rate	Units
Process Wastewater	10,604 *	MGY	Sanitary Wastewater	18,300 *	GPD
Contact Cooling Water			Regulated Storm Water	2.6	MGD
Noncontact Cooling Water			High Pressure Test Water		
Groundwater Cleanup			Other: Dredge Basin	10.2 *	MGY

* Based on 2013 data.

Note: For A. and B. above, indicate units as MGD (million gallons per day), MGY (million gallons per year), GPD (gallons per day), or other appropriate unit.

Michigan Department of Environmental Quality – Water Resources Division

WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION III – Industrial and Commercial Wastewater

B. Outfall Information

Complete a separate Section III.B. – Outfall Information (Pages 19 – 24) for each outfall at the facility. Make copies of this blank section of the Application as necessary for additional outfalls.

PLEASE TYPE OR PRINT

FACILITY NAME	NPDES PERMIT NUMBER	OUTFALL NUMBER
Fermi 2 Power Plant	MI0037028	001

1. OUTFALL INFORMATION. Instructions for this item are on Page 3 of the Appendix.

A.	Receiving Water: Ottawa Stony				Hydrologic Unit Code: 04100001	
B.	County: Monroe				Township: Frenchtown	
C.	Town: T6S	Range: R10E	Section: 21	¼: NE	¼, ¼: NW	Private (French) Land Claim:
D.	Latitude: 41.964843				Longitude: -83.254496	

E. Type of Wastewater Discharged (check all that apply to this outfall):

- ☐ Contact Cooling
- ☐ Groundwater Cleanup
- ☐ Hydrostatic Pressure Test
- ☐ Noncontact Cooling Water
- ☒ Process Wastewater
- ☐ Sanitary Wastewater
- ☐ Storm Water - not regulated
- ☐ Storm Water - regulated
- ☐ Storm water subject to effluent guidelines (indicate under which category): ____
- ☐ Others (see Table 8 – Other Common Types of Wastewater on Page 17 in the Appendix) ____

F. The Maximum Design Flow Rate for this outfall is: 45.1 MGD

G. What is the Maximum Authorized Daily Discharge Flow for this outfall for the next five years?

Seasonal Dischargers ____ MGY (Continue with Item H.)

Continuous Dischargers 45.1 MGD (Continue with Item I.)

H. Seasonal Discharge:

List the discharge periods (by month) and the volume discharged in the space provided below.

From	Through	Actual Discharge Volume (MGD)	Annual Total
From	Through	Actual Discharge Volume (MGD)	
From	Through	Actual Discharge Volume (MGD)	
From	Through	Actual Discharge Volume (MGD)	

I. Continuous Discharge:

How often is there a discharge from this outfall (on average)? 24 Hours/Day 365 Days/Year

Batch dischargers are required to provide the following additional information:

Is there effluent flow equalization? ☐ Yes ☐ No

Batch Peak Flow Rate: ____ Number of batches discharged per day: ____

	Minimum	Average	Maximum
Batch Volume (gallons)			
Batch Duration (minutes)			

Michigan Department of Environmental Quality – Water Resources Division

WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION III – Industrial and Commercial Wastewater

B. Outfall Information

PLEASE TYPE OR PRINT

FACILITY NAME	NPDES PERMIT NUMBER	OUTFALL NUMBER
Fermi 2 Power Plant	MI0037028	001

2. PROCESS STREAMS CONTRIBUTING TO OUTFALL DISCHARGE

Federal regulations require that different industries report different information, depending on the type of facility. The information below is used to determine the applicable federal regulations for this facility. An abbreviated list is on Page 11 in the 'Summary of Information to be reported by Industry Type' section of the Appendix. Applicants are required to provide the name and the SIC or the NAICS code for each process at the facility. Facilities with production-based limits must report an estimated annual production rate for the next five (5) years or the life of the permit. If the wastestream is not regulated under federal categorical standards, the applicant is required to report all pollutants which have the reasonable potential to be present in the discharge. To submit additional information, see Page ii, Item 3.

PROCESS INFORMATION

A. Name of the process contributing to the discharge: Closed - cycle Cooling System Blowdown.

B. SIC or NAICS code: 4911

C. Describe the process and provide measures of production: Blowdown from the Plant's Closed-cylcle Cooling System cooling tower blowdown. Maximum expected discharge = 45 MGD.

PROCESS INFORMATION

A. Name of the process contributing to the discharge: Monitoring Point 001D - Processed Radwaste Wastewater.

B. SIC or NAICS code: 4911

C. Describe the process and provide measures of production: Processed Radwaste wastewater from the plant floor drains and equipment drains. Maximum anticipated flow = 0.216 MGD

PROCESS INFORMATION

A. Name of the process contributing to the discharge: Monitoring Point 001E - Chemical & non-chemical metal cleaning waste.

B. SIC or NAICS code: 4911

C. Describe the process and provide measures of production: Treated chemical and non-chemical metal cleaning wastes from the condenser and heat exchanger cleaning. Maximum andicipated flow = 0.50 MGD.

PROCESS INFORMATION

A. Name of the process contributing to the discharge: Monitoring Point 001B - Residual Heat Removal System service water.

B. SIC or NAICS code: 4911

C. Describe the process and provide measures of production: Blowdown from the plant's Residual Heat Removal service water system. Maximum anticipated flow = 1.44 MGD.

PROCESS INFORMATION

A. Name of the process contributing to the discharge: _____

B. SIC or NAICS code: _____

C. Describe the process and provide measures of production:

Michigan Department of Environmental Quality – Water Resources Division

WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION III – Industrial and Commercial Wastewater

B. Outfall Information

PLEASE TYPE OR PRINT

FACILITY NAME	NPDES PERMIT NUMBER	OUTFALL NUMBER
Fermi 2 Power Plant	MI0037028	001

3. EFFLUENT CHARACTERISTICS - CONVENTIONAL POLLUTANTS. Instructions for this item are on Page 4 of the Appendix.

☒ Check this box if additional information is included as an attachment. To submit additional information, see Page ii, Item 3.

Please Note: Rule 323.1062 allows the use of either *Escherichia coli* or Fecal Coliform Bacteria as an indicator that effluent has been disinfected. The DEQ will use the indicator selected below in the permit issued based on this Application. ☐ Use *Escherichia coli* as an indicator of disinfection. ☐ Use Fecal Coliform Bacteria as an indicator of disinfection.

Submitted via DMRs or e-DMRs	Waiver Request and the Rationale Behind the Request	Parameter	Maximum Monthly Concentration	Maximum Daily Concentration	Units	Number of Analyses	Sample Type
☐		Biochemical Oxygen Demand – five day (BOD_5)			mg/l		☐ Grab ☐ 24-Hr Comp
☐		Chemical Oxygen Demand (COD)			mg/l		☐ Grab ☐ 24-Hr Comp
☐		Total Organic Carbon (TOC)			mg/l		☐ Grab ☐ 24-Hr Comp
☐		Ammonia Nitrogen (as N)			mg/l		☐ Grab ☐ 24-Hr Comp
☐		Total Suspended Solids			mg/l		☐ Grab ☐ 24-Hr Comp
☐	**Waiver Request Not Required**	Total Dissolved Solids			mg/l		☐ Grab ☐ 24-Hr Comp
☐	**Waiver Request Not Required**	Total Phosphorus (as P)			mg/l		☐ Grab ☐ 24-Hr Comp
☐	**Waiver Request Not Required**	Fecal Coliform Bacteria (report geometric means)		Maximum 7-day	counts/100ml		Grab
☐	**Waiver Request Not Required**	*Escherichia coli* (report geometric means)		Maximum 7-day	counts/100 ml		Grab
☒	**Waiver Request Not Required**	Total Residual Chlorine			☐ mg/l ☐ µg/l		Grab
☐	**Waiver Request Not Required**	Dissolved Oxygen	~~Do Not Use~~	Minimum Daily	mg/l		Grab
☒		pH (report maximum and minimum of individual samples)	Minimum	Maximum	standard units		Grab
☒		Temperature, Summer			☐ °F ☐ °C		Grab
☒		Temperature, Winter			☐ °F ☐ °C		Grab
☐	**Waiver Request Not Required**	Oil & Grease			mg/l		Grab

Michigan Department of Environmental Quality – Water Resources Division

WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION III – Industrial and Commercial Wastewater

B. Outfall Information

PLEASE TYPE OR PRINT

FACILITY NAME	NPDES PERMIT NUMBER	OUTFALL NUMBER
Fermi 2 Power Plant	MI0037028	001

Note: For questions on this page, Tables 1 – 5 are found in the Appendix.

4. PRIMARY INDUSTRY PRIORITY POLLUTANT INFORMATION

Existing primary industries that discharge process wastewater are required to submit the results of at least one permittee-collected effluent analysis for selected organic pollutants identified in Table 2 (as determined from Table 1, Testing Requirements for Organic Toxic Pollutants by Industrial Category), and all of the pollutants identified in Table 3. Existing primary industries are required to also provide the results of at least one permittee-collected effluent analysis for any other chemical listed in Table 2 known or believed to be present in the facility's effluent.

In addition, submit the results of all other effluent analyses performed within the last three years for any chemical listed in Tables 2 and 3.

New primary industries that propose to discharge process wastewater are required to provide an estimated effluent concentration for any chemical listed in Tables 2 and 3 expected to be present in the facility's effluent.

5. DIOXIN AND FURAN CONGENER INFORMATION

Existing industries that use or manufacture 2,3,5-trichlorophenoxy acetic acid (2,4,5-T); 2-(2,3,5-trichlorophenoxy) propanoic acid, (Silvex, 2,3,5-TP); 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon); 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothionate (Ronnel); 2,4,5-trichlorophenol (TCP); or hexachlorophrene (HCP), or knows or has reason to believe that 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) is present in the facility's effluent, are required to submit the results of at least one effluent analysis for the dioxin and furan congeners listed in Table 6. All effluent analyses for dioxin and furan congeners shall be conducted using USEPA Method 1613.

In addition, submit the results of all other effluent analyses performed within the last three years for any dioxin and furan congener listed in Table 6.

New industries that expect to use or manufacture 2,3,5-trichlorophenoxy acetic acid (2,4,5-T); 2-(2,3,5-trichlorophenoxy) propanoic acid (Silvex, 2,3,5-TP); 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon); 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothionate (Ronnel); 2,4,5-trichlorophenol (TCP); or hexachlorophrene (HCP), or knows or has reason to believe that 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) is present in the facility's effluent, shall provide estimated effluent concentrations for the dioxin and furan congeners listed in Table 6.

6. OTHER INDUSTRY PRIORITY POLLUTANT INFORMATION

Existing secondary industries or existing primary industries that discharge nonprocess wastewater are required to submit the results of at least one effluent analysis for any chemical listed in Tables 2 and 3 known or believed to be present in the facility's effluent.

In addition, submit the results of all other effluent analyses performed within the last three years for any chemical listed in Tables 2 and 3.

New secondary industries or new primary industries that propose to discharge nonprocess wastewater are required to provide an estimated effluent concentration for any chemical listed in Tables 2 and 3 expected to be present in the facility's effluent.

7. ADDITIONAL TOXIC AND OTHER POLLUTANT INFORMATION

All existing industries, regardless of discharge type, are required to provide the results of at least one analysis for any chemical listed in Table 4 known or believed to be present in the facility's effluent, and a measured or estimated effluent concentration for any chemical listed in Table 5 known or believed to be present in the facility's effluent. In addition, submit the results of any effluent analysis performed within the last three years for any chemical listed in Tables 4 and 5.

New industries, regardless of discharge type, are required to provide an estimated effluent concentration for any chemical listed in Tables 4 and 5 expected to be present in the facility's effluent.

8. INJURIOUS CHEMICALS NOT PREVIOUSLY REPORTED

New or existing industries, regardless of discharge type, are required to provide a measured or estimated effluent concentration for any toxic or otherwise injurious chemicals known or believed to be present in the facility's effluent that have not been previously identified in this Application. Quantitative effluent data for these chemicals that is less than five years old shall be reported.

NOTE: All effluent data submitted in response to questions 4, 5, 6, 7, and 8 above should be recorded on Page 23. To submit additional information, see Page ii, Item 3. If the effluent concentrations are estimated, place an "E" in the "Analytical Method" column. The following fields shall be completed for each data row: Parameter, CAS No., Concentration(s), Sample Type, and Analytical Method. For analytical test requirements, see Page ii, Item 5. Tables 1, 2, and 3 can be found in the Appendix.

If Alternate Test Procedures have been approved for any parameter listed above (Items 4. through 8.), see Page ii, Item 5. for additional instructions.

Michigan Department of Environmental Quality – Water Resources Division

WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION III – Industrial and Commercial Wastewater

B. Outfall Information

PLEASE TYPE OR PRINT

FACILITY NAME	NPDES PERMIT NUMBER	OUTFALL NUMBER
Fermi 2 Power Plant	MI0037028	001

Submitted via DMRs or e-DMRs	PARAMETER	CAS No.	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Conc. (µg/l)	Sample Type	Analytical Method
	SAMPLE DATE →							
☐	SEE ATTACHMENT VI							
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Attachment VI

NPDES Permit Application for Reissuance

Fermi 2 Power Plant MI0037028

Outfall 001 Analytical Data

Note: Also contains Fermi Intake Analytical Data

TRIMATRIX LABORATORIES

December 19, 2013

DTE - Fermi-2
Attn: Ms. Mary Hana
6400 North Dixie Highway, 200 TAC
Newport, MI 48166

Project: Permit Renewal - Fermi, 2013

Dear Ms. Mary Hana,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1312032	12/03/2013	Laboratory Services

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications and Project Technical Narrative sections of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Jennifer L. Rice
Project Chemist

5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

PROJECT TECHNICAL NARRATIVE(s)

Polychlorinated Biphenyls (PCBs) by EPA Method 608

Narrative: Due to sample volumes, matrix specific quality control (QC) was not performed on this batch. A blank and a Laboratory Control Sample make up the batch QC.

Analysis: USEPA-608

Sample/Analyte: 1312032-14 Intake Composite
1312032-15 001 Composite

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TRIMATRIX LABORATORIES

PROJECT TECHNICAL NARRATIVE(s)

Volatile Organic Compounds by EPA Method 624

Narrative: Sample was not preserved per 40 CFR Part 136.3,Table II: a sample collected for Acrolein must be pH adjusted to a range of 4-5 or analyzed within 3 days of collection.

Analysis: USEPA-624

Sample/Analyte: 1312032-06 Outfall 001 VOC Lab Composite
1312032-13 Intake VOC Lab Composite

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TRIMATRIX LABORATORIES

PROJECT TECHNICAL NARRATIVE(s)

Semivolatile Organic Compounds by EPA Method 625

Narrative: Due to sample volumes, matrix specific quality control (QC) was not performed on this batch. A blank and a Laboratory Control Sample make up the batch QC.

Analysis: USEPA-625

Sample/Analyte: 1312032-14 Intake Composite
1312032-15 001 Composite

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TRIMATRIX LABORATORIES

PROJECT TECHNICAL NARRATIVE(s)

Total Metals by EPA 200 Series Methods

Narrative: The CRL recovery for this analyte was outside of the laboratory control limits.

Analysis: USEPA-200.8

3L09035-CRL2 Selenium

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TRIMATRIX LABORATORIES

PROJECT TECHNICAL NARRATIVE(s)

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Narrative: The CRL recovery for this analyte was outside of the laboratory control limits.

Analysis: SM 5540 C-2011

3L04037-CRL1	Surfactants, MBAS

Narrative: The MS or MSD recovery, but not both, was outside the control limit. The RPD is within the control limit.

Analysis: USEPA-351.2 Rev. 2.0

Sample/Analyte: 1312032-15 001 Composite	Nitrogen, Total Kjeldahl

Narrative: The RL for this analysis was elevated due to insufficient sample volume or weight received.

Analysis: USEPA-1664A

Sample/Analyte: 1312032-10 Intake Grab Day 2	HEM; Oil & Grease

Narrative: A.C.U. stands for Apparent Color Units. Color is pH dependent and its value increases proportionally with pH. The method requires that the pH of the sample be determined and reported along with the A.C.U value. The sample pH was: 7.12.

Analysis: SM 2120 B-2011

Sample/Analyte: 1312032-14 Intake Composite	Color (Apparent)
1312032-15 001 Composite	Color (Apparent)

Narrative: The referenced method requires analysis occur within 15 minutes of sample collection. Analysis was performed at the laboratory on 12-4-13..

Analysis: SM 4500-SO3 B-2011

Sample/Analyte: 1312032-14 Intake Composite	Sulfite
1312032-15 001 Composite	Sulfite

Narrative: The mg/L MBAS result reported should be considered mg MBAS/L (calculated as LAS, molecular weight 320).

Analysis: SM 5540 C-2011

Sample/Analyte: 1312032-14 Intake Composite	Surfactants, MBAS
1312032-15 001 Composite	Surfactants, MBAS

Narrative: Distillation pretreatment was not performed. Common interfering ions were complexed by a buffer solution. Fluoroborates (if present) may result in a low bias of the reported concentration.

Analysis: SM 4500-F C-2011

Sample/Analyte: 1312032-14 Intake Composite	Fluoride
1312032-15 001 Composite	Fluoride

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TRIMATRIX LABORATORIES

STATEMENT OF DATA QUALIFICATIONS

Volatile Organic Compounds by EPA Method 624

Qualification: The corresponding CCV for this analytical batch had a recovery exceeding the upper control limit of the method. A positive result for this analyte in any associated samples are considered estimated. Non-detectable results are not qualified.

Analysis: USEPA-624

Sample/Analyte:		
1312032-06	Outfall 001 VOC Lab Composite	Chloroethane
1312032-13	Intake VOC Lab Composite	Chloroethane

Qualification: The chemical utilized to preserve this sample has the potential to degrade 2-chloroethyl vinyl ether through polymerization or other rapid chemical reaction. The reporting limit and/or any positive result must be considered estimated.

Analysis: USEPA-624

Sample:	
1312032-06	Outfall 001 VOC Lab Composite
1312032-13	Intake VOC Lab Composite

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TRIMATRIX LABORATORIES

STATEMENT OF DATA QUALIFICATIONS

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Qualification: The following reported test methods and analyte(s) are exceptions to our NELAP Fields of Accreditation, or for which accreditation is not required, applicable, or available.

Analysis: EPA-351.2/4500-NH3G
Analyte(s): Nitrogen, Organic

Analysis: SM 4500-SO3 B-2011
Analyte(s): Sulfite

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services
Client Sample ID:	**Outfall 001 Grab Day 1**	Sampled:	12/2/13 13:00
Lab Sample ID:	**1312032-01**	Sampled By:	J. Elsey
Matrix:	Waste Water	Received:	12/3/13 17:00

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chlorine, Total Residual (Field)	<0.20	0.20	mg/L	1	HACH-8167	12/02/13 13:00	JAE	1313078
Oxygen, Dissolved (Field)	**7.57**	0.10	mg/L	1	SM 4500-O G	12/02/13 13:00	JAE	1313078
pH (Field)	**8.31**	1.00	pH Units	1	SM 4500-H B-2011	12/02/13 13:00	JAE	1313078
Temperature °C (Field)	**16.0**	0.1	°C	1	SM 2550 B	12/02/13 13:00	JAE	1313078

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services
Client Sample ID:	**Outfall 001 LLHg**	Sampled:	12/2/13 12:44
Lab Sample ID:	**1312032-02**	Sampled By:	J. Elsey
Matrix:	Waste Water	Received:	12/3/13 17:00

Total Metals by EPA 1600 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Mercury	**7.84**	2.50	ng/L	5	USEPA-1631E	12/05/13 12:43	MSM	1313075

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services
Client Sample ID:	**Outfall 001 Grab Day 2**	Sampled:	12/3/13 12:35
Lab Sample ID:	**1312032-03**	Sampled By:	J. Elsey
Matrix:	Waste Water	Received:	12/3/13 17:00

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Phenolics, Total	<0.0500	0.0500	mg/L	1	USEPA-420.4	12/09/13 10:39	LMA	1313065
Chlorine, Total Residual (Field)	<0.20	0.20	mg/L	1	HACH-8167	12/03/13 12:35	JAE	1313078
Oxygen, Dissolved (Field)	**6.89**	0.10	mg/L	1	SM 4500-O G	12/03/13 12:35	JAE	1313078
pH (Field)	**8.56**	1.00	pH Units	1	SM 4500-H B-2011	12/03/13 12:35	JAE	1313078
Temperature °C (Field)	**19.0**	0.1	°C	1	SM 2550 B	12/03/13 12:35	JAE	1313078
Cyanide, Available	<2.0	2.0	ug/L	1	USEPA OIA-1677	12/09/13 12:10	LMA	1313173
HEM; Oil & Grease	<5.00	5.00	mg/L	1	USEPA-1664A	12/10/13 08:00	WAH	1313184

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services
Client Sample ID:	**Outfall 001 LLHg Duplicate**	Sampled:	12/2/13 12:47
Lab Sample ID:	**1312032-04**	Sampled By:	J. Elsey
Matrix:	Waste Water	Received:	12/3/13 17:00

Total Metals by EPA 1600 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Mercury	**7.51**	0.500	ng/L	1	USEPA-1631E	12/05/13 12:01	MSM	1313075

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services
Client Sample ID:	**Outfall 001 Field Blank**	Sampled:	12/2/13 12:41
Lab Sample ID:	**1312032-05**	Sampled By:	J. Elsey
Matrix:	Waste Water	Received:	12/3/13 17:00

Total Metals by EPA 1600 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Mercury	<0.500	0.500	ng/L	1	USEPA-1631E	12/05/13 12:05	MSM	1313075

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**		
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services		
Client Sample ID:	**Outfall 001 VOC Lab Composite**	Sampled:	12/3/13 12:35		
Lab Sample ID:	**1312032-06**	Sampled By:	J. Elsey		
Matrix:	Waste Water	Received:	12/3/13 17:00		
Unit:	ug/L	Prepared:	12/6/13 7:00	By:	DLV
Dilution Factor:	1	Analyzed:	12/6/13 16:34	By:	DLV
QC Batch:	1313145	Analytical Batch:	3L09003		

*Volatile Organic Compounds by EPA Method 624

CAS Number	Analyte	Analytical Result	RL
107-02-8	Acrolein	<5.0	5.0
107-13-1	Acrylonitrile	<1.0	1.0
71-43-2	Benzene	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
*75-00-3	Chloroethane	<1.0	1.0
110-75-8	2-Chloroethyl Vinyl Ether	<10	10
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<1.0	1.0
124-48-1	Dibromochloromethane	<1.0	1.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
542-75-6	1,3-Dichloropropene (Total)	<2.0	2.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0
78-87-5	1,2-Dichloropropane	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
75-09-2	Methylene Chloride	<5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
108-88-3	Toluene	<1.0	1.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-01-4	Vinyl Chloride	<1.0	1.0

Continued on next page

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**		
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services		
Client Sample ID:	**Outfall 001 VOC Lab Composite**	Sampled:	12/3/13 12:35		
Lab Sample ID:	**1312032-06**	Sampled By:	J. Elsey		
Matrix:	Waste Water	Received:	12/3/13 17:00		
Unit:	ug/L	Prepared:	12/6/13 7:00	By:	DLV
Dilution Factor:	1	Analyzed:	12/6/13 16:34	By:	DLV
QC Batch:	1313145	Analytical Batch:	3L09003		

*Volatile Organic Compounds by EPA Method 624 (Continued)

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*98*	*85-118*
1,2-Dichloroethane-d4	*99*	*87-122*
Toluene-d8	*98*	*85-113*
4-Bromofluorobenzene	*93*	*82-110*

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services
Client Sample ID:	**Fermi LLHg Trip Blank**	Sampled:	12/2/13 0:00
Lab Sample ID:	**1312032-07**	Sampled By:	J. Elsey
Matrix:	Waste Water	Received:	12/3/13 17:00

Total Metals by EPA 1600 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Mercury	<0.500	0.500	ng/L	1	USEPA-1631E	12/05/13 12:08	MSM	1313075

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services
Client Sample ID:	**Intake Grab Day 1**	Sampled:	12/2/13 12:25
Lab Sample ID:	**1312032-08**	Sampled By:	J. Elsey
Matrix:	Waste Water	Received:	12/3/13 17:00

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chlorine, Total Residual (Field)	<0.20	0.20	mg/L	1	HACH-8167	12/02/13 12:25	JAE	1313078
Oxygen, Dissolved (Field)	**6.43**	0.10	mg/L	1	SM 4500-O G	12/02/13 12:25	JAE	1313078
pH (Field)	**7.51**	1.00	pH Units	1	SM 4500-H B-2011	12/02/13 12:25	JAE	1313078
Temperature °C (Field)	**5.0**	0.1	°C	1	SM 2550 B	12/02/13 12:25	JAE	1313078

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services
Client Sample ID:	**Intake LLHg**	Sampled:	12/2/13 12:02
Lab Sample ID:	**1312032-09**	Sampled By:	J. Elsey
Matrix:	Waste Water	Received:	12/3/13 17:00

Total Metals by EPA 1600 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Mercury	**3.61**	0.500	ng/L	1	USEPA-1631E	12/19/13 10:56	MSM	1313536

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services
Client Sample ID:	**Intake Grab Day 2**	Sampled:	12/3/13 12:00
Lab Sample ID:	**1312032-10**	Sampled By:	J. Elsey
Matrix:	Waste Water	Received:	12/3/13 17:00

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Phenolics, Total	<0.0500	0.0500	mg/L	1	USEPA-420.4	12/09/13 10:39	LMA	1313065
Chlorine, Total Residual (Field)	<0.20	0.20	mg/L	1	HACH-8167	12/03/13 12:00	JAE	1313078
Oxygen, Dissolved (Field)	**7.56**	0.10	mg/L	1	SM 4500-O G	12/03/13 12:00	JAE	1313078
pH (Field)	**7.57**	1.00	pH Units	1	SM 4500-H B-2011	12/03/13 12:00	JAE	1313078
Temperature °C (Field)	**12.0**	0.1	°C	1	SM 2550 B	12/03/13 12:00	JAE	1313078
Cyanide, Available	<2.0	2.0	ug/L	1	USEPA OIA-1677	12/09/13 12:11	LMA	1313173
HEM; Oil & Grease	<5.10	5.10	mg/L	1	USEPA-1664A	12/10/13 08:00	WAH	1313184

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services
Client Sample ID:	**Intake LLHg Duplicate**	Sampled:	12/2/13 12:05
Lab Sample ID:	**1312032-11**	Sampled By:	J. Elsey
Matrix:	Waste Water	Received:	12/3/13 17:00

Total Metals by EPA 1600 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Mercury	**3.50**	0.500	ng/L	1	USEPA-1631E	12/19/13 09:14	MSM	1313536

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services
Client Sample ID:	**Intake LLHg Field Blank**	Sampled:	12/2/13 11:59
Lab Sample ID:	**1312032-12**	Sampled By:	J. Elsey
Matrix:	Waste Water	Received:	12/3/13 17:00

Total Metals by EPA 1600 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Mercury	<0.500	0.500	ng/L	1	USEPA-1631E	12/05/13 12:19	MSM	1313075

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**		
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services		
Client Sample ID:	**Intake VOC Lab Composite**	Sampled:	12/3/13 12:00		
Lab Sample ID:	**1312032-13**	Sampled By:	J. Elsey		
Matrix:	Waste Water	Received:	12/3/13 17:00		
Unit:	ug/L	Prepared:	12/6/13 7:00	By:	DLV
Dilution Factor:	1	Analyzed:	12/6/13 17:03	By:	DLV
QC Batch:	1313145	Analytical Batch:	3L09003		

*Volatile Organic Compounds by EPA Method 624

CAS Number	Analyte	Analytical Result	RL
107-02-8	Acrolein	<5.0	5.0
107-13-1	Acrylonitrile	<1.0	1.0
71-43-2	Benzene	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
*75-00-3	Chloroethane	<1.0	1.0
110-75-8	2-Chloroethyl Vinyl Ether	<10	10
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<1.0	1.0
124-48-1	Dibromochloromethane	<1.0	1.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
542-75-6	1,3-Dichloropropene (Total)	<2.0	2.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0
78-87-5	1,2-Dichloropropane	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
75-09-2	Methylene Chloride	<5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
108-88-3	Toluene	<1.0	1.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-01-4	Vinyl Chloride	<1.0	1.0

Continued on next page

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**		
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services		
Client Sample ID:	**Intake VOC Lab Composite**	Sampled:	12/3/13 12:00		
Lab Sample ID:	**1312032-13**	Sampled By:	J. Elsey		
Matrix:	Waste Water	Received:	12/3/13 17:00		
Unit:	ug/L	Prepared:	12/6/13 7:00	By:	DLV
Dilution Factor:	1	Analyzed:	12/6/13 17:03	By:	DLV
QC Batch:	1313145	Analytical Batch:	3L09003		

*Volatile Organic Compounds by EPA Method 624 (Continued)

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*98*	*85-118*
1,2-Dichloroethane-d4	*98*	*87-122*
Toluene-d8	*99*	*85-113*
4-Bromofluorobenzene	*95*	*82-110*

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**		
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services		
Client Sample ID:	**Intake Composite**	Sampled:	12/3/13 12:20		
Lab Sample ID:	**1312032-14**	Sampled By:	J. Elsey		
Matrix:	Waste Water	Received:	12/3/13 17:00		
Unit:	ug/L	Prepared:	12/6/13 7:31	By:	ALK
Dilution Factor:	1	Analyzed:	12/13/13 3:08	By:	ASC
QC Batch:	1313086	Analytical Batch:	3L13025		

Polychlorinated Biphenyls (PCBs) by EPA Method 608

CAS Number	Analyte	Analytical Result	RL
12674-11-2	PCB-1016	<0.20	0.20
11104-28-2	PCB-1221	<0.20	0.20
11141-16-5	PCB-1232	<0.20	0.20
53469-21-9	PCB-1242	<0.20	0.20
12672-29-6	PCB-1248	<0.20	0.20
11097-69-1	PCB-1254	<0.20	0.20
11096-82-5	PCB-1260	<0.20	0.20

Surrogates:	*% Recovery*	*Control Limits*
Decachlorobiphenyl	*86*	*45-134*
Tetrachloro-m-xylene	*71*	*27-126*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**		
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services		
Client Sample ID:	**Intake Composite**	Sampled:	12/3/13 12:20		
Lab Sample ID:	**1312032-14**	Sampled By:	J. Elsey		
Matrix:	Waste Water	Received:	12/3/13 17:00		
Unit:	ug/L	Prepared:	12/5/13 8:00	By:	ALK
Dilution Factor:	1	Analyzed:	12/11/13 6:36	By:	DWJ
QC Batch:	1313027	Analytical Batch:	3L11050		

Semivolatile Organic Compounds by EPA Method 625

CAS Number	Analyte	Analytical Result	RL
83-32-9	Acenaphthene	<5.0	5.0
208-96-8	Acenaphthylene	<5.0	5.0
120-12-7	Anthracene	<5.0	5.0
92-87-5	Benzidine	<50	50
56-55-3	Benzo(a)anthracene	<5.0	5.0
50-32-8	Benzo(a)pyrene	<5.0	5.0
205-99-2	Benzo(b)fluoranthene	<5.0	5.0
207-08-9	Benzo(k)fluoranthene	<5.0	5.0
191-24-2	Benzo(g,h,i)perylene	<5.0	5.0
101-55-3	4-Bromophenyl Phenyl Ether	<5.0	5.0
85-68-7	Butyl Benzyl Phthalate	<5.0	5.0
59-50-7	4-Chloro-3-methylphenol	<5.0	5.0
111-91-1	Bis(2-chloroethoxy)methane	<5.0	5.0
111-44-4	Bis(2-chloroethyl) Ether	<5.0	5.0
108-60-1	Bis(2-chloroisopropyl) Ether	<5.0	5.0
91-58-7	2-Chloronaphthalene	<5.0	5.0
95-57-8	2-Chlorophenol	<5.0	5.0
7005-72-3	4-Chlorophenyl Phenyl Ether	<5.0	5.0
218-01-9	Chrysene	<5.0	5.0
53-70-3	Dibenz(a,h)anthracene	<5.0	5.0
84-74-2	Di-n-butyl Phthalate	<5.0	5.0
95-50-1	1,2-Dichlorobenzene	<5.0	5.0
541-73-1	1,3-Dichlorobenzene	<5.0	5.0
106-46-7	1,4-Dichlorobenzene	<5.0	5.0
91-94-1	3,3´-Dichlorobenzidine	<20	20
120-83-2	2,4-Dichlorophenol	<5.0	5.0
84-66-2	Diethyl Phthalate	<5.0	5.0
105-67-9	2,4-Dimethylphenol	<5.0	5.0
131-11-3	Dimethyl Phthalate	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**		
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services		
Client Sample ID:	**Intake Composite**	Sampled:	12/3/13 12:20		
Lab Sample ID:	**1312032-14**	Sampled By:	J. Elsey		
Matrix:	Waste Water	Received:	12/3/13 17:00		
Unit:	ug/L	Prepared:	12/5/13 8:00	By:	ALK
Dilution Factor:	1	Analyzed:	12/11/13 6:36	By:	DWJ
QC Batch:	1313027	Analytical Batch:	3L11050		

Semivolatile Organic Compounds by EPA Method 625 (Continued)

CAS Number	Analyte	Analytical Result	RL
534-52-1	4,6-Dinitro-2-methylphenol	<20	20
51-28-5	2,4-Dinitrophenol	<20	20
121-14-2	2,4-Dinitrotoluene	<5.0	5.0
606-20-2	2,6-Dinitrotoluene	<5.0	5.0
117-84-0	Di-n-octyl Phthalate	<5.0	5.0
122-66-7	1,2-Diphenylhydrazine	<5.0	5.0
117-81-7	Bis(2-ethylhexyl) Phthalate	<5.0	5.0
206-44-0	Fluoranthene	<5.0	5.0
86-73-7	Fluorene	<5.0	5.0
118-74-1	Hexachlorobenzene	<5.0	5.0
87-68-3	Hexachlorobutadiene	<5.0	5.0
77-47-4	Hexachlorocyclopentadiene	<5.0	5.0
67-72-1	Hexachloroethane	<5.0	5.0
193-39-5	Indeno(1,2,3-cd)pyrene	<5.0	5.0
78-59-1	Isophorone	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
98-95-3	Nitrobenzene	<5.0	5.0
100-02-7	4-Nitrophenol	<20	20
88-75-5	2-Nitrophenol	<5.0	5.0
62-75-9	N-Nitroso-dimethylamine	<5.0	5.0
86-30-6	N-Nitroso-diphenylamine	<5.0	5.0
621-64-7	N-Nitroso-di-n-propylamine	<5.0	5.0
87-86-5	Pentachlorophenol	<20	20
85-01-8	Phenanthrene	<5.0	5.0
108-95-2	Phenol	<5.0	5.0
129-00-0	Pyrene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
88-06-2	2,4,6-Trichlorophenol	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**		
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services		
Client Sample ID:	**Intake Composite**	Sampled:	12/3/13 12:20		
Lab Sample ID:	**1312032-14**	Sampled By:	J. Elsey		
Matrix:	Waste Water	Received:	12/3/13 17:00		
Unit:	ug/L	Prepared:	12/5/13 8:00	By:	ALK
Dilution Factor:	1	Analyzed:	12/11/13 6:36	By:	DWJ
QC Batch:	1313027	Analytical Batch:	3L11050		

Semivolatile Organic Compounds by EPA Method 625 (Continued)

CAS Number	Analyte	Analytical Result	RL
	Surrogates:	***% Recovery***	***Control Limits***
	2-Fluorophenol	*40*	*18-74*
	Phenol-d6	*26*	*12-47*
	Nitrobenzene-d5	*80*	*34-122*
	2-Fluorobiphenyl	*81*	*36-136*
	2,4,6-Tribromophenol	*56*	*19-131*
	o-Terphenyl	*84*	*27-138*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services
Client Sample ID:	**Intake Composite**	Sampled:	12/3/13 12:20
Lab Sample ID:	**1312032-14**	Sampled By:	J. Elsey
Matrix:	Waste Water	Received:	12/3/13 17:00

Total Metals by EPA 200 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Aluminum	**0.65**	0.050	mg/L	1	USEPA-200.7	12/09/13 12:12	KLV	1313073
Antimony	<1.0	1.0	ug/L	1	USEPA-200.8	12/09/13 13:27	MSM	1313011
Arsenic	**1.1**	1.0	ug/L	1	USEPA-200.8	12/09/13 13:27	MSM	1313011
Barium	**26**	5.0	ug/L	1	USEPA-200.8	12/09/13 13:27	MSM	1313011
Beryllium	<1.0	1.0	ug/L	1	USEPA-200.8	12/09/13 13:27	MSM	1313011
Boron	**27**	20	ug/L	1	USEPA-200.8	12/10/13 10:19	MSM	1313011
Cadmium	<0.20	0.20	ug/L	1	USEPA-200.8	12/09/13 13:27	MSM	1313011
Chromium	<10	10	ug/L	1	USEPA-200.8	12/09/13 13:27	MSM	1313011
Cobalt	<10	10	ug/L	1	USEPA-200.7	12/09/13 12:12	KLV	1313073
Copper	**3.7**	1.0	ug/L	1	USEPA-200.8	12/09/13 13:27	MSM	1313011
Iron	**1.0**	0.010	mg/L	1	USEPA-200.7	12/09/13 15:40	CKD	1313073
Lead	**1.2**	1.0	ug/L	1	USEPA-200.8	12/09/13 13:27	MSM	1313011
Magnesium	**11**	0.50	mg/L	1	USEPA-200.7	12/09/13 15:40	CKD	1313073
Manganese	**0.031**	0.010	mg/L	1	USEPA-200.7	12/09/13 12:12	KLV	1313073
Molybdenum	<0.10	0.10	mg/L	1	USEPA-200.7	12/05/13 09:54	KLV	1312991
Nickel	<5.0	5.0	ug/L	1	USEPA-200.8	12/09/13 13:27	MSM	1313011
Selenium	<1.0	1.0	ug/L	1	USEPA-200.8	12/09/13 13:27	MSM	1313011
Silver	<0.50	0.50	ug/L	1	USEPA-200.8	12/09/13 13:27	MSM	1313011
Thallium	<1.0	1.0	ug/L	1	USEPA-200.8	12/09/13 13:27	MSM	1313011
Tin	<0.20	0.20	mg/L	1	USEPA-200.7	12/05/13 09:54	KLV	1312991
Titanium	<0.10	0.10	mg/L	1	USEPA-200.7	12/05/13 09:54	KLV	1312991
Zinc	**11**	10	ug/L	1	USEPA-200.8	12/09/13 13:27	MSM	1313011

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services
Client Sample ID:	**Intake Composite**	Sampled:	12/3/13 12:20
Lab Sample ID:	**1312032-14**	Sampled By:	J. Elsey
Matrix:	Waste Water	Received:	12/3/13 17:00

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Hardness as CaCO3	**147**	2	mg/L	1	SM 2340 C-2011	12/06/13 14:30	KAR	1313099
BOD, (5-Day)	<4.0	4.0	mg/L	1	SM 5210 B-2011	12/04/13 11:37	SKA	1313038
Bromide	<0.50	0.50	mg/L	1	ASTM D 1246-05	12/11/13 13:00	SLL	1313240
Chemical Oxygen Demand	**22**	5.0	mg/L	1	SM 5220 D-2011	12/04/13 14:59	SLL	1313025
Color (Apparent)	**15.0**	5.00	A.C.U.	1	SM 2120 B-2011	12/04/13 14:23	CAC	1313019
Fluoride	**0.16**	0.10	mg/L	1	SM 4500-F C-2011	12/13/13 10:40	SLL	1313326
Surfactants, MBAS	<0.0250	0.0250	mg/L	1	SM 5540 C-2011	12/04/13 12:14	WAH	1313020
Phosphorus, Total	**0.148**	0.0100	mg/L	1	SM 4500-P E-2011	12/10/13 10:09	KAR	1313144
Residue, Dissolved @ 180° C	**190**	50	mg/L	1	SM 2540 C-2011	12/05/13 13:00	WAH	1313033
Residue, Suspended	**25.7**	3.3	mg/L	1	SM 2540 D-2011	12/05/13 15:30	WAH	1313036
Sulfate	**30**	5.0	mg/L	1	ASTM D516-90 (07)	12/12/13 09:45	LMA	1313298
Sulfide, Total	<0.020	0.020	mg/L	1	SM 4500-S2 D-2011	12/06/13 15:28	WAH	1313149
Sulfite	<1.0	1.0	mg/L	1	SM 4500-SO3 B-2011	12/04/13 13:50	CAC	1313110
Carbon, Total Organic	**3.6**	0.50	mg/L	1	SM 5310 C-2011	12/05/13 19:16	KAR	1313095
Nitrogen, Ammonia	**0.079**	0.050	mg/L	1	SM 4500-NH3 G-2011	12/11/13 11:15	CLB	1313163
Nitrogen, Nitrate+Nitrite	**0.48**	0.050	mg/L	1	SM 4500-NO3 F-2011	12/04/13 13:19	CAC	1313118
Nitrogen, Organic	<0.50	0.50	mg/L	1	EPA-351.2/4500-NH3G	12/12/13 14:35	CLB	1313201
Nitrogen, Total Kjeldahl	<0.50	0.50	mg/L	1	USEPA-351.2 Rev. 2.0	12/09/13 11:45	CLB	1313050
Nitrogen, Inorganic	**0.56**	0.050	mg/L	1	[CALC]	12/11/13 11:15	CAC	[CALC]

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**		
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services		
Client Sample ID:	**001 Composite**	Sampled:	12/3/13 12:55		
Lab Sample ID:	**1312032-15**	Sampled By:	J. Elsey		
Matrix:	Waste Water	Received:	12/3/13 17:00		
Unit:	ug/L	Prepared:	12/6/13 7:31	By:	ALK
Dilution Factor:	1	Analyzed:	12/13/13 3:36	By:	ASC
QC Batch:	1313086	Analytical Batch:	3L13025		

Polychlorinated Biphenyls (PCBs) by EPA Method 608

CAS Number	Analyte	Analytical Result	RL
12674-11-2	PCB-1016	<0.20	0.20
11104-28-2	PCB-1221	<0.20	0.20
11141-16-5	PCB-1232	<0.20	0.20
53469-21-9	PCB-1242	<0.20	0.20
12672-29-6	PCB-1248	<0.20	0.20
11097-69-1	PCB-1254	<0.20	0.20
11096-82-5	PCB-1260	<0.20	0.20

Surrogates:	*% Recovery*	*Control Limits*
Decachlorobiphenyl	*73*	*45-134*
Tetrachloro-m-xylene	*64*	*27-126*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**		
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services		
Client Sample ID:	**001 Composite**	Sampled:	12/3/13 12:55		
Lab Sample ID:	**1312032-15**	Sampled By:	J. Elsey		
Matrix:	Waste Water	Received:	12/3/13 17:00		
Unit:	ug/L	Prepared:	12/5/13 8:00	By:	ALK
Dilution Factor:	1	Analyzed:	12/11/13 7:08	By:	DWJ
QC Batch:	1313027	Analytical Batch:	3L11050		

Semivolatile Organic Compounds by EPA Method 625

CAS Number	Analyte	Analytical Result	RL
83-32-9	Acenaphthene	<5.0	5.0
208-96-8	Acenaphthylene	<5.0	5.0
120-12-7	Anthracene	<5.0	5.0
92-87-5	Benzidine	<50	50
56-55-3	Benzo(a)anthracene	<5.0	5.0
50-32-8	Benzo(a)pyrene	<5.0	5.0
205-99-2	Benzo(b)fluoranthene	<5.0	5.0
207-08-9	Benzo(k)fluoranthene	<5.0	5.0
191-24-2	Benzo(g,h,i)perylene	<5.0	5.0
101-55-3	4-Bromophenyl Phenyl Ether	<5.0	5.0
85-68-7	Butyl Benzyl Phthalate	<5.0	5.0
59-50-7	4-Chloro-3-methylphenol	<5.0	5.0
111-91-1	Bis(2-chloroethoxy)methane	<5.0	5.0
111-44-4	Bis(2-chloroethyl) Ether	<5.0	5.0
108-60-1	Bis(2-chloroisopropyl) Ether	<5.0	5.0
91-58-7	2-Chloronaphthalene	<5.0	5.0
95-57-8	2-Chlorophenol	<5.0	5.0
7005-72-3	4-Chlorophenyl Phenyl Ether	<5.0	5.0
218-01-9	Chrysene	<5.0	5.0
53-70-3	Dibenz(a,h)anthracene	<5.0	5.0
84-74-2	Di-n-butyl Phthalate	<5.0	5.0
95-50-1	1,2-Dichlorobenzene	<5.0	5.0
541-73-1	1,3-Dichlorobenzene	<5.0	5.0
106-46-7	1,4-Dichlorobenzene	<5.0	5.0
91-94-1	3,3´-Dichlorobenzidine	<20	20
120-83-2	2,4-Dichlorophenol	<5.0	5.0
84-66-2	Diethyl Phthalate	<5.0	5.0
105-67-9	2,4-Dimethylphenol	<5.0	5.0
131-11-3	Dimethyl Phthalate	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**		
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services		
Client Sample ID:	**001 Composite**	Sampled:	12/3/13 12:55		
Lab Sample ID:	**1312032-15**	Sampled By:	J. Elsey		
Matrix:	Waste Water	Received:	12/3/13 17:00		
Unit:	ug/L	Prepared:	12/5/13 8:00	By:	ALK
Dilution Factor:	1	Analyzed:	12/11/13 7:08	By:	DWJ
QC Batch:	1313027	Analytical Batch:	3L11050		

Semivolatile Organic Compounds by EPA Method 625 (Continued)

CAS Number	Analyte	Analytical Result	RL
534-52-1	4,6-Dinitro-2-methylphenol	<20	20
51-28-5	2,4-Dinitrophenol	<20	20
121-14-2	2,4-Dinitrotoluene	<5.0	5.0
606-20-2	2,6-Dinitrotoluene	<5.0	5.0
117-84-0	Di-n-octyl Phthalate	<5.0	5.0
122-66-7	1,2-Diphenylhydrazine	<5.0	5.0
117-81-7	Bis(2-ethylhexyl) Phthalate	<5.0	5.0
206-44-0	Fluoranthene	<5.0	5.0
86-73-7	Fluorene	<5.0	5.0
118-74-1	Hexachlorobenzene	<5.0	5.0
87-68-3	Hexachlorobutadiene	<5.0	5.0
77-47-4	Hexachlorocyclopentadiene	<5.0	5.0
67-72-1	Hexachloroethane	<5.0	5.0
193-39-5	Indeno(1,2,3-cd)pyrene	<5.0	5.0
78-59-1	Isophorone	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
98-95-3	Nitrobenzene	<5.0	5.0
100-02-7	4-Nitrophenol	<20	20
88-75-5	2-Nitrophenol	<5.0	5.0
62-75-9	N-Nitroso-dimethylamine	<5.0	5.0
86-30-6	N-Nitroso-diphenylamine	<5.0	5.0
621-64-7	N-Nitroso-di-n-propylamine	<5.0	5.0
87-86-5	Pentachlorophenol	<20	20
85-01-8	Phenanthrene	<5.0	5.0
108-95-2	Phenol	<5.0	5.0
129-00-0	Pyrene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
88-06-2	2,4,6-Trichlorophenol	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**		
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services		
Client Sample ID:	**001 Composite**	Sampled:	12/3/13 12:55		
Lab Sample ID:	**1312032-15**	Sampled By:	J. Elsey		
Matrix:	Waste Water	Received:	12/3/13 17:00		
Unit:	ug/L	Prepared:	12/5/13 8:00	By:	ALK
Dilution Factor:	1	Analyzed:	12/11/13 7:08	By:	DWJ
QC Batch:	1313027	Analytical Batch:	3L11050		

Semivolatile Organic Compounds by EPA Method 625 (Continued)

CAS Number	Analyte	Analytical Result	RL
Surrogates:		***% Recovery***	***Control Limits***
2-Fluorophenol		*40*	*18-74*
Phenol-d6		*26*	*12-47*
Nitrobenzene-d5		*66*	*34-122*
2-Fluorobiphenyl		*68*	*36-136*
2,4,6-Tribromophenol		*51*	*19-131*
o-Terphenyl		*74*	*27-138*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services
Client Sample ID:	**001 Composite**	Sampled:	12/3/13 12:55
Lab Sample ID:	**1312032-15**	Sampled By:	J. Elsey
Matrix:	Waste Water	Received:	12/3/13 17:00

Total Metals by EPA 200 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Aluminum	**1.0**	0.050	mg/L	1	USEPA-200.7	12/09/13 12:16	KLV	1313073
Antimony	<1.0	1.0	ug/L	1	USEPA-200.8	12/09/13 13:34	MSM	1313011
Arsenic	**2.3**	1.0	ug/L	1	USEPA-200.8	12/09/13 13:34	MSM	1313011
Barium	**46**	5.0	ug/L	1	USEPA-200.8	12/09/13 13:34	MSM	1313011
Beryllium	<1.0	1.0	ug/L	1	USEPA-200.8	12/09/13 13:34	MSM	1313011
Boron	**46**	20	ug/L	1	USEPA-200.8	12/10/13 10:20	MSM	1313011
Cadmium	<0.20	0.20	ug/L	1	USEPA-200.8	12/09/13 13:34	MSM	1313011
Chromium	<10	10	ug/L	1	USEPA-200.8	12/09/13 13:34	MSM	1313011
Cobalt	<10	10	ug/L	1	USEPA-200.7	12/09/13 12:16	KLV	1313073
Copper	**7.1**	1.0	ug/L	1	USEPA-200.8	12/09/13 13:34	MSM	1313011
Iron	**1.6**	0.010	mg/L	1	USEPA-200.7	12/09/13 15:43	CKD	1313073
Lead	**2.1**	1.0	ug/L	1	USEPA-200.8	12/09/13 13:34	MSM	1313011
Magnesium	**20**	0.50	mg/L	1	USEPA-200.7	12/09/13 15:43	CKD	1313073
Manganese	**0.047**	0.010	mg/L	1	USEPA-200.7	12/09/13 12:16	KLV	1313073
Molybdenum	<0.10	0.10	mg/L	1	USEPA-200.7	12/05/13 09:58	KLV	1312991
Nickel	<5.0	5.0	ug/L	1	USEPA-200.8	12/09/13 13:34	MSM	1313011
Selenium	<1.0	1.0	ug/L	1	USEPA-200.8	12/09/13 13:34	MSM	1313011
Silver	<0.50	0.50	ug/L	1	USEPA-200.8	12/09/13 13:34	MSM	1313011
Thallium	<1.0	1.0	ug/L	1	USEPA-200.8	12/09/13 13:34	MSM	1313011
Tin	<0.20	0.20	mg/L	1	USEPA-200.7	12/05/13 09:58	KLV	1312991
Titanium	<0.10	0.10	mg/L	1	USEPA-200.7	12/05/13 09:58	KLV	1312991
Zinc	**18**	10	ug/L	1	USEPA-200.8	12/09/13 13:34	MSM	1313011

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**DTE - Fermi-2**	Work Order:	**1312032**
Project:	Permit Renewal - Fermi, 2013	Description:	Laboratory Services
Client Sample ID:	**001 Composite**	Sampled:	12/3/13 12:55
Lab Sample ID:	**1312032-15**	Sampled By:	J. Elsey
Matrix:	Waste Water	Received:	12/3/13 17:00

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Hardness as CaCO3	**248**	2	mg/L	1	SM 2340 C-2011	12/06/13 14:30	KAR	1313099
BOD, (5-Day)	<4.0	4.0	mg/L	1	SM 5210 B-2011	12/04/13 11:31	SKA	1313038
Bromide	<0.50	0.50	mg/L	1	ASTM D 1246-05	12/11/13 13:00	SLL	1313240
Chemical Oxygen Demand	**28**	5.0	mg/L	1	SM 5220 D-2011	12/04/13 14:59	SLL	1313025
Color (Apparent)	**15.0**	5.00	A.C.U.	1	SM 2120 B-2011	12/04/13 14:23	CAC	1313019
Fluoride	**0.23**	0.10	mg/L	1	SM 4500-F C-2011	12/13/13 10:40	SLL	1313326
Surfactants, MBAS	<0.0250	0.0250	mg/L	1	SM 5540 C-2011	12/04/13 12:15	WAH	1313020
Phosphorus, Total	**0.667**	0.0100	mg/L	1	SM 4500-P E-2011	12/10/13 10:09	KAR	1313144
Residue, Dissolved @ 180° C	**340**	50	mg/L	1	SM 2540 C-2011	12/05/13 13:00	WAH	1313033
Residue, Suspended	**59.4**	5.0	mg/L	1	SM 2540 D-2011	12/05/13 15:30	WAH	1313036
Sulfate	**49**	10	mg/L	2	ASTM D516-90 (07)	12/12/13 10:38	LMA	1313298
Sulfide, Total	<0.020	0.020	mg/L	1	SM 4500-S2 D-2011	12/06/13 15:31	WAH	1313149
Sulfite	<1.0	1.0	mg/L	1	SM 4500-SO3 B-2011	12/04/13 13:50	CAC	1313110
Carbon, Total Organic	**5.3**	0.50	mg/L	1	SM 5310 C-2011	12/05/13 20:20	KAR	1313095
Nitrogen, Ammonia	**0.089**	0.050	mg/L	1	SM 4500-NH3 G-2011	12/11/13 11:15	CLB	1313163
Nitrogen, Nitrate+Nitrite	**0.87**	0.050	mg/L	1	SM 4500-NO3 F-2011	12/04/13 13:19	CAC	1313118
Nitrogen, Organic	**0.51**	0.50	mg/L	1	EPA-351.2/4500-NH3G	12/12/13 14:35	CLB	1313201
Nitrogen, Total Kjeldahl	**0.59**	0.50	mg/L	1	USEPA-351.2 Rev. 2.0	12/09/13 11:45	CLB	1313050
Nitrogen, Inorganic	**0.96**	0.050	mg/L	1	[CALC]	12/11/13 11:15	CAC	[CALC]

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Polychlorinated Biphenyls (PCBs) by EPA Method 608

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1313086 608 Liquid/Liquid Extraction/USEPA-608								
Method Blank					Analyzed:		12/13/2013	By: ASC
Unit: ug/L					Analytical Batch:		3L13025	
PCB-1016			<0.20			--	0.20	
PCB-1221			<0.20				0.20	
PCB-1232			<0.20				0.20	
PCB-1242			<0.20				0.20	
PCB-1248			<0.20				0.20	
PCB-1254			<0.20				0.20	
PCB-1260			<0.20				0.20	
Surrogates:								
Decachlorobiphenyl				*98*	*45-134*			
Tetrachloro-m-xylene				*72*	*27-126*			
Laboratory Control Sample					Analyzed:		12/13/2013	By: ASC
Unit: ug/L					Analytical Batch:		3L13025	
PCB-1248		0.600	**0.552**	92	38-158	--	0.20	
Surrogates:								
Decachlorobiphenyl				*96*	*45-134*			
Tetrachloro-m-xylene				*70*	*27-126*			

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 624

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1313145 5030B Aqueous Purge & Trap/USEPA-624								
Method Blank					Analyzed:		12/06/2013	By: DLV
Unit: ug/L					Analytical Batch:		3L09003	
Acrolein			<5.0				5.0	
Acrylonitrile			<1.0				1.0	
Benzene			<1.0				1.0	
Bromodichloromethane			<1.0				1.0	
Bromoform			<1.0				1.0	
Bromomethane			<1.0				1.0	
Carbon Tetrachloride			<1.0				1.0	
Chlorobenzene			<1.0				1.0	
Chloroethane			<1.0				1.0	
2-Chloroethyl Vinyl Ether			<10				10	
Chloroform			<1.0				1.0	
Chloromethane			<1.0				1.0	
Dibromochloromethane			<1.0				1.0	
1,1-Dichloroethane			<1.0				1.0	
1,2-Dichloroethane			<1.0				1.0	
1,1-Dichloroethene			<1.0				1.0	
1,3-Dichloropropene (Total)			<2.0				2.0	
trans-1,2-Dichloroethene			<1.0				1.0	
1,2-Dichloropropane			<1.0				1.0	
Ethylbenzene			<1.0			--	1.0	
Methylene Chloride			<5.0				5.0	
1,1,2,2-Tetrachloroethane			<1.0				1.0	
Tetrachloroethene			<1.0				1.0	
Toluene			<1.0				1.0	
1,1,1-Trichloroethane			<1.0				1.0	
1,1,2-Trichloroethane			<1.0				1.0	
Trichloroethene			<1.0				1.0	
Vinyl Chloride			<1.0				1.0	
Surrogates:								
Dibromofluoromethane				*101*	*85-118*			
1,2-Dichloroethane-d4				*99*	*87-122*			
Toluene-d8				*100*	*85-113*			
4-Bromofluorobenzene				*95*	*82-110*			

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 624 (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1313145 (Continued) 5030B Aqueous Purge & Trap/USEPA-624								
Laboratory Control Sample					Analyzed:		12/06/2013	By: DLV
Unit: ug/L					Analytical Batch:		3L09003	
Acrolein	40.0		**44.5**	111	48-146	--	5.0	
Acrylonitrile	40.0		**34.4**	86	73-129	--	1.0	
Benzene	40.0		**39.7**	99	84-119	--	1.0	
Bromodichloromethane	40.0		**37.6**	94	82-124	--	1.0	
Bromoform	40.0		**34.8**	87	65-123	--	1.0	
Bromomethane	40.0		**45.0**	113	55-142	--	1.0	
Carbon Tetrachloride	40.0		**38.2**	95	79-127	--	1.0	
Chlorobenzene	40.0		**38.0**	95	84-118	--	1.0	
Chloroethane	40.0		**49.2**	123	76-124	--	1.0	
Chloroform	40.0		**39.1**	98	82-119	--	1.0	
Chloromethane	40.0		**39.5**	99	73-125	--	1.0	
Dibromochloromethane	40.0		**34.9**	87	74-121	--	1.0	
1,1-Dichloroethane	40.0		**39.2**	98	80-118	--	1.0	
1,2-Dichloroethane	40.0		**37.8**	95	81-122	--	1.0	
1,1-Dichloroethene	40.0		**42.6**	107	77-123	--	1.0	
1,3-Dichloropropene (Total)	80.0		**65.5**	82	81-116	--	2.0	
trans-1,2-Dichloroethene	40.0		**39.7**	99	76-126	--	1.0	
1,2-Dichloropropane	40.0		**40.5**	101	82-122	--	1.0	
Ethylbenzene	40.0		**38.2**	96	87-119	--	1.0	
Methylene Chloride	40.0		**38.6**	97	75-129	--	5.0	
1,1,2,2-Tetrachloroethane	40.0		**37.5**	94	70-137	--	1.0	
Tetrachloroethene	40.0		**38.4**	96	81-117	--	1.0	
Toluene	40.0		**38.5**	96	85-118	--	1.0	
1,1,1-Trichloroethane	40.0		**39.8**	99	81-122	--	1.0	
1,1,2-Trichloroethane	40.0		**37.9**	95	83-121	--	1.0	
Trichloroethene	40.0		**39.9**	100	82-119	--	1.0	
Vinyl Chloride	40.0		**42.1**	105	77-123	--	1.0	
Surrogates:								
Dibromofluoromethane				*103*	*85-118*			
1,2-Dichloroethane-d4				*97*	*87-122*			
Toluene-d8				*101*	*85-113*			
4-Bromofluorobenzene				*97*	*82-110*			

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QUALITY CONTROL REPORT

Semivolatile Organic Compounds by EPA Method 625

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1313027 625 Liquid/Liquid Extraction/USEPA-625								
Method Blank					Analyzed:		12/11/2013	By: DWJ
Unit: ug/L					Analytical Batch:		3L11050	
Acenaphthene			<5.0					5.0
Acenaphthylene			<5.0					5.0
Anthracene			<5.0					5.0
Benzidine			<50					50
Benzo(a)anthracene			<5.0			--		5.0
Benzo(a)pyrene			<5.0					5.0
Benzo(b)fluoranthene			<5.0					5.0
Benzo(k)fluoranthene			<5.0					5.0
Benzo(g,h,i)perylene			<5.0					5.0
4-Bromophenyl Phenyl Ether			<5.0					5.0
Butyl Benzyl Phthalate			<5.0					5.0
4-Chloro-3-methylphenol			<5.0					5.0
Bis(2-chloroethoxy)methane			<5.0			--		5.0
Bis(2-chloroethyl) Ether			<5.0					5.0
Bis(2-chloroisopropyl) Ether			<5.0					5.0
2-Chloronaphthalene			<5.0					5.0
2-Chlorophenol			<5.0			--		5.0
4-Chlorophenyl Phenyl Ether			<5.0					5.0
Chrysene			<5.0			--		5.0
Dibenz(a,h)anthracene			<5.0					5.0
Di-n-butyl Phthalate			<5.0			--		5.0
1,2-Dichlorobenzene			<5.0					5.0
1,3-Dichlorobenzene			<5.0					5.0
1,4-Dichlorobenzene			<5.0					5.0
3,3´-Dichlorobenzidine			<20					20
2,4-Dichlorophenol			<5.0					5.0
Diethyl Phthalate			<5.0			--		5.0
2,4-Dimethylphenol			<5.0					5.0
Dimethyl Phthalate			<5.0					5.0
4,6-Dinitro-2-methylphenol			<20			--		20
2,4-Dinitrophenol			<20					20
2,4-Dinitrotoluene			<5.0					5.0
2,6-Dinitrotoluene			<5.0					5.0
Di-n-octyl Phthalate			<5.0					5.0
1,2-Diphenylhydrazine			<5.0					5.0
Bis(2-ethylhexyl) Phthalate			<5.0			--		5.0

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QUALITY CONTROL REPORT

Semivolatile Organic Compounds by EPA Method 625 (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1313027 (Continued) 625 Liquid/Liquid Extraction/USEPA-625								
Method Blank (Continued)					Analyzed:		12/11/2013	By: DWJ
Unit: ug/L					Analytical Batch:		3L11050	
Fluoranthene			<5.0				5.0	
Fluorene			<5.0				5.0	
Hexachlorobenzene			<5.0				5.0	
Hexachlorobutadiene			<5.0				5.0	
Hexachlorocyclopentadiene			<5.0				5.0	
Hexachloroethane			<5.0				5.0	
Indeno(1,2,3-cd)pyrene			<5.0				5.0	
Isophorone			<5.0				5.0	
Naphthalene			<5.0				5.0	
Nitrobenzene			<5.0			--	5.0	
4-Nitrophenol			<20				20	
2-Nitrophenol			<5.0				5.0	
N-Nitroso-dimethylamine			<5.0				5.0	
N-Nitroso-diphenylamine			<5.0			--	5.0	
N-Nitroso-di-n-propylamine			<5.0				5.0	
Pentachlorophenol			<20				20	
Phenanthrene			<5.0				5.0	
Phenol			<5.0				5.0	
Pyrene			<5.0				5.0	
1,2,4-Trichlorobenzene			<5.0				5.0	
2,4,6-Trichlorophenol			<5.0				5.0	
Surrogates:								
2-Fluorophenol				*49*	*18-74*			
Phenol-d6				*31*	*12-47*			
Nitrobenzene-d5				*87*	*34-122*			
2-Fluorobiphenyl				*94*	*36-136*			
2,4,6-Tribromophenol				*69*	*19-131*			
o-Terphenyl				*98*	*27-138*			
Laboratory Control Sample					Analyzed:		12/11/2013	By: DWJ
Unit: ug/L					Analytical Batch:		3L11050	
Acenaphthene	100		**99.2**	99	47-145	--	5.0	

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Semivolatile Organic Compounds by EPA Method 625 (Continued)

QC Batch: 1313027 (Continued) 625 Liquid/Liquid Extraction/USEPA-625

Laboratory Control Sample (Continued) Analyzed: 12/11/2013 By: DWJ

Unit: ug/L Analytical Batch: 3L11050

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Acenaphthylene		100	**102**	102	33-145	--		5.0
Anthracene		100	**99.3**	99	27-133	--		5.0
Benzidine		200	**171**	86	28-120	--		50
Benzo(a)anthracene		100	**96.8**	97	33-143	--		5.0
Benzo(a)pyrene		100	**96.8**	97	17-163	--		5.0
Benzo(b)fluoranthene		100	**96.6**	97	24-159	--		5.0
Benzo(k)fluoranthene		100	**104**	104	11-162	--		5.0
Benzo(g,h,i)perylene		100	**96.5**	96	1-219	--		5.0
4-Bromophenyl Phenyl Ether		100	**83.0**	83	53-127	--		5.0
Butyl Benzyl Phthalate		100	**98.3**	98	1-152	--		5.0
4-Chloro-3-methylphenol		100	**93.9**	94	22-147	--		5.0
Bis(2-chloroethoxy)methane		100	**100**	100	33-184	--		5.0
Bis(2-chloroethyl) Ether		100	**105**	105	12-158	--		5.0
Bis(2-chloroisopropyl) Ether		100	**104**	104	36-166	--		5.0
2-Chloronaphthalene		100	**101**	101	60-118	--		5.0
2-Chlorophenol		100	**93.2**	93	23-134	--		5.0
4-Chlorophenyl Phenyl Ether		100	**93.5**	94	25-158	--		5.0
Chrysene		100	**102**	102	17-168	--		5.0
Dibenz(a,h)anthracene		100	**94.1**	94	1-227	--		5.0
Di-n-butyl Phthalate		100	**94.5**	94	1-118	--		5.0
1,2-Dichlorobenzene		100	**97.5**	98	32-129	--		5.0
1,3-Dichlorobenzene		100	**98.3**	98	1-172	--		5.0
1,4-Dichlorobenzene		100	**100**	100	20-124	--		5.0
3,3´-Dichlorobenzidine		200	**214**	107	1-262	--		20
2,4-Dichlorophenol		100	**97.4**	97	39-135	--		5.0
Diethyl Phthalate		100	**97.6**	98	1-114	--		5.0
2,4-Dimethylphenol		100	**91.0**	91	32-119	--		5.0
Dimethyl Phthalate		100	**96.5**	96	1-112	--		5.0
4,6-Dinitro-2-methylphenol		100	**100**	100	1-181	--		20
2,4-Dinitrophenol		100	**76.0**	76	1-191	--		20
2,4-Dinitrotoluene		100	**93.2**	93	39-139	--		5.0
2,6-Dinitrotoluene		100	**90.8**	91	50-158	--		5.0
Di-n-octyl Phthalate		100	**95.2**	95	4-146	--		5.0
1,2-Diphenylhydrazine		100	**96.5**	96	62-128	--		5.0
Bis(2-ethylhexyl) Phthalate		100	**99.8**	100	8-158	--		5.0
Fluoranthene		100	**99.8**	100	26-137	--		5.0

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QUALITY CONTROL REPORT

Semivolatile Organic Compounds by EPA Method 625 (Continued)

QC Batch: 1313027 (Continued) 625 Liquid/Liquid Extraction/USEPA-625

Laboratory Control Sample (Continued) Analyzed: 12/11/2013 By: DWJ

Unit: ug/L Analytical Batch: 3L11050

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Fluorene	100		**99.8**	100	59-121	--		5.0
Hexachlorobenzene	100		**99.0**	99	1-152	--		5.0
Hexachlorobutadiene	100		**104**	104	24-116	--		5.0
Hexachlorocyclopentadiene	100		**92.3**	92	21-138	--		5.0
Hexachloroethane	100		**102**	102	40-113	--		5.0
Indeno(1,2,3-cd)pyrene	100		**92.4**	92	21-196	--		5.0
Isophorone	100		**99.7**	100	56-129	--		5.0
Naphthalene	100		**103**	103	21-133	--		5.0
Nitrobenzene	100		**99.2**	99	35-180	--		5.0
4-Nitrophenol	100		**29.1**	29	1-132	--		20
2-Nitrophenol	100		**99.7**	100	29-182	--		5.0
N-Nitroso-dimethylamine	100		**59.7**	60	22-87	--		5.0
N-Nitroso-diphenylamine	100		**82.2**	82	45-110	--		5.0
N-Nitroso-di-n-propylamine	100		**101**	101	1-230	--		5.0
Pentachlorophenol	100		**80.9**	81	14-176	--		20
Phenanthrene	100		**97.5**	98	54-120	--		5.0
Phenol	100		**41.9**	42	5-112	--		5.0
Pyrene	100		**95.9**	96	52-115	--		5.0
1,2,4-Trichlorobenzene	100		**95.1**	95	44-142	--		5.0
2,4,6-Trichlorophenol	100		**89.9**	90	37-144	--		5.0
Surrogates:								
2-Fluorophenol				*57*	*18-74*			
Phenol-d6				*38*	*12-47*			
Nitrobenzene-d5				*89*	*34-122*			
2-Fluorobiphenyl				*92*	*36-136*			
2,4,6-Tribromophenol				*82*	*19-131*			
o-Terphenyl				*93*	*27-138*			

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Total Metals by EPA 200 Series Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: **Aluminum**/USEPA-200.7									
QC Batch: 1313073 (200.2 Digestion)							Analyzed:	12/09/2013	By: KLV
Method Blank			<0.050	mg/L					0.050
Laboratory Control Sample		2.00	**1.87**	mg/L	93	85-115			0.050
Analyte: **Antimony**/USEPA-200.8									
QC Batch: 1313011 (200.2 Digestion)							Analyzed:	12/09/2013	By: MSM
Method Blank			<1.0	ug/L					1.0
Laboratory Control Sample		50.0	**52.7**	ug/L	105	85-115			1.0
Analyte: **Arsenic**/USEPA-200.8									
QC Batch: 1313011 (200.2 Digestion)							Analyzed:	12/09/2013	By: MSM
Method Blank			<1.0	ug/L					1.0
Laboratory Control Sample		50.0	**51.1**	ug/L	102	85-115			1.0
Analyte: **Barium**/USEPA-200.8									
QC Batch: 1313011 (200.2 Digestion)							Analyzed:	12/09/2013	By: MSM
Method Blank			<5.0	ug/L					5.0
Laboratory Control Sample		50.0	**53.5**	ug/L	107	85-115			5.0
Analyte: **Beryllium**/USEPA-200.8									
QC Batch: 1313011 (200.2 Digestion)							Analyzed:	12/09/2013	By: MSM
Method Blank			<1.0	ug/L					1.0
Laboratory Control Sample		50.0	**47.4**	ug/L	95	85-115			1.0
Analyte: **Boron**/USEPA-200.8									
QC Batch: 1313011 (200.2 Digestion)							Analyzed:	12/10/2013	By: MSM
Method Blank			<20	ug/L					20
Laboratory Control Sample		50.0	**45.2**	ug/L	90	85-115			20
Analyte: **Cadmium**/USEPA-200.8									
QC Batch: 1313011 (200.2 Digestion)							Analyzed:	12/09/2013	By: MSM
Method Blank			<0.20	ug/L					0.20

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Total Metals by EPA 200 Series Methods (Continued)

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: **Cadmium**/USEPA-200.8 (Continued)									
QC Batch: 1313011 (Continued) (200.2 Digestion)							Analyzed:	12/09/2013	By: MSM
Laboratory Control Sample		50.0	**51.2**	ug/L	102	85-115			0.20
Analyte: **Chromium**/USEPA-200.8									
QC Batch: 1313011 (200.2 Digestion)							Analyzed:	12/09/2013	By: MSM
Method Blank			<10	ug/L					10
Laboratory Control Sample		50.0	**43.8**	ug/L	88	85-115			10
Analyte: **Cobalt**/USEPA-200.7									
QC Batch: 1313073 (200.2 Digestion)							Analyzed:	12/09/2013	By: KLV
Method Blank			<10	ug/L					10
Laboratory Control Sample		400	**379**	ug/L	95	85-115			10
Analyte: **Copper**/USEPA-200.8									
QC Batch: 1313011 (200.2 Digestion)							Analyzed:	12/09/2013	By: MSM
Method Blank			<1.0	ug/L					1.0
Laboratory Control Sample		50.0	**47.5**	ug/L	95	85-115			1.0
Analyte: **Iron**/USEPA-200.7									
QC Batch: 1313073 (200.2 Digestion)							Analyzed:	12/09/2013	By: CKD
Method Blank			<0.010	mg/L					0.010
Laboratory Control Sample		0.400	**0.391**	mg/L	98	85-115			0.010
Analyte: **Lead**/USEPA-200.8									
QC Batch: 1313011 (200.2 Digestion)							Analyzed:	12/09/2013	By: MSM
Method Blank			<1.0	ug/L					1.0
Laboratory Control Sample		50.0	**50.3**	ug/L	101	85-115			1.0
Analyte: **Magnesium**/USEPA-200.7									
QC Batch: 1313073 (200.2 Digestion)							Analyzed:	12/09/2013	By: CKD
Method Blank			<0.50	mg/L					0.50

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Total Metals by EPA 200 Series Methods (Continued)

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: **Magnesium**/USEPA-200.7 (Continued)									
QC Batch: 1313073 (Continued) (200.2 Digestion)							Analyzed:	12/09/2013	By: CKD
Laboratory Control Sample		20.0	**19.7**	mg/L	98	85-115			0.50
Analyte: **Manganese**/USEPA-200.7									
QC Batch: 1313073 (200.2 Digestion)							Analyzed:	12/09/2013	By: KLV
Method Blank			<0.010	mg/L					0.010
Laboratory Control Sample		0.400	**0.378**	mg/L	94	85-115			0.010
Analyte: **Molybdenum**/USEPA-200.7									
QC Batch: 1312991 (200.2 Digestion)							Analyzed:	12/05/2013	By: KLV
Method Blank			<0.10	mg/L					0.10
Laboratory Control Sample		0.400	**0.422**	mg/L	106	85-115			0.10
Analyte: **Nickel**/USEPA-200.8									
QC Batch: 1313011 (200.2 Digestion)							Analyzed:	12/09/2013	By: MSM
Method Blank			<5.0	ug/L					5.0
Laboratory Control Sample		50.0	**47.0**	ug/L	94	85-115			5.0
Analyte: **Selenium**/USEPA-200.8									
QC Batch: 1313011 (200.2 Digestion)							Analyzed:	12/09/2013	By: MSM
Method Blank			<1.0	ug/L					1.0
Laboratory Control Sample		50.0	**48.9**	ug/L	98	85-115			1.0
Analyte: **Silver**/USEPA-200.8									
QC Batch: 1313011 (200.2 Digestion)							Analyzed:	12/09/2013	By: MSM
Method Blank			<0.50	ug/L					0.50
Laboratory Control Sample		50.0	**51.9**	ug/L	104	85-115			0.50
Analyte: **Thallium**/USEPA-200.8									
QC Batch: 1313011 (200.2 Digestion)							Analyzed:	12/09/2013	By: MSM
Method Blank			<1.0	ug/L					1.0

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Total Metals by EPA 200 Series Methods (Continued)

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: **Thallium**/USEPA-200.8 (Continued)									
QC Batch: 1313011 (Continued) (200.2 Digestion)							Analyzed:	12/09/2013	By: MSM
Laboratory Control Sample		50.0	**49.8**	ug/L	100	85-115			1.0
Analyte: **Tin**/USEPA-200.7									
QC Batch: 1312991 (200.2 Digestion)							Analyzed:	12/05/2013	By: KLV
Method Blank			<0.20	mg/L					0.20
Laboratory Control Sample		2.00	**2.12**	mg/L	106	85-115			0.20
Analyte: **Titanium**/USEPA-200.7									
QC Batch: 1312991 (200.2 Digestion)							Analyzed:	12/05/2013	By: KLV
Method Blank			<0.10	mg/L					0.10
Laboratory Control Sample		0.400	**0.422**	mg/L	106	85-115			0.10
Analyte: **Zinc**/USEPA-200.8									
QC Batch: 1313011 (200.2 Digestion)							Analyzed:	12/09/2013	By: MSM
Method Blank			<10	ug/L					10
Laboratory Control Sample		50.0	**54.0**	ug/L	108	85-115			10

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Total Metals by EPA 1600 Series Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: **Mercury**/USEPA-1631E									
QC Batch: 1313075 (1631E Digestion)						Analyzed:	12/05/2013		By: MSM
Method Blank			<0.500	ng/L					0.500
Method Blank			<0.500	ng/L					0.500
Method Blank			<0.500	ng/L					0.500
Laboratory Control Sample		4.00	**4.103**	ng/L	103	77-123			0.500
1312032-02 [Outfall 001 LLHg]									
Matrix Spike	7.843	4.00	**11.74**	ng/L	98	71-125			2.50
Matrix Spike Duplicate	7.843	4.00	**11.43**	ng/L	90	71-125	3	24	2.50
QC Batch: 1313536 (1631E Digestion)						Analyzed:	12/19/2013		By: MSM
Method Blank			<0.500	ng/L					0.500
Method Blank			<0.500	ng/L					0.500
Method Blank			<0.500	ng/L					0.500
Laboratory Control Sample		4.00	**4.065**	ng/L	102	77-123			0.500

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: BOD, (5-Day)/SM 5210 B-2011									
QC Batch: 1313038 (General Inorganic Prep)						Analyzed: 12/04/2013			By: SKA
Method Blank			<2.0	mg/L					2.0
Laboratory Control Sample		198	**189**	mg/L	96	85-115			2.0
Analyte: Bromide/ASTM D 1246-05									
QC Batch: 1313240 (Method Specific Preparation)						Analyzed: 12/11/2013			By: SLL
Method Blank			<0.50	mg/L					0.50
Laboratory Control Sample		5.00	**5.20**	mg/L	104	90-110			0.50
1312032-14 [Intake Composite]									
Matrix Spike	0.304	2.50	**2.83**	mg/L	101	80-120			0.50
Duplicate	0.304		**0.295**	mg/L			3	20	0.50
Analyte: Carbon, Total Organic/SM 5310 C-2011									
QC Batch: 1313095 (Method Specific Preparation)						Analyzed: 12/05/2013			By: KAR
Method Blank			<0.50	mg/L					0.50
Laboratory Control Sample		2.00	**2.24**	mg/L	112	84-118			0.50
1312032-14 [Intake Composite]									
Matrix Spike	3.58	2.00	**5.71**	mg/L	107	75-124			0.50
Matrix Spike Duplicate	3.58	2.00	**5.68**	mg/L	105	75-124	0.5	20	0.50
Analyte: Chemical Oxygen Demand/SM 5220 D-2011									
QC Batch: 1313025 (5220 D COD Digestion)						Analyzed: 12/04/2013			By: SLL
Method Blank			<5.0	mg/L					5.0
Laboratory Control Sample		60.0	**60.6**	mg/L	101	95-105			5.0
Analyte: Color (Apparent)/SM 2120 B-2011									
QC Batch: 1313019 (Method Specific Preparation)						Analyzed: 12/04/2013			By: CAC
Method Blank			<5.00	A.C.U.					5.00
Laboratory Control Sample		25.0	**25.0**	A.C.U.	100	80-120			5.00
1312032-14 [Intake Composite]									
Duplicate	15.0		**15.0**	A.C.U.			0	20	5.00

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Physical/Chemical Parameters by EPA/APHA/ASTM Methods (Continued)

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: Cyanide, Available/USEPA OIA-1677									
QC Batch: 1313173 (Method Specific Preparation)						Analyzed: 12/09/2013			By: LMA
Method Blank			<2.0	ug/L					2.0
Laboratory Control Sample		20.0	**21.5**	ug/L	108	82-132			2.0
1312032-10 [Intake Grab Day 2]									
Matrix Spike	<2.0	20.0	**20.7**	ug/L	103	82-130			2.0
Matrix Spike Duplicate	<2.0	20.0	**21.3**	ug/L	106	82-130	3	11	2.0
Analyte: Fluoride/SM 4500-F C-2011									
QC Batch: 1313326 (Method Specific Preparation)						Analyzed: 12/13/2013			By: SLL
Method Blank			<0.10	mg/L					0.10
Laboratory Control Sample		2.00	**1.98**	mg/L	99	90-110			0.10
Analyte: Hardness as CaCO3/SM 2340 C-2011									
QC Batch: 1313099 (Method Specific Preparation)						Analyzed: 12/06/2013			By: KAR
Method Blank			<2	mg/L					2
Laboratory Control Sample		86.3	**87**	mg/L	101	92-110			2
Laboratory Control Sample		200	**202**	mg/L	101	92-110			2
1312032-14 [Intake Composite]									
Matrix Spike	147	400	**545**	mg/L	100	86-113			4
Duplicate	147		**147**	mg/L			0	20	2
Analyte: HEM; Oil & Grease/USEPA-1664A									
QC Batch: 1313184 (1664A Extraction)						Analyzed: 12/10/2013			By: WAH
Method Blank			<5.00	mg/L					5.00
Laboratory Control Sample		40.0	**37.5**	mg/L	94	78-114			5.00
1312032-03 [Outfall 001 Grab Day 2]									
Duplicate	<5.00		<5.00	mg/L				18	5.00
Analyte: Nitrogen, Ammonia/SM 4500-NH3 G-2011									
QC Batch: 1313163 (4500-NH3 B Ammonia Distillation)						Analyzed: 12/11/2013			By: CLB
Method Blank			<0.050	mg/L					0.050

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QUALITY CONTROL REPORT

Physical/Chemical Parameters by EPA/APHA/ASTM Methods (Continued)

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: **Nitrogen, Ammonia**/SM 4500-NH3 G-2011 (Continued)									
QC Batch: 1313163 (Continued) (4500-NH3 B Ammonia Distillation)							Analyzed:	12/11/2013	By: CLB
Laboratory Control Sample		1.00	**0.963**	mg/L	96	90-110			0.050
Analyte: **Nitrogen, Nitrate+Nitrite**/SM 4500-NO3 F-2011									
QC Batch: 1313118 (General Inorganic Prep)							Analyzed:	12/04/2013	By: CAC
Method Blank			<0.050	mg/L					0.050
Laboratory Control Sample		0.500	**0.524**	mg/L	105	90-110			0.050
Analyte: **Nitrogen, Total Kjeldahl**/USEPA-351.2 Rev. 2.0									
QC Batch: 1313050 (351.2 TKN Digestion)							Analyzed:	12/09/2013	By: CLB
Method Blank			<0.50	mg/L					0.50
Laboratory Control Sample		2.00	**2.09**	mg/L	104	90-110			0.50
1312032-15 [001 Composite]									
Matrix Spike	0.594	2.00	**2.87**	mg/L	**114**	90-110			0.50
Matrix Spike Duplicate	0.594	2.00	**2.80**	mg/L	110	90-110	3	20	0.50
Analyte: **Phenolics, Total**/USEPA-420.4									
QC Batch: 1313065 (Method Specific Preparation)							Analyzed:	12/09/2013	By: LMA
Method Blank			<0.0500	mg/L					0.0500
Laboratory Control Sample		0.250	**0.264**	mg/L	106	90-110			0.0500
Analyte: **Phosphorus, Total**/SM 4500-P E-2011									
QC Batch: 1313144 (4500-P B Phosphorus Digestion)							Analyzed:	12/10/2013	By: KAR
Method Blank			<0.0100	mg/L					0.0100
Laboratory Control Sample		0.800	**0.784**	mg/L	98	90-110			0.0100
Analyte: **Residue, Dissolved @ 180° C**/SM 2540 C-2011									
QC Batch: 1313033 (General Inorganic Prep)							Analyzed:	12/05/2013	By: WAH
Method Blank			<50	mg/L					50
Laboratory Control Sample		200	**200**	mg/L	99	85-115			50

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Physical/Chemical Parameters by EPA/APHA/ASTM Methods (Continued)

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: **Residue, Suspended**/SM 2540 D-2011									
QC Batch: 1313036 (General Inorganic Prep)							Analyzed:	12/05/2013	By: WAH
Method Blank			<3.3	mg/L					3.3
Laboratory Control Sample		200	**190**	mg/L	95	88-104			24.8
Analyte: **Sulfate**/ASTM D516-90 (07)									
QC Batch: 1313298 (General Inorganic Prep)							Analyzed:	12/12/2013	By: LMA
Method Blank			<5.0	mg/L					5.0
Laboratory Control Sample		20.0	**21.7**	mg/L	108	88-112			5.0
Analyte: **Sulfide, Total**/SM 4500-S2 D-2011									
QC Batch: 1313149 (Method Specific Preparation)							Analyzed:	12/06/2013	By: WAH
Method Blank			<0.020	mg/L					0.020
Laboratory Control Sample		0.336	**0.345**	mg/L	103	80-120			0.020
Analyte: **Sulfite**/SM 4500-SO3 B-2011									
QC Batch: 1313110 (Method Specific Preparation)							Analyzed:	12/04/2013	By: CAC
Method Blank			<1.0	mg/L					1.0
Laboratory Control Sample		50.0	**46.0**	mg/L	92	80-120			1.0
1312032-15 [001 Composite]									
Matrix Spike	<1.0	50.0	**41.0**	mg/L	82	76-104			1.0
Duplicate	<1.0		<1.0	mg/L				20	1.0
Analyte: **Surfactants, MBAS**/SM 5540 C-2011									
QC Batch: 1313020 (Method Specific Preparation)							Analyzed:	12/04/2013	By: WAH
Method Blank			<0.0250	mg/L					0.0250
Laboratory Control Sample		0.125	**0.120**	mg/L	96	80-120			0.0250
1312032-15 [001 Composite]									
Duplicate	<0.0250		<0.0250	mg/L				20	0.0250

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Chain of Custody Record

COC No. 131136695

Pg. 1 of 1

For Lab Use Only
Cart 13
VOA Rack/Tray 624-RED
Receipt Log No. 12-22
Project Chemist ~~Lisa Harvey~~ JLR
Work Order No. 1312032

Client Name: DTE - Fermi
Address: 6400 North Dixie Highway
City, State Zip: Newport, MI 48166
Phone/Fax: 734-586-1839
Email: hanamj@dteenergy.com

Project Name: Permit Renewal
Client Project No. / P.O. No.
Invoice To: (●) Client ( ) Other (comments)
Contact/Report To: Mary Hana

Analyses Requested

Schedule	Matrix Code	Sample Number		Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	VOCs	Field Tests	Total Phenol	Oil & Grease	AvCN	LLHg	Total	Sample Comments
				Container Type (corresponds to Container Packing List)							1	--	13	7	23	24		
				Number of Containers Submitted														
03	WW	01	1	Outfall 001 Grab Day 1	2503	12/2/13	1300		X	WW	2*	X					2	pH 8.31
05		02	2	outfall 001 LLHg	↓	12/2/13	1244									4	4	Temp 16 °C
			3															TRC <0.20mg/L
			4															DO 7.57
02	WW	03	5	Outfall 001 Grab Day 2	2503	12/3/13	1235		X	WW	2*	X	1	2	3	4 (30)	11	pH 8.56
07	WW	04	6	Outfall 001 LLHg Duplicate	↓	12/2/13	1247									2	2	Temp 19 °C
07	WW	05	7	Outfall 001 Field Blank	↓	12/2/13	1241									2	2	TRC <0.20mg/L
			8															DO 6.59
01	WW	06	9	Outfall 001 VOC Lab Composite				X		WW	4*						4	*Lab: Add Day1 +Day2 VOCs together
06	WW	07	10	Fermi LLHg Trip Blank	2503	12-2-13										2	2	

Sampled By (print): Jeff Elsey
Sampler's Signature: [signature]
Company: TriMatrix Laboratory / DTE ENERGY

How Shipped? Hand X Carrier:
Tracking No.

1. Relinquished By: [signature] Date 12/3/13 Time 1400
1. Received By: [signature] Date 12.3.13 Time 1410

Comments: 2RLM

2. Relinquished By: [signature] Date 12.3.13 Time 1700
2. Received By:

3. Relinquished By: Date Time
3. Received For Lab By: [signature] Date 12-3-13 Time 1700

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAcNaOH pH>9
G MeOH
H Other (note below)

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DTE Fermi Permit Renewal 001 Grab COC 11/25/2013