General Motors LLC
Tonawanda Engine Plant
2995 River Road
Buffalo, NY 14207-1099

November 20, 2014

J.R. Smythe
Division of Water
NYS Dept. of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203-2999

Re: GM Powertrain Tonawanda Engine Plant
SPDES Permit NY0000574
4th Quarter 2014 Monitoring Well Results

Dear Mr. Smythe:

Attached please find the analytical results from the testing of monitoring wells for the 4th Quarter 2014.

Please call Miguel A. Antonetti, PhD at 716-867-2129, if you have any questions.

"I certify under the 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 gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed 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 fines and imprisonment for knowing violations."

Sincerely,

Steven C. Finch
Plant Manager

Attachment

CC:
Andrea Skalski - NYSDEC, Buffalo
Brian Baker - NYSDEC, Albany

TRIMATRIX LABORATORIES

November 05, 2014

GM - Tonawanda Engine Plant
Attn: Mr. Casey Essary
2995 River Road
Buffalo, NY 14207-1099

Project: Program 2 - Quarterly SPDES Wells

Dear Mr. Casey Essary,

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

Work Order	Received	Description
1410440	10/22/2014	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 (#88-0730/13-049-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003329); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#103068); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-14-4); Virginia DCLS (#460153/2592); 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)

No Project Narrative is associated with this report.

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TRIMATRIX
LABORATORIES

STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services
Client Sample ID:	**Monitoring Well 1**	Sampled:	10/21/14 13:15
Lab Sample ID:	**1410440-01**	Sampled By:	P. Hagerty
Matrix:	Ground Water	Received:	10/22/14 08:30
Unit:	ug/L	Prepared:	10/23/14 07:26 By: ALK
Dilution Factor:	1	Analyzed:	11/02/14 20:51 By: MSZ
QC Batch:	1411711	Analytical Batch:	4K04038

Polychlorinated Biphenyls (PCBs) by EPA Method 608

CAS Number	Analyte	Analytical Result	RL	MDL
12674-11-2	PCB-1016	0.10U	0.10	0.027
11104-28-2	PCB-1221	0.10U	0.10	0.050
11141-16-5	PCB-1232	0.10U	0.10	0.035
53469-21-9	PCB-1242	0.10U	0.10	0.018
12672-29-6	PCB-1248	0.10U	0.10	0.017
11097-69-1	PCB-1254	0.10U	0.10	0.040
11096-82-5	PCB-1260	0.10U	0.10	0.034

Surrogates:	*% Recovery*	*Control Limits*
Decachlorobiphenyl	*97*	*30-138*
Tetrachloro-m-xylene	*68*	*29-117*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services
Client Sample ID:	**Monitoring Well 2**	Sampled:	10/21/14 12:45
Lab Sample ID:	**1410440-02**	Sampled By:	P. Hagerty
Matrix:	Ground Water	Received:	10/22/14 08:30
Unit:	ug/L	Prepared:	10/23/14 07:26 By: ALK
Dilution Factor:	1	Analyzed:	11/05/14 02:03 By: MSZ
QC Batch:	1411711	Analytical Batch:	4K05017

Polychlorinated Biphenyls (PCBs) by EPA Method 608

CAS Number	Analyte	Analytical Result	RL	MDL
12674-11-2	PCB-1016	0.10U	0.10	0.027
11104-28-2	PCB-1221	0.10U	0.10	0.050
11141-16-5	PCB-1232	0.10U	0.10	0.035
53469-21-9	PCB-1242	0.10U	0.10	0.018
12672-29-6	PCB-1248	0.10U	0.10	0.017
11097-69-1	PCB-1254	0.10U	0.10	0.040
11096-82-5	PCB-1260	0.10U	0.10	0.034

Surrogates:	*% Recovery*	*Control Limits*
Decachlorobiphenyl	*96*	*30-138*
Tetrachloro-m-xylene	*56*	*29-117*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services
Client Sample ID:	**Monitoring Well 3**	Sampled:	10/21/14 12:30
Lab Sample ID:	**1410440-03**	Sampled By:	P. Hagerty
Matrix:	Ground Water	Received:	10/22/14 08:30
Unit:	ug/L	Prepared:	10/23/14 07:26 By: ALK
Dilution Factor:	1	Analyzed:	11/02/14 21:52 By: MSZ
QC Batch:	1411711	Analytical Batch:	4K04038

Polychlorinated Biphenyls (PCBs) by EPA Method 608

CAS Number	Analyte	Analytical Result	RL	MDL
12674-11-2	PCB-1016	0.10U	0.10	0.027
11104-28-2	PCB-1221	0.10U	0.10	0.050
11141-16-5	PCB-1232	0.10U	0.10	0.035
53469-21-9	PCB-1242	0.10U	0.10	0.018
12672-29-6	PCB-1248	0.10U	0.10	0.017
11097-69-1	PCB-1254	0.10U	0.10	0.040
11096-82-5	PCB-1260	0.10U	0.10	0.034

Surrogates:	***% Recovery***	***Control Limits***
Decachlorobiphenyl	*112*	*30-138*
Tetrachloro-m-xylene	*78*	*29-117*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**		
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services		
Client Sample ID:	**Monitoring Well 4**	Sampled:	10/21/14 11:30		
Lab Sample ID:	**1410440-04**	Sampled By:	P. Hagerty		
Matrix:	Ground Water	Received:	10/22/14 08:30		
Unit:	ug/L	Prepared:	10/23/14 07:26	By:	ALK
Dilution Factor:	1	Analyzed:	11/02/14 22:22	By:	MSZ
QC Batch:	1411711	Analytical Batch:	4K04038		

Polychlorinated Biphenyls (PCBs) by EPA Method 608

CAS Number	Analyte	Analytical Result	RL	MDL
12674-11-2	PCB-1016	0.10U	0.10	0.027
11104-28-2	PCB-1221	0.10U	0.10	0.050
11141-16-5	PCB-1232	0.10U	0.10	0.035
53469-21-9	PCB-1242	0.10U	0.10	0.018
12672-29-6	PCB-1248	0.10U	0.10	0.017
11097-69-1	PCB-1254	0.10U	0.10	0.040
11096-82-5	PCB-1260	0.10U	0.10	0.034

Surrogates:	***% Recovery***	***Control Limits***
Decachlorobiphenyl	*94*	*30-138*
Tetrachloro-m-xylene	*75*	*29-117*

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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	MDL
QC Batch: 1411711 608 Liquid/Liquid Extraction/USEPA-608									
Method Blank					Analyzed:	11/02/2014	By: MSZ		
Unit: ug/L					Analytical Batch:	4K04038			
PCB-1016			0.10 U			--		0.10	0.027
PCB-1221			0.10 U					0.10	0.050
PCB-1232			0.10 U					0.10	0.035
PCB-1242			0.10 U					0.10	0.018
PCB-1248			0.10 U					0.10	0.017
PCB-1254			0.10 U					0.10	0.040
PCB-1260			0.10 U			--		0.10	0.034
Surrogates:									
Decachlorobiphenyl				*105*	*30-138*				
Tetrachloro-m-xylene				*74*	*29-117*				
Laboratory Control Sample					Analyzed:	11/02/2014	By: MSZ		
Unit: ug/L					Analytical Batch:	4K04038			
PCB-1016		0.600	**0.529**	88	50-114	--		0.10	0.027
PCB-1260		0.600	**0.622**	104	8-127	--		0.10	0.034
Surrogates:									
Decachlorobiphenyl				*107*	*30-138*				
Tetrachloro-m-xylene				*77*	*29-117*				
Matrix Spike 1410440-04 Monitoring Well 4					Analyzed:	11/03/2014	By: MSZ		
Unit: ug/L					Analytical Batch:	4K04038			
PCB-1016	0.10 U	0.600	**0.528**	88	55-117	--		0.10	0.027
PCB-1260	0.10 U	0.600	**0.628**	105	46-132	--		0.10	0.034
Surrogates:									
Decachlorobiphenyl				*108*	*30-138*				
Tetrachloro-m-xylene				*75*	*29-117*				
Matrix Spike Duplicate 1410440-04 Monitoring Well 4					Analyzed:	11/03/2014	By: MSZ		
Unit: ug/L					Analytical Batch:	4K04038			
PCB-1016	0.10 U	0.600	**0.508**	85	55-117	4	20	0.10	0.027
PCB-1260	0.10 U	0.600	**0.599**	100	46-132	5	20	0.10	0.034
Surrogates:									
Decachlorobiphenyl				*103*	*30-138*				
Tetrachloro-m-xylene				*72*	*29-117*				

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TRIMATRIX LABORATORIES

Chain of Custody Record

COC No. 140905228

5560 Corporate Exchange Court SE, Grand Rapids, MI 49512
Phone (616) 975-4500 Fax (616) 942-7463 www.trimatrixlabs.com

Pg. 1 of 1

For Lab Use Only
Cart: 2
VOA Rack/Tray: 5 D G
Receipt Log No: 134
Project Chemist: Jennifer Rice
Work Order No: 1410410

Client Name: GM - Tonawanda Engine Plant
Address: 2995 River Road
City, State Zip: Buffalo, NY 14207-1099
Phone: 716-879-5638 Fax 716-879-5425
Email: casey.essary@gm.com

Project Name: Program 2 - Qtly SPDES Wells
Client Project No. / P.O. No.
Invoice To: ☑ Client ☐ Other (comments)
Contact/Report To: Casey Essary

Analyses Requested

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID TM	Sample Date	Sample Time	COMP	GRAB	Matrix	D Benzene, Toluene - 8021	A SVOCs - 8270; PCBs - 608	A Cond, Turb, Cl, SO4, TDS	B Total Metals: Cr, Fe	Field pH	Field Temp	Total	Sample Comments
		01	1 Monitoring Well 1	2819	10/21/14	1315		X	W	2	3	1	1	7.35	12.9	7	Field pH/Temp:
		02	2 Monitoring Well 2	2868		1245		X	W	2	3	1	1	6.16	13.0	7	Field pH/Temp:
		03	3 Monitoring Well 3	2868		1230		X	W	2	3	1	1	7.34	14.1	7	Field pH/Temp:
		04	4 Monitoring Well 4	2819		1130		X	W	2	3	1	1	7.50	12.2	7	Field pH/Temp:
			5														
			6														
			7														
			8														
			9														
			10														

Container Type (corresponds to Container Packing List): 1p | 2 | 3 | 6

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 ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Sampled By (print): PATRICK J NAGERY
Sampler's Signature: Patrick J Nagery
Company: CDM Smith

How Shipped? Hand ____ Carrier FED EX
Tracking No.

Comments

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
1. Received By	Date	Time	2. Received By	Date	Time	3. Received For Lab By	Date	Time
							10-22-14	08:30

ORIGINAL - LABORATORY COPY - SAMPLER

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: GM Tonawanda — Receipt Record Page/Line #

Work Order #: 1410440 — New / Add To — Project Chemist — Sample #s

Recorded by (initials/date): WC 10 22 14

☑ Cooler ☐ Box ☐ Other ____ — Qty Received: 2

Thermometer Used: ☐ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#____) — ☐ See Additional Cooler Information Form

Cooler # / Time	Custody Seals	Coolant Type	Coolant Location	Temp Blank Present	If Present, Temperature Blank Location is:
Cooler # Tm 2808 Time 0421	☑ None ☐ Present / Intact ☐ Present / Not Intact	☑ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None	Dispersed / Top / Middle / Bottom	☐ Yes ☐ No	☐ Representative ☐ Not Representative
Cooler # Tm 2819 Time 0428	☑ None ☐ Present / Intact ☐ Present / Not Intact	☑ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None	Dispersed / Top / Middle / Bottom	☐ Yes ☐ No	☐ Representative ☐ Not Representative
Cooler # Time	☐ None ☐ Present / Intact ☐ Present / Not Intact	☐ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None	Dispersed / Top / Middle / Bottom	☐ Yes ☐ No	☐ Representative ☐ Not Representative
Cooler # Time	☐ None ☐ Present / Intact ☐ Present / Not Intact	☐ Loose Ice ☐ Bagged Ice ☐ Blue Ice ☐ None	Dispersed / Top / Middle / Bottom	☐ Yes ☐ No	☐ Representative ☐ Not Representative

	Cooler 1 Observed °C	Cooler 1 Correction Factor °C	Cooler 1 Actual °C	Cooler 2 Observed °C	Cooler 2 Correction Factor °C	Cooler 2 Actual °C	Cooler 3 Observed °C	Cooler 3 Correction Factor °C	Cooler 3 Actual °C	Cooler 4 Observed °C	Cooler 4 Correction Factor °C	Cooler 4 Actual °C
Temp Blank												
Sample 1	5.4	-	5.4	4.8	-	4.8						
Sample 2	5.7	-	5.7	4.8	-	4.8						
Sample 3	5.0	-	5.0	5.1	-	5.1						
3 Sample Average °C:	5.4			4.9								
☐ Cooler ID on COC?				☑ Cooler ID on COC?			☐ Cooler ID on COC?			☐ Cooler ID on COC?		
☐ VOC Trip Blank received?				☑ VOC Trip Blank received?			☐ VOC Trip Blank received?			☐ VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☐	☐	Chain of Custody record(s)? If No, Initialed By ____
☐		Received for Lab Signed/Date/Time?
☐	☐	Shipping document?
☐	☐	Other ____

COC Information

☐ TriMatrix COC ☐ Other ____

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☐	☐	Analysis Requested?
☐	☐	Sample ID matches COC?
☐	☐	Sample Date and Time matches COC?
☐		Container type completed on COC?
☐	☐	All container types indicated are received?

Check Sample Preservation

N/A	Yes	No	
	☐	☐	Temperature Blank OR average sample temperature, ≤6° C?
☐	☐	☐	If either is ≤6° C, was thermal preservation required?
☐		☐	If "Yes" Project Chemist Approval Initials: ____
☐		☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐		☐	Completed Sample Preservation Verification Form?
☐	☐	☐	Samples chemically preserved correctly?
☐		☐	If "No" added orange tag?
☐		☐	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☑ Green-tagged containers
☐ Yellow/White-tagged 1 L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED. COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☐	Broken containers/lids?
	☐	☐	Missing or incomplete labels?
	☐	☐	Illegible information on labels?
	☐	☐	Low volume received?
	☐	☐	Inappropriate or non-TriMatrix containers received?
☐	☐	☐	VOC vials / TOX containers have headspace?
☐	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤8 Hour Goal Met?
10.22.14 0830	10.22.14 0945	Yes (No)

TRIMATRIX LABORATORIES — SAMPLE PRESERVATION VERIFICATION FORM

Client: GM Tonawanda
Receipt Log #: 134
Completed By (initials/date): GM 10.22.14
Work Order #: 1410440
Project Chemist:

COC ID #: 140905228
Adjusted by: ____ Date: ____
DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1					✓	✓		
COC Line #2					✓	✓		
COC Line #3					✓	✓		
COC Line #4					✓	✓		
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

pH Strip Reagent #
☑ 4051306
☐

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

COC ID #
Adjusted by ____ Date ____
DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

TRIMATRIX LABORATORIES

November 05, 2014

GM - Tonawanda Engine Plant
Attn: Mr. Casey Essary
2995 River Road
Buffalo, NY 14207-1099

Project: Program 2 - Quarterly SPDES Wells

Dear Mr. Casey Essary,

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

Work Order	Received	Description
1410440	10/22/2014	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 (#88-0730/13-049-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003329); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#103068); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-14-4); Virginia DCLS (#460153/2592); 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)

Semivolatile Organic Compounds by EPA Method 8270C

Narrative: Manual integration was required on the analytes listed below. All manual integrations were performed and reviewed in accordance with TriMatrix laboratory policy.

Analysis: USEPA-8270C

Sample/Analyte: 1410440-03 Monitoring Well 3 Bis(2-ethylhexyl) Phthalate

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TRIMATRIX LABORATORIES

PROJECT TECHNICAL NARRATIVE(s)

Total Metals by EPA 6000/7000 Series Methods

Narrative: The MS and/or MSD recovery was outside the control limit. The non-spiked sample concentration for the same analyte was greater than or equal to 4 times the spiked amount; matrix QC results are not available.

Analysis: USEPA-6010C

Sample/Analyte:	1410440-04	Monitoring Well 4	Chromium
	1410440-04	Monitoring Well 4	Iron

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

TRIMATRIX LABORATORIES

STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: One or more surrogate recoveries in the acid and/or base-neutral fraction(s) for the sample exceeded the upper control limit. Positive results from the same fraction are considered estimated, non-detect results are not qualified.

Analysis: USEPA-8270C

Sample:	1410440-02	Monitoring Well 2
	1410440-03	Monitoring Well 3
	1410440-04	Monitoring Well 4

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**		
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services		
Client Sample ID:	**Monitoring Well 1**	Sampled:	10/21/14 13:15		
Lab Sample ID:	**1410440-01**	Sampled By:	P. Hagerty		
Matrix:	Ground Water	Received:	10/22/14 08:30		
Unit:	ug/L	Prepared:	10/24/14 10:00	By:	BAG
Dilution Factor:	1	Analyzed:	10/24/14 18:20	By:	BAG
QC Batch:	1411847	Analytical Batch:	4J27003		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL	Action Limit
71-43-2	Benzene	<1.0	1.0	
108-88-3	Toluene	<1.0	1.0	

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*98*	*85-118*
1,2-Dichloroethane-d4	*101*	*87-122*
Toluene-d8	*100*	*85-113*
4-Bromofluorobenzene	*97*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services
Client Sample ID:	**Monitoring Well 1**	Sampled:	10/21/14 13:15
Lab Sample ID:	**1410440-01**	Sampled By:	P. Hagerty
Matrix:	Ground Water	Received:	10/22/14 08:30
Unit:	ug/L	Prepared:	10/24/14 07:13 By: JBA
Dilution Factor:	1	Analyzed:	10/25/14 00:27 By: DWJ
QC Batch:	1411771	Analytical Batch:	4J27064

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	Action Limit
85-68-7	Butyl Benzyl Phthalate	<10	10	
84-74-2	Di-n-butyl Phthalate	<10	10	
117-81-7	Bis(2-ethylhexyl) Phthalate	<10	10	
108-95-2	Phenol	<10	10	
129-00-0	Pyrene	<10	10	

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*63*	*20-70*
Phenol-d6	*34*	*18-45*
Nitrobenzene-d5	*82*	*31-123*
2-Fluorobiphenyl	*92*	*25-113*
2,4,6-Tribromophenol	*96*	*30-121*
o-Terphenyl	*123*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services
Client Sample ID:	**Monitoring Well 1**	Sampled:	10/21/14 13:15
Lab Sample ID:	**1410440-01**	Sampled By:	P. Hagerty
Matrix:	Ground Water	Received:	10/22/14 08:30

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chromium	**0.11**	0.050		mg/L	1	USEPA-6010C	10/27/14 12:59	CKD	1411690
Iron	**0.74**	0.020		mg/L	1	USEPA-6010C	10/27/14 12:59	CKD	1411690

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services
Client Sample ID:	**Monitoring Well 1**	Sampled:	10/21/14 13:15
Lab Sample ID:	**1410440-01**	Sampled By:	P. Hagerty
Matrix:	Ground Water	Received:	10/22/14 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**5300**	100		mg/L	100	SM 4500-Cl E-2011	10/23/14 09:27	LMA	1411704
Conductivity @ 25° C	**15480**	5		umhos/cm	1	SM 2510 B-2011	10/24/14 13:05	HLB	1411786
Residue, Dissolved @ 180° C	**8900**	500	500	mg/L	1	SM 2540 C-2011	10/23/14 15:00	WAY	1411741
Sulfate	**250**	50		mg/L	10	ASTM D516-90 (07)	10/27/14 10:31	LMA	1411931
Turbidity	**18**	1.0		NTU	1	SM 2130 B-2011	10/22/14 11:19	CAC	1411657

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services
Client Sample ID:	**Monitoring Well 2**	Sampled:	10/21/14 12:45
Lab Sample ID:	**1410440-02**	Sampled By:	P. Hagerty
Matrix:	Ground Water	Received:	10/22/14 08:30
Unit:	ug/L	Prepared:	10/24/14 10:00 By: BAG
Dilution Factor:	1	Analyzed:	10/24/14 18:48 By: BAG
QC Batch:	1411847	Analytical Batch:	4J27003

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL	Action Limit
71-43-2	Benzene	<1.0	1.0	
108-88-3	Toluene	<1.0	1.0	

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*101*	*85-118*
1,2-Dichloroethane-d4	*104*	*87-122*
Toluene-d8	*102*	*85-113*
4-Bromofluorobenzene	*97*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**		
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services		
Client Sample ID:	**Monitoring Well 2**	Sampled:	10/21/14 12:45		
Lab Sample ID:	**1410440-02**	Sampled By:	P. Hagerty		
Matrix:	Ground Water	Received:	10/22/14 08:30		
Unit:	ug/L	Prepared:	10/24/14 07:13	By:	JBA
Dilution Factor:	1	Analyzed:	10/25/14 02:10	By:	DWJ
QC Batch:	1411771	Analytical Batch:	4J27064		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	Action Limit
85-68-7	Butyl Benzyl Phthalate	<10	10	
84-74-2	Di-n-butyl Phthalate	<10	10	
117-81-7	Bis(2-ethylhexyl) Phthalate	<10	10	
108-95-2	Phenol	<10	10	
129-00-0	Pyrene	<10	10	

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*58*	*20-70*
Phenol-d6	*29*	*18-45*
Nitrobenzene-d5	*94*	*31-123*
2-Fluorobiphenyl	*96*	*25-113*
2,4,6-Tribromophenol	*90*	*30-121*
o-Terphenyl	***126***	*42-125*

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services
Client Sample ID:	**Monitoring Well 2**	Sampled:	10/21/14 12:45
Lab Sample ID:	**1410440-02**	Sampled By:	P. Hagerty
Matrix:	Ground Water	Received:	10/22/14 08:30

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chromium	<0.050	0.050		mg/L	1	USEPA-6010C	10/27/14 13:04	CKD	1411690
Iron	**4.7**	0.020		mg/L	1	USEPA-6010C	10/27/14 13:04	CKD	1411690

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services
Client Sample ID:	**Monitoring Well 2**	Sampled:	10/21/14 12:45
Lab Sample ID:	**1410440-02**	Sampled By:	P. Hagerty
Matrix:	Ground Water	Received:	10/22/14 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**1100**	25		mg/L	25	SM 4500-Cl E-2011	10/23/14 08:47	LMA	1411704
Conductivity @ 25° C	**5233**	5		umhos/cm	1	SM 2510 B-2011	10/24/14 13:05	HLB	1411786
Residue, Dissolved @ 180° C	**3700**	50.0	500	mg/L	1	SM 2540 C-2011	10/23/14 15:00	WAY	1411741
Sulfate	**1200**	250		mg/L	50	ASTM D516-90 (07)	10/27/14 09:51	LMA	1411931
Turbidity	**18**	1.0		NTU	1	SM 2130 B-2011	10/22/14 11:19	CAC	1411657

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services
Client Sample ID:	**Monitoring Well 3**	Sampled:	10/21/14 12:30
Lab Sample ID:	**1410440-03**	Sampled By:	P. Hagerty
Matrix:	Ground Water	Received:	10/22/14 08:30
Unit:	ug/L	Prepared:	10/24/14 10:00 By: BAG
Dilution Factor:	1	Analyzed:	10/24/14 19:15 By: BAG
QC Batch:	1411847	Analytical Batch:	4J27003

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL	Action Limit
71-43-2	Benzene	<1.0	1.0	
108-88-3	Toluene	<1.0	1.0	

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*98*	*85-118*
1,2-Dichloroethane-d4	*100*	*87-122*
Toluene-d8	*100*	*85-113*
4-Bromofluorobenzene	*96*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services
Client Sample ID:	**Monitoring Well 3**	Sampled:	10/21/14 12:30
Lab Sample ID:	**1410440-03**	Sampled By:	P. Hagerty
Matrix:	Ground Water	Received:	10/22/14 08:30
Unit:	ug/L	Prepared:	10/24/14 07:13 By: JBA
Dilution Factor:	1	Analyzed:	10/25/14 02:44 By: DWJ
QC Batch:	1411771	Analytical Batch:	4J27064

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	Action Limit
85-68-7	Butyl Benzyl Phthalate	<10	10	
84-74-2	Di-n-butyl Phthalate	<10	10	
117-81-7	Bis(2-ethylhexyl) Phthalate	<10	10	
108-95-2	Phenol	<10	10	
129-00-0	Pyrene	<10	10	

Surrogates:	*% Recovery*	*Control Limits*
2-Fluorophenol	*61*	*20-70*
Phenol-d6	*31*	*18-45*
Nitrobenzene-d5	*90*	*31-123*
2-Fluorobiphenyl	*93*	*25-113*
2,4,6-Tribromophenol	*99*	*30-121*
o-Terphenyl	***128***	*42-125*

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services
Client Sample ID:	**Monitoring Well 3**	Sampled:	10/21/14 12:30
Lab Sample ID:	**1410440-03**	Sampled By:	P. Hagerty
Matrix:	Ground Water	Received:	10/22/14 08:30

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chromium	<0.050	0.050		mg/L	1	USEPA-6010C	10/27/14 13:08	CKD	1411690
Iron	**0.83**	0.020		mg/L	1	USEPA-6010C	10/27/14 13:08	CKD	1411690

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services
Client Sample ID:	**Monitoring Well 3**	Sampled:	10/21/14 12:30
Lab Sample ID:	**1410440-03**	Sampled By:	P. Hagerty
Matrix:	Ground Water	Received:	10/22/14 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**500**	10		mg/L	10	SM 4500-Cl E-2011	10/23/14 08:47	LMA	1411704
Conductivity @ 25° C	**3488**	5		umhos/cm	1	SM 2510 B-2011	10/24/14 13:05	HLB	1411786
Residue, Dissolved @ 180° C	**2450**	50.0	500	mg/L	1	SM 2540 C-2011	10/23/14 15:00	WAY	1411741
Sulfate	**650**	120		mg/L	25	ASTM D516-90 (07)	10/27/14 09:51	LMA	1411931
Turbidity	**4.5**	1.0		NTU	1	SM 2130 B-2011	10/22/14 11:19	CAC	1411657

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**		
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services		
Client Sample ID:	**Monitoring Well 4**	Sampled:	10/21/14 11:30		
Lab Sample ID:	**1410440-04**	Sampled By:	P. Hagerty		
Matrix:	Ground Water	Received:	10/22/14 08:30		
Unit:	ug/L	Prepared:	10/24/14 10:00	By:	BAG
Dilution Factor:	1	Analyzed:	10/24/14 19:42	By:	BAG
QC Batch:	1411847	Analytical Batch:	4J27003		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL	Action Limit
71-43-2	Benzene	<1.0	1.0	
108-88-3	Toluene	<1.0	1.0	

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*102*	*85-118*
1,2-Dichloroethane-d4	*102*	*87-122*
Toluene-d8	*102*	*85-113*
4-Bromofluorobenzene	*99*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services
Client Sample ID:	**Monitoring Well 4**	Sampled:	10/21/14 11:30
Lab Sample ID:	**1410440-04**	Sampled By:	P. Hagerty
Matrix:	Ground Water	Received:	10/22/14 08:30
Unit:	ug/L	Prepared:	10/24/14 07:13 By: JBA
Dilution Factor:	1	Analyzed:	10/25/14 03:18 By: DWJ
QC Batch:	1411771	Analytical Batch:	4J27064

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	Action Limit
85-68-7	Butyl Benzyl Phthalate	<10	10	
84-74-2	Di-n-butyl Phthalate	<10	10	
117-81-7	Bis(2-ethylhexyl) Phthalate	<10	10	
108-95-2	Phenol	<10	10	
129-00-0	Pyrene	<10	10	

Surrogates:	*% Recovery*	*Control Limits*
2-Fluorophenol	*54*	*20-70*
Phenol-d6	*30*	*18-45*
Nitrobenzene-d5	*84*	*31-123*
2-Fluorobiphenyl	*98*	*25-113*
2,4,6-Tribromophenol	*70*	*30-121*
o-Terphenyl	***126***	*42-125*

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services
Client Sample ID:	**Monitoring Well 4**	Sampled:	10/21/14 11:30
Lab Sample ID:	**1410440-04**	Sampled By:	P. Hagerty
Matrix:	Ground Water	Received:	10/22/14 08:30

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chromium	**4.1**	0.50		mg/L	10	USEPA-6010C	10/27/14 15:48	CKD	1411690
Iron	**22**	0.50		mg/L	25	USEPA-6010C	10/27/14 15:37	CKD	1411690

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**GM - Tonawanda Engine Plant**	Work Order:	**1410440**
Project:	Program 2 - Quarterly SPDES Wells	Description:	Laboratory Services
Client Sample ID:	**Monitoring Well 4**	Sampled:	10/21/14 11:30
Lab Sample ID:	**1410440-04**	Sampled By:	P. Hagerty
Matrix:	Ground Water	Received:	10/22/14 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Action Limit	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**890**	25		mg/L	25	SM 4500-Cl E-2011	10/23/14 08:50	LMA	1411704
Residue, Dissolved @ 180° C	**2710**	50.0	500	mg/L	1	SM 2540 C-2011	10/23/14 15:00	WAY	1411741
Conductivity @ 25° C	**4119**	5		umhos/cm	1	SM 2510 B-2011	10/24/14 13:05	HLB	1411786
Sulfate	**450**	120		mg/L	25	ASTM D516-90 (07)	10/27/14 10:31	LMA	1411931
Turbidity	**770**	1.0		NTU	1	SM 2130 B-2011	10/22/14 11:19	CAC	1411657

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1411847 5030B Aqueous Purge & Trap/USEPA-8260B								
Method Blank					Analyzed:	10/24/2014	By: BAG	
Unit: ug/L					Analytical Batch:	4J27003		
Benzene			<1.0					1.0
Toluene			<1.0					1.0
Surrogates:								
Dibromofluoromethane				*104*	*85-118*			
1,2-Dichloroethane-d4				*103*	*87-122*			
Toluene-d8				*101*	*85-113*			
4-Bromofluorobenzene				*100*	*82-110*			
Laboratory Control Sample					Analyzed:	10/24/2014	By: BAG	
Unit: ug/L					Analytical Batch:	4J27003		
Benzene		40.0	**44.2**	110	84-119	--		1.0
Toluene		40.0	**44.1**	110	85-118	--		1.0
Surrogates:								
Dibromofluoromethane				*101*	*85-118*			
1,2-Dichloroethane-d4				*99*	*87-122*			
Toluene-d8				*99*	*85-113*			
4-Bromofluorobenzene				*101*	*82-110*			
Matrix Spike 1410440-04 Monitoring Well 4					Analyzed:	10/24/2014	By: BAG	
Unit: ug/L					Analytical Batch:	4J27003		
Benzene	<1.0	40.0	**44.1**	110	80-129	--		1.0
Toluene	<1.0	40.0	**44.1**	110	79-129	--		1.0
Surrogates:								
Dibromofluoromethane				*98*	*85-118*			
1,2-Dichloroethane-d4				*99*	*87-122*			
Toluene-d8				*99*	*85-113*			
4-Bromofluorobenzene				*100*	*82-110*			

Continued on next page

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1411847 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B								
Matrix Spike Duplicate 1410440-04 Monitoring Well 4					Analyzed:	10/24/2014	By: BAG	
Unit: ug/L					Analytical Batch:	4J27003		
Benzene	<1.0	40.0	**46.0**	115	80-129	4	9	1.0
Toluene	<1.0	40.0	**45.6**	114	79-129	3	9	1.0
Surrogates:								
Dibromofluoromethane				*100*	*85-118*			
1,2-Dichloroethane-d4				*98*	*87-122*			
Toluene-d8				*99*	*85-113*			
4-Bromofluorobenzene				*100*	*82-110*			

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1411771 3510C Liquid-Liquid Extraction/USEPA-8270C								
Method Blank					Analyzed:	10/24/2014	By: DWJ	
Unit: ug/L					Analytical Batch:	4J27064		
Butyl Benzyl Phthalate			<10			--		10
Di-n-butyl Phthalate			<10			--		10
Bis(2-ethylhexyl) Phthalate			<10			--		10
Phenol			<10					10
Pyrene			<10					10
Surrogates:								
2-Fluorophenol				*57*	*20-70*			
Phenol-d6				*29*	*18-45*			
Nitrobenzene-d5				*90*	*31-123*			
2-Fluorobiphenyl				*108*	*25-113*			
2,4,6-Tribromophenol				*87*	*30-121*			
o-Terphenyl				*124*	*42-125*			
Laboratory Control Sample					Analyzed:	10/24/2014	By: DWJ	
Unit: ug/L					Analytical Batch:	4J27064		
Butyl Benzyl Phthalate	100		**131**	131	58-141	--		10
Di-n-butyl Phthalate	100		**117**	117	58-145	--		10
Bis(2-ethylhexyl) Phthalate	100		**121**	121	60-136	--		10
Phenol	100		**41.6**	42	22-60	--		10
Pyrene	100		**118**	118	60-134	--		10
Surrogates:								
2-Fluorophenol				*59*	*20-70*			
Phenol-d6				*33*	*18-45*			
Nitrobenzene-d5				*103*	*31-123*			

Continued on next page

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1411771 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C								
Laboratory Control Sample (Continued)					Analyzed:	10/24/2014	By: DWJ	
Unit: ug/L					Analytical Batch:	4J27064		
Surrogates (Continued):								
2-Fluorobiphenyl				*113*	*25-113*			
2,4,6-Tribromophenol				*114*	*30-121*			
o-Terphenyl				*119*	*42-125*			
Matrix Spike 1410440-04 Monitoring Well 4					Analyzed:	10/25/2014	By: DWJ	
Unit: ug/L					Analytical Batch:	4J27064		
Butyl Benzyl Phthalate	<10	101	**131**	129	44-149	--		10
Di-n-butyl Phthalate	0.300	101	**127**	126	51-145	--		10
Bis(2-ethylhexyl) Phthalate	1.30	101	**127**	125	50-144	--		10
Phenol	<10	101	**34.5**	34	22-52	--		10
Pyrene	<10	101	**116**	115	55-134	--		10
Surrogates:								
2-Fluorophenol				*50*	*20-70*			
Phenol-d6				*28*	*18-45*			
Nitrobenzene-d5				*103*	*31-123*			
2-Fluorobiphenyl				*107*	*25-113*			
2,4,6-Tribromophenol				*84*	*30-121*			
o-Terphenyl				*118*	*42-125*			
Matrix Spike Duplicate 1410440-04 Monitoring Well 4					Analyzed:	10/25/2014	By: DWJ	
Unit: ug/L					Analytical Batch:	4J27064		
Butyl Benzyl Phthalate	<10	100	**134**	134	44-149	3	15	10
Di-n-butyl Phthalate	0.300	100	**130**	130	51-145	2	16	10
Bis(2-ethylhexyl) Phthalate	1.30	100	**130**	129	50-144	2	16	10
Phenol	<10	100	**31.9**	32	22-52	8	19	10
Pyrene	<10	100	**120**	120	55-134	3	16	10

Continued on next page

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1411771 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Matrix Spike Duplicate (Continued) 1410440-04 Monitoring Well 4 — Analyzed: 10/25/2014 By: DWJ

Unit: ug/L — Analytical Batch: 4J27064

Surrogates:		
2-Fluorophenol	*44*	*20-70*
Phenol-d6	*26*	*18-45*
Nitrobenzene-d5	*104*	*31-123*
2-Fluorobiphenyl	*106*	*25-113*
2,4,6-Tribromophenol	*71*	*30-121*
o-Terphenyl	*123*	*42-125*

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Total Metals by EPA 6000/7000 Series Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: Chromium/USEPA-6010C									
QC Batch: 1411690 (3010A Digestion)							Analyzed: 10/27/2014		By: CKD
Method Blank			<0.050	mg/L					0.050
Laboratory Control Sample		0.400	**0.441**	mg/L	110	80-120			0.050
Analyte: Iron/USEPA-6010C									
QC Batch: 1411690 (3010A Digestion)							Analyzed: 10/27/2014		By: CKD
Method Blank			<0.020	mg/L					0.020
Laboratory Control Sample		0.400	**0.448**	mg/L	112	80-120			0.020

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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: Chloride/SM 4500-Cl E-2011									
QC Batch: 1411704 (General Inorganic Prep)						Analyzed: 10/23/2014		By: LMA	
Method Blank			<1.0	mg/L					1.0
Laboratory Control Sample		50.0	**50.0**	mg/L	100	90-106			1.0
1410440-04 [Monitoring Well 4]									
Matrix Spike	887	50.0	**931**	mg/L	88	72-123			25
Matrix Spike Duplicate	887	50.0	**940**	mg/L	107	72-123	1	20	25
Analyte: Conductivity @ 25° C/SM 2510 B-2011									
QC Batch: 1411786 (Method Specific Preparation)						Analyzed: 10/24/2014		By: HLB	
Method Blank			<5	umhos/cm					5
Laboratory Control Sample		12900	**12690**	umhos/cm	98	90-110			
Laboratory Control Sample		1410	**1416**	umhos/cm	100	90-110			
1410440-04 [Monitoring Well 4]									
Duplicate	4119		**4124**	umhos/cm			0.1	5	5
Analyte: Residue, Dissolved @ 180° C/SM 2540 C-2011									
QC Batch: 1411741 (General Inorganic Prep)						Analyzed: 10/23/2014		By: WAY	
Method Blank			<50.0	mg/L					50.0
Laboratory Control Sample		200	**192**	mg/L	96	85-115			50.0
1410440-04 [Monitoring Well 4]									
Duplicate	2710		**2670**	mg/L			1	5	50.0
Analyte: Sulfate/ASTM D516-90 (07)									
QC Batch: 1411931 (General Inorganic Prep)						Analyzed: 10/27/2014		By: LMA	
Method Blank			<5.0	mg/L					5.0
Laboratory Control Sample		20.0	**20.0**	mg/L	100	88-112			5.0
1410440-04 [Monitoring Well 4]									
Matrix Spike	450	20.0	**469**	mg/L	93	61-156			120
Matrix Spike Duplicate	450	20.0	**475**	mg/L	126	61-156	1	20	120
Analyte: Turbidity/SM 2130 B-2011									
QC Batch: 1411657 (Method Specific Preparation)						Analyzed: 10/22/2014		By: CAC	
Method Blank			<1.0	NTU					1.0

Continued on next page

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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: **Turbidity**/SM 2130 B-2011 (Continued)									
QC Batch: 1411657 (Continued) (Method Specific Preparation)							Analyzed: 10/22/2014		By: CAC
Laboratory Control Sample		20.0	**20.4**	NTU	102	95-105			1.0
1410440-04 [Monitoring Well 4]									
Duplicate	766		**770**	NTU			0.5	20	1.0

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TRIMATRIX LABORATORIES

Chain of Custody Record

COC No. 140905228

5560 Corporate Exchange Court SE, Grand Rapids, MI 49512
Phone (616) 975-4500 Fax (616) 942-7463 www.trimatrixlabs.com

Pg. 1 of 1

For Lab Use Only
Cart: 2
VOA Rack/Tray: 50 G
Receipt Log No.: 134
Project Chemist: Jennifer Rice
Work Order No.: 1416440

Client Name: GM - Tonawanda Engine Plant
Address: 2995 River Road
City, State Zip: Buffalo, NY 14207-1099
Phone: 716-879-5638 Fax 716-879-5425
Email: casey.essary@gm.com

Project Name: Program 2 - Qtly SPDES Wells
Client Project No. / P.O. No.:
Invoice To: ☑ Client ☐ Other (comments)
Contact/Report To: Casey Essary

Analyses Requested

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 Zn Ac/NaOH pH>9; G MeOH; H Other (note below)

	D	A	A	B									
	Benzene, Toluene - 8021	SVOCs - 8270; PCBs - 608	Cond, Turb, Cl, SO_4, TDS	Total Metals: Cr, Fe							Field pH	Field Temp	
Container Type (corresponds to Container Packing List)	1p	2	3	6									
Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	Total									Sample Comments
		01	1 Monitoring Well 1	TM 2819	10/21/14	1315		X	W	2	3	1	1				7.35	12.9	7 Field pH/Temp:
		02	2 Monitoring Well 2	2868		1245		X	W	2	3	1	1				6.76	13.0	7 Field pH/Temp:
		03	3 Monitoring Well 3	2868		1230		X	W	2	3	1	1				7.34	14.1	7 Field pH/Temp:
		04	4 Monitoring Well 4	2819		1130		X	W	2	3	1	1				7.50	12.2	7 Field pH/Temp:
			5																
			6																
			7																
			8																
			9																
			10																

Sampled By (print): PATRICK J NAGERY
Sampler's Signature: Patrick J Nagery
Company: Clarkson

How Shipped? Hand ____ Carrier FED EX
Tracking No.:

Comments:

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
1. Received By	Date	Time	2. Received By	Date	Time	3. Received For Lab By	Date	Time
							10-22-14	0X

ORIGINAL - LABORATORY COPY - SAMPLER

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Gm Tonawanda
Receipt Record Page/Line #:
Work Order #: 1410440
New / Add To:
Project Chemist: Sample #s:

Recorded by (initials/date): WC 10 22 14

☑ Cooler ☐ Box ☐ Other: Qty Received: 2

Thermometer Used: ☐ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler # / Time	Cooler # / Time	Cooler # / Time	Cooler # / Time
Tm 2808 0921	Tm 2819 0928		
Custody Seals:			
☑ None	☑ None	☐ None	☐ None
☐ Present / Intact	☐ Present / Intact	☐ Present / Intact	☐ Present / Intact
☐ Present / Not Intact	☐ Present / Not Intact	☐ Present / Not Intact	☐ Present / Not Intact
Coolant Type:			
☑ Loose Ice	☑ Loose Ice	☐ Loose Ice	☐ Loose Ice
☐ Bagged Ice	☐ Bagged Ice	☐ Bagged Ice	☐ Bagged Ice
☐ Blue Ice	☐ Blue Ice	☐ Blue Ice	☐ Blue Ice
☐ None	☐ None	☐ None	☐ None
Coolant Location:			
(Dispersed) / Top / Middle / Bottom	(Dispersed) / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom
Temp Blank Present: ☐ Yes ☐ No	Temp Blank Present: ☐ Yes ☐ No	Temp Blank Present: ☐ Yes ☐ No	Temp Blank Present: ☐ Yes ☐ No
If Present, Temperature Blank Location is:	If Present, Temperature Blank Location is:	If Present, Temperature Blank Location is:	If Present, Temperature Blank Location is:
☐ Representative ☐ Not Representative	☐ Representative ☐ Not Representative	☐ Representative ☐ Not Representative	☐ Representative ☐ Not Representative

	Observed °C	Correction Factor °C	Actual °C
Temp Blank			
Sample 1	5.4	-	5.4
Sample 2	5.7	-	5.7
Sample 3	5.0	-	5.0
3 Sample Average °C:			5.4

	Observed °C	Correction Factor °C	Actual °C
Temp Blank	1		1
Sample 1	4.8	-	4.8
Sample 2	4.8	-	4.8
Sample 3	5.1	-	5.1
3 Sample Average °C:			4.9

	Observed °C	Correction Factor °C	Actual °C
Temp Blank			
Sample 1			
Sample 2			
Sample 3			
3 Sample Average °C:			

	Observed °C	Correction Factor °C	Actual °C
Temp Blank			
Sample 1			
Sample 2			
Sample 3			
3 Sample Average °C:			

☐ Cooler ID on COC?	☐ Cooler ID on COC?	☐ Cooler ID on COC?	☐ Cooler ID on COC?
☐ VOC Trip Blank received?	☑ VOC Trip Blank received?	☐ VOC Trip Blank received?	☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☐	☐	Chain of Custody record(s)? If No, Initiated By _____
☐		Received for Lab Signed/Date/Time?
☐	☐	Shipping document?
☐	☐	Other _____

COC Information

☑ TriMatrix COC ☐ Other_____

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☐	☐	☑	Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☐	☑	Temperature Blank OR average sample temperature, ≥6° C?
☐	☐	☑	If either is ≥6° C, was thermal preservation required?
☐	☐		If "Yes" Project Chemist Approval Initials: _____
☐	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☑		Completed Sample Preservation Verification Form?
☐	☑	☐	Samples chemically preserved correctly?
☐	☐		If "No" added orange tag?
☐	☐		Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☑ Green-tagged containers
☐ Yellow/White-tagged 1 L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED. COCs TO LAB(S)

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤8 Hour Goal Met?
10-22-14 0830	10-22-14 0945	Yes (No)

TRIMATRIX LABORATORIES

SAMPLE PRESERVATION VERIFICATION FORM

page 1 of 1

Client: Gm Tonawanda	Work Order # 1410440
Receipt Log # 134 — Completed By (initials/date): [illegible] 10-22-14	Project Chemist

COC ID # 1409052228		Adjusted by: Date:		DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13	3	6	15	
Tag Color	Lt. Blue	Blue	Brown	Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4	None	HNO_3	HNO_3	
Expected pH	>12	<2	<2	6-8 ✓	<2	<2	
COC Line #1				✓	✓		
COC Line #2				✓	✓		
COC Line #3				✓	✓		
COC Line #4				✓	✓		
COC Line #5							
COC Line #6							
COC Line #7							
COC Line #8							
COC Line #9							
COC Line #10							

Comments

COC ID #		Adjusted by: Date:		DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13	3	6	15	
Tag Color	Lt. Blue	Blue	Brown	Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4	None	HNO_3	HNO_3	
Expected pH	>12	<2	<2	6-8	<2	<2	
COC Line #1							
COC Line #2							
COC Line #3							
COC Line #4							
COC Line #5							
COC Line #6							
COC Line #7							
COC Line #8							
COC Line #9							
COC Line #10							

Comments

pH Strip Reagent #
☒ 4051306
☐

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5