

Kevin Schneider

From: Kevin Schneider
Sent: Friday, May 10, 2013 2:35 PM
To: Kaysen.Michelle@epamail.epa.gov
Cc: Bhooma Sundar (Sundar.Bhooma@epamail.epa.gov); GARY CYGAN (Cygan.Gary@epamail.epa.gov); Dave Favero; Scott Cormier; Clifford Yantz
Subject: RACER Trust - Dort Hwy Land - GWI Update - 4th Quarter Results
Attachments: GWI Update - 4th Quarter Results 2013.pdf

Michelle,

The analytical results for the fourth quarterly sampling event for the RACER Dort Highway Land site (#12960) is attached. Sampling was conducted on March 14, 2013 for the monitoring wells, except monitoring well MW-4, which was sampled on April 10, 2013. The water in monitoring well MW-4 was frozen during the March sampling so MW-4 was sampled once the well thawed. Tables 1 and 2 provide summaries of the water levels and analytical results, respectively, for the site for the four sampling events. Figure 7 provides the current groundwater contours and exceedances (Figures 1 through 4 were provided in the original GWI Report and Figures 5 and 6 were provided in the second and third quarterly sampling event updates, respectively).

The groundwater elevations range from 828.40 feet above mean sea level (ft aMSL) at MW-8 to 821.36 ft aMSL at MW-2. The groundwater level for MW-4 from April 10, 2013 was similar to the level of the ice in the well on March 14, 2013.

The groundwater contours provide an indication of the groundwater flow direction at the Site, and indicate a flow pattern originating from the southeastern portion of the Site with a general overall westerly flow direction. The groundwater contours during this event indicate a similar flow pattern as observed previously.

The samples were analyzed for arsenic, lead, selenium, and silver during this round of sampling. Arsenic and lead were detected in four of the five monitoring wells; arsenic and lead remained undetected in monitoring well MW-4. Arsenic was detected above the Michigan Department of Environmental Quality (MDEQ) nonresidential drinking water and groundwater surface water interface (GSI) criteria of 0.01 mg/L at MW-2, MW2-1, and MW-7. The total arsenic detections ranged from 0.007 mg/L at MW-9 to 0.027 mg/L at MW-2. The dissolved arsenic detections ranged from 0.005 mg/L at MW-7 to 0.011 mg/L at MW2-1.

Lead was detected above the MDEQ nonresidential drinking water criterion of 0.004 mg/L at MW-2, MW2-1, MW-7 and MW-9 and the GSI criterion of 0.014 mg/L at MW-7 and MW-9. The total lead detections ranged from 0.005 mg/L at MW-2 to 0.021 mg/L at MW-9 (Co-Located). The dissolved lead detections ranged from 0.006 mg/L at MW-2 to 0.012 mg/L at MW-9 (Co-Located).

Silver was detected above the MDEQ GSI criterion of 0.0002 mg/L at MW-9 at a concentration of 0.0003 mg/L. This is the first time that silver was detected in the monitoring wells during the Groundwater Investigation.

The results are generally similar to the June, September, and December 2012 monitoring event results, with the exception of the lead detections which were slightly elevated compared to previous sampling events. The lead detections appear to be due to elevated turbidity during sampling. The analytical results for the dissolved samples were generally lower compared with the analytical results for the total samples.

We believe the data is consistent enough with previous data to complete the Environmental Indicator (EI) Migration of Contaminated Groundwater Under Control (CA750) form and submit that to you by the end of May, the scheduled due date.

Please let us know if you have any questions or comments and have a wonderful day,

Kevin Schneider



Kevin Schneider

SCIENTIST

O'BRIEN & GERE

37000 Grand River Ave, Suite 260

Farmington Hills, MI 48335

p 248-477-5701 ext. 33 | f 248-477-5962

Cell 734-306-9685

Kevin.Schneider@obg.com www.obg.com

Table 1
RACER Trust- Dort Hwy Land
Depth to Groundwater Levels in Monitoring Wells

Well	Top Of Casing Elev. (ft) *	Top of Sand Pack Elev. (ft)	Bottom of Sand Pack Elev. (ft)	Date	Depth To Water (ft)	Static Water Elev. (ft)
MW-1	831.76	825.69	819.69	27-Jun-12	6.06	825.70
				27-Sep-12	8.96	822.80
				14-Mar-13	6.76	825.00
MW-2	829.31	814.64	806.84	27-Jun-12	7.09	822.22
				27-Sep-12	9.05	820.26
				19-Dec-12	9.08	820.23
				14-Mar-13	7.95	821.36
MW2-1	832.33	821.05	812.35	27-Jun-12	8.69	823.64
				27-Sep-12	10.56	821.77
				19-Dec-12	12.25	820.08
				14-Mar-13	9.94	822.39
MW-3	824.99	816.81	807.81	27-Jun-12	5.30	819.69
				27-Sep-12	4.32	820.67
				14-Mar-13	2.06	822.93
MW-4	824.03	818.12	812.12	27-Jun-12	5.60	818.43
				27-Sep-12	5.43	818.60
				19-Dec-12	2.47	821.56
				10-Apr-13	2.25	821.78
MW-5	829.58	811.43	803.43	27-Jun-12	21.00	808.58
				27-Sep-12	7.76	821.82
				14-Mar-13	6.09	823.49
MW-6	828.63	816.25	808.25	27-Jun-12	3.95	824.68
				27-Sep-12	7.20	821.43
				14-Mar-13	6.55	822.08
MW-7	834.20	818.26	811.86	27-Jun-12	9.51	824.69
				27-Sep-12	11.04	823.16
				19-Dec-12	10.96	823.24
				14-Mar-13	10.56	823.64
MW-8	833.22	820.20	811.20	27-Jun-12	5.39	827.83
				27-Sep-12	8.15	825.07
				14-Mar-13	4.82	828.40
MW-9	835.45	817.48	809.98	27-Jun-12	8.05	827.40
				27-Sep-12	8.13	827.32
				19-Dec-12	7.12	828.33
				14-Mar-13	7.27	828.18

Notes

* Casing elevations were provided by CTI Engineers and are in feet relative to National Geodetic Vertical Datum

Table 2
Summary of Detected Groundwater Analytical Results
RACER Trust
Grand Blanc, Michigan

Parameter		MDEQ Criteria				MW-1		MW-2													
		Residential Drinking Water Criteria & RBSLs	Groundwater Surface Water Interface Criteria & RBSLs	Non-Residential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Groundwater Contact Criteria & RBSLs			(CO-LOCATED)				(CO-LOCATED)				(Dup 1)					
						28-Jun-12		28-Jun-12		27-Sep-12		27-Sep-12		19-Dec-12		19-Dec-12		14-Mar-13		14-Mar-13	
						Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total
		Metals																			
Arsenic	mg/L	0.01 (A)	0.01	NLV	4.3	<0.002	<0.002	0.027	0.028	0.035	0.034	0.034	0.035	0.031	0.032	0.030	0.035	0.009	0.027	0.010	0.027
Barium	mg/L	2 (A)	0.67 (G,X)	NLV	14000	0.084	0.098	0.042	0.045	--	--	--	--	--	--	--	--	--	--	--	--
Lead (Total)	mg/L	0.004 (L)	0.014 (G,X)	NLV	ID	<0.003	<0.003	<0.003	<0.003	<0.003	0.004	<0.003	0.004	<0.003	<0.003	<0.003	<0.003	0.006	0.005	0.008	0.009
Silver	mg/L	0.034	0.0002 (M); 0.00006	NLV	1.50E+06	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002
SVOCs																					
Dimethyl phthalate	µg/L	210,000	NA	NLV	4.2E+06 (S)	--	10*	--	5*	--	--	--	--	--	--	--	--	--	--	--	--
VOCs																					
Bromodichloromethane	µg/L	80 (A,W)	ID	37,000	14,000	--	<1	--	<1	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	µg/L	80 (A,W)	350	1.80E+05	1.50E+05	--	<1	--	<1	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	2,500	740	2.30E+06	2.40E+06	--	<1	--	<1	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

Exceeds residential drinking water criteria or both GSI and drinking water criteria

Exceeds GSI protection criteria only

* Compound also found in associated method blank.

(A) Criterion is the state of Michigan drinking water standard.

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water

(S) Criterion defaults to the hazardous substance-specific water solubility limit.

(L) Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(10) of the NREPA, and are not calculated using the algorithms and assumptions specified in pathway-specific rules.

(W) Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan drinking water standard of 80 µg/L.

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source.

(NLV) Means hazardous substance is not likely to volatilize under most conditions.

(ID) Means insufficient data to develop criterion.

(--) Not analyzed.

Table 2
Summary of Detected Groundwater Analytical Results
RACER Trust
Grand Blanc, Michigan

Parameter		MDEQ Criteria				MW2-1								MW-3	MW-4							
		Residential Drinking Water Criteria & RBSLs	Groundwater Surface Water Interface Criteria & RBSLs	Non-Residential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Groundwater Contact Criteria & RBSLs																	
						28-Jun-12		27-Sep-12		19-Dec-12		14-Mar-13										
						Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Total	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Metals																						
Arsenic	mg/L	0.01 (A)	0.01	NLV	4.3	0.020	0.018	0.026	0.032	0.020	0.019	0.011	0.010	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Barium	mg/L	2 (A)	0.67 (G,X)	NLV	14000	0.081	0.083	--	--	--	--	--	--	0.094	0.135	--	--	--	--	--	--	
Lead (Total)	mg/L	0.004 (L)	0.014 (G,X)	NLV	ID	<0.003	<0.003	<0.003	0.004	<0.003	<0.003	0.007	0.008	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	
Silver	mg/L	0.034	0.0002 (M); 0.00006	NLV	1.50E+06	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	
SVOCs																						
Dimethyl phthalate	µg/L	210,000	NA	NLV	4.2E+06 (S)	--	8*	--	--	--	--	--	--	<5	<5	--	--	--	--	--	--	
VOCs																						
Bromodichloromethane	µg/L	80 (A,W)	ID	37,000	14,000	--	<1	--	--	--	--	--	--	<1	<1	--	--	--	--	--	--	
Chloroform	µg/L	80 (A,W)	350	1.80E+05	1.50E+05	--	<1	--	--	--	--	--	--	<1	<1	--	--	--	--	--	--	
1,1-Dichloroethane	µg/L	2,500	740	2.30E+06	2.40E+06	--	<1	--	--	--	--	--	--	6	<1	--	--	--	--	--	--	

Notes:

Exceeds residential drinking water criteria or both GSI and drinking water criteria

Exceeds GSI protection criteria only

* Compound also found in associated method blank.

(A) Criterion is the state of Michigan drinking water standard.

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water

(S) Criterion defaults to the hazardous substance-specific water solubility limit.

(L) Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(10) of the NREPA, and are not calculated using the algorithms and assumptions specified in pathway-specific rules.

(W) Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan drinking water standard of 80 µg/L.

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source.

(NLV) Means hazardous substance is not likely to volatilize under most conditions.

(ID) Means insufficient data to develop criterion.

(--) Not analyzed.

Table 2
Summary of Detected Groundwater Analytical Results
RACER Trust
Grand Blanc, Michigan

Parameter		MDEQ Criteria				MW-5	MW-6	MW-7										MW-8			
		Residential Drinking Water Criteria & RBSLs	Groundwater Surface Water Interface Criteria & RBSLs	Non-Residential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Groundwater Contact Criteria & RBSLs			(CO-LOCATED)												(DUP-1)	
								29-Jun-12	2-Jul-12	28-Jun-12		28-Jun-12		27-Sep-12		19-Dec-12		14-Mar-13		2-Jul-12	
		Total	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Total	Total		
Metals																					
Arsenic	mg/L	0.01 (A)	0.01	NLV	4.3	<0.002	<0.002	0.023	0.024	0.024	0.029	0.030	0.028	0.010	0.010	0.005	0.011	<0.002	<0.002		
Barium	mg/L	2 (A)	0.67 (G,X)	NLV	14000	0.054	0.046	0.090	0.092	0.090	0.112	--	--	--	--	--	--	0.105	0.111		
Lead (Total)	mg/L	0.004 (L)	0.014 (G,X)	NLV	ID	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.009	0.020	<0.003	<0.003		
Silver	mg/L	0.034	0.0002 (M); 0.00006	NLV	1.50E+06	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005		
SVOCs																					
Dimethyl phthalate	µg/L	210,000	NA	NLV	4.2E+06 (S)	8*	<5	--	<5	--	<5	--	--	--	--	--	--	8*	10*		
VOCs																					
Bromodichloromethane	µg/L	80 (A,W)	ID	37,000	14,000	<1	<1	--	<1	--	<1	--	--	--	--	--	--	<1	<1		
Chloroform	µg/L	80 (A,W)	350	1.80E+05	1.50E+05	<1	<1	--	<1	--	<1	--	--	--	--	--	--	<1	<1		
1,1-Dichloroethane	µg/L	2,500	740	2.30E+06	2.40E+06	<1	<1	--	<1	--	<1	--	--	--	--	--	--	<1	<1		

Notes:

Exceeds residential drinking water criteria or both GSI and drinking water criteria

Exceeds GSI protection criteria only

* Compound also found in associated method blank.

(A) Criterion is the state of Michigan drinking water standard.

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water

(S) Criterion defaults to the hazardous substance-specific water solubility limit.

(L) Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(10) of the NREPA, and are not calculated using the algorithms and assumptions specified in pathway-specific rules.

(W) Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan drinking water standard of 80 µg/L.

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source.

(NLV) Means hazardous substance is not likely to volatilize under most conditions.

(ID) Means insufficient data to develop criterion.

(--) Not analyzed.

Table 2
Summary of Detected Groundwater Analytical Results
RACER Trust
Grand Blanc, Michigan

Parameter		MDEQ Criteria				MW-9													
		Residential Drinking Water Criteria & RBSLs	Groundwater Surface Water Interface Criteria & RBSLs	Non-Residential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Groundwater Contact Criteria & RBSLs														
								(DUP-1)				(DUP-1)				(CO-LOCATED)			
						27-Jun-12		27-Sep-12		27-Sep-12		19-Dec-12		19-Dec-12		14-Mar-13		14-Mar-13	
						Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total
Metals																			
Arsenic	mg/L	0.01 (A)	0.01	NLV	4.3	<0.002	0.002	0.003	0.004	0.003	0.003	0.003	0.003	0.003	0.003	<0.002	0.006	<0.002	0.007
Barium	mg/L	2 (A)	0.67 (G,X)	NLV	14000	0.076	0.086	--	--	--	--	--	--	--	--	--	--	--	--
Lead (Total)	mg/L	0.004 (L)	0.014 (G,X)	NLV	ID	0.004	0.006	<0.003	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.011	0.018	0.012	0.021
Silver	mg/L	0.034	0.0002 (M); 0.00006	NLV	1.50E+06	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	0.0003	<0.0002	<0.0002
SVOCs																			
Dimethyl phthalate	µg/L	210,000	NA	NLV	4.2E+06 (S)	--	<5	--	--	--	--	--	--	--	--	--	--	--	--
VOCs																			
Bromodichloromethane	µg/L	80 (A,W)	ID	37,000	14,000	--	<1	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	µg/L	80 (A,W)	350	1.80E+05	1.50E+05	--	<1	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	2,500	740	2.30E+06	2.40E+06	--	<1	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

Exceeds residential drinking water criteria or both GSI and drinking water criteria

Exceeds GSI protection criteria only

* Compound also found in associated method blank.

(A) Criterion is the state of Michigan drinking water standard.

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water

(S) Criterion defaults to the hazardous substance-specific water solubility limit.

(L) Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(10) of the NREPA, and are not calculated using the algorithms and assumptions specified in pathway-specific rules.

(W) Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan drinking water standard of 80 µg/L.

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source.

(NLV) Means hazardous substance is not likely to volatilize under most conditions.

(ID) Means insufficient data to develop criterion.

(--) Not analyzed.

Table 2
Summary of Detected Groundwater Analytical Results
RACER Trust
Grand Blanc, Michigan

Parameter		MDEQ Criteria				EB-1	EB-1	EB-1	EB-1	FB-1	FB-1	FB-1	FB-1	TB-1	TB-2	TB-3
		Residential Drinking Water Criteria & RBSLs	Groundwater Surface Water Interface Criteria & RBSLs	Non-Residential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Groundwater Contact Criteria & RBSLs	(Equip Blank)	(Equip Blank)	(Equip Blank)	(Equip Blank)	(Field Blank)	(Field Blank)	(Field Blank)	(Field Blank)	(Trip Blank)	(Trip Blank)	(Trip Blank)
						2-Jul-12	27-Sep-12	19-Dec-12	14-Mar-13	2-Jul-12	27-Sep-12	19-Dec-12	14-Mar-13	28-Jun-12	29-Jun-12	2-Jul-12
						Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
Metals																
Arsenic	mg/L	0.01 (A)	0.01	NLV	4.3	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	--	--
Barium	mg/L	2 (A)	0.67 (G,X)	NLV	14000	<0.005	--	--	--	<0.005	--	--	--	--	--	--
Lead (Total)	mg/L	0.004 (L)	0.014 (G,X)	NLV	ID	<0.003	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	--	--	--
Silver	mg/L	0.034	0.0002 (M); 0.00006	NLV	1.50E+06	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	--	--	--
SVOCs																
Dimethyl phthalate	µg/L	210,000	NA	NLV	4.2E+06 (S)	<5	--	--	--	9*	--	--	--	--	--	--
VOCs																
Bromodichloromethane	µg/L	80 (A,W)	ID	37,000	14,000	2	--	--	--	<1	--	--	--	<1	<1	<1
Chloroform	µg/L	80 (A,W)	350	1.80E+05	1.50E+05	9	--	--	--	<1	--	--	--	<1	<1	5
1,1-Dichloroethane	µg/L	2,500	740	2.30E+06	2.40E+06	<1	--	--	--	<1	--	--	--	<1	<1	<1

Notes:

Exceeds residential drinking water criteria or both GSI and drinking water criteria

Exceeds GSI protection criteria only

* Compound also found in associated method blank.

(A) Criterion is the state of Michigan drinking water standard.

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water

(S) Criterion defaults to the hazardous substance-specific water solubility limit.

(L) Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(10) of the NREPA, and are not calculated using the algorithms and assumptions specified in pathway-specific rules.

(W) Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan drinking water standard of 80 µg/L.

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source.

(NLV) Means hazardous substance is not likely to volatilize under most conditions.

(ID) Means insufficient data to develop criterion.

(--) Not analyzed.

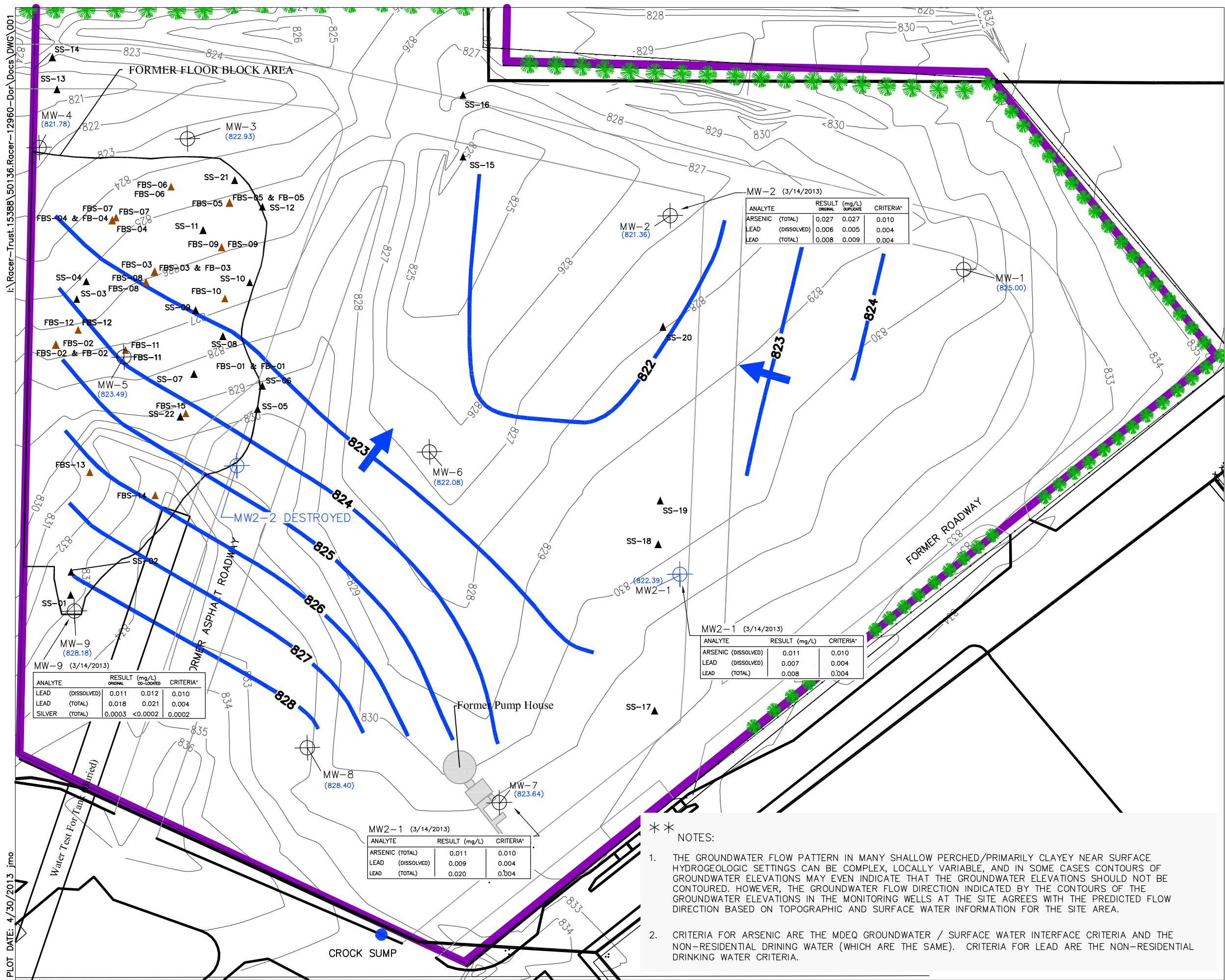


FIGURE 7



RACER TRUST
DORT HIGHWAY LAND
GRAND BLANC, MICHIGAN

GROUNDWATER CONTOUR
MAP (MAR 14, 2013)
WITH EXCEEDANCES



15388/50136.001
APRIL 2013



I:\Racer-Trust\15388\50136.Racer-12960-Dor\Docs\DWG\001

PLOT DATE: 4/30/2013 jmo



Analytical Laboratory Report

Report ID: S55756.01(01)
Generated on 03/22/2013

Report to

Attention: Clifford Yantz
O'Brien & Gere Engineers, Inc.
37000 Grand River Ave.
Suite 260
Farmington, MI 48335

Phone: 248-477-5701 FAX:
Email: Clifford.Yantz@obg.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S55756.01-S55756.10
Project: RACER Dort Hwy Land
Collected Date: 03/14/2013
Submitted Date/Time: 03/15/2013 14:15
Sampled by: Kevin Schneider
P.O. #: 11311199

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:

Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (10 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S55756.01	MW-9	Groundwater	03/14/2013 10:10
S55756.02	MW-9 Co-Located	Groundwater	03/14/2013 10:10
S55756.03	MW-7	Groundwater	03/14/2013 11:45
S55756.04	MW-2-1	Groundwater	03/14/2013 13:15
S55756.05	MW-2-1 MS	Groundwater	03/14/2013 13:15
S55756.06	MW-2-1 MSD	Groundwater	03/14/2013 13:15
S55756.07	MW-2	Groundwater	03/14/2013 15:40
S55756.08	FB-1	Quality Control	03/14/2013 15:50
S55756.09	EB-1	Quality Control	03/14/2013 16:15
S55756.10	DUP-1	Groundwater	03/14/2013 00:01



Analytical Laboratory Report

Lab Sample ID: S55756.01

Sample Tag: MW-9

Collected Date/Time: 03/14/2013 10:10

Matrix: Groundwater

COC Reference: 79611

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

Extraction / Prep.

Metal Digestion Completed 3015A 03/22/13 01:00 SLR

Metal Digestion Completed 3015A 03/22/13 01:00 SLR

Metals

Arsenic, Dissolved Not detected mg/L 0.002 E200.8 03/22/13 13:37 SLS 7440-38-2

Arsenic 0.006 mg/L 0.002 E200.8 03/22/13 13:34 SLS 7440-38-2

Lead, Dissolved 0.011 mg/L 0.003 E200.8 03/22/13 15:38 SLS 7439-92-1

Lead 0.018 mg/L 0.003 E200.8 03/22/13 15:36 SLS 7439-92-1

Selenium, Dissolved Not detected mg/L 0.005 E200.8 03/22/13 13:37 SLS 7782-49-2

Selenium Not detected mg/L 0.005 E200.8 03/22/13 13:34 SLS 7782-49-2

Silver, Dissolved Not detected mg/L 0.0002 E200.8 03/22/13 13:37 SLS 7440-22-4

Silver 0.0003 mg/L 0.0002 E200.8 03/22/13 13:34 SLS 7440-22-4



Analytical Laboratory Report

Lab Sample ID: S55756.02
Sample Tag: MW-9 Co-Located
Collected Date/Time: 03/14/2013 10:10
Matrix: Groundwater
COC Reference: 79611

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

Extraction / Prep.

Metal Digestion	Completed			3015A	03/22/13 01:00	SLR		
Metal Digestion	Completed			3015A	03/22/13 01:00	SLR		

Metals

Arsenic, Dissolved	Not detected	mg/L	0.002	E200.8	03/22/13 13:43	SLS	7440-38-2	
Arsenic	0.007	mg/L	0.002	E200.8	03/22/13 13:40	SLS	7440-38-2	
Lead, Dissolved	0.012	mg/L	0.003	E200.8	03/22/13 15:42	SLS	7439-92-1	
Lead	0.021	mg/L	0.003	E200.8	03/22/13 15:40	SLS	7439-92-1	
Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	03/22/13 13:43	SLS	7782-49-2	
Selenium	Not detected	mg/L	0.005	E200.8	03/22/13 13:40	SLS	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	E200.8	03/22/13 13:43	SLS	7440-22-4	
Silver	Not detected	mg/L	0.0002	E200.8	03/22/13 13:40	SLS	7440-22-4	



Analytical Laboratory Report

Lab Sample ID: S55756.03

Sample Tag: MW-7

Collected Date/Time: 03/14/2013 11:45

Matrix: Groundwater

COC Reference: 79611

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

Extraction / Prep.

Metal Digestion Completed 3015A 03/22/13 01:00 SLR

Metal Digestion Completed 3015A 03/22/13 01:00 SLR

Metals

Arsenic, Dissolved 0.005 mg/L 0.002 E200.8 03/22/13 13:49 SLS 7440-38-2

Arsenic 0.011 mg/L 0.002 E200.8 03/22/13 13:46 SLS 7440-38-2

Lead, Dissolved 0.009 mg/L 0.003 E200.8 03/22/13 15:46 SLS 7439-92-1

Lead 0.020 mg/L 0.003 E200.8 03/22/13 15:44 SLS 7439-92-1

Selenium, Dissolved Not detected mg/L 0.005 E200.8 03/22/13 13:49 SLS 7782-49-2

Selenium Not detected mg/L 0.005 E200.8 03/22/13 13:46 SLS 7782-49-2

Silver, Dissolved Not detected mg/L 0.0002 E200.8 03/22/13 13:49 SLS 7440-22-4

Silver Not detected mg/L 0.0002 E200.8 03/22/13 13:46 SLS 7440-22-4



Analytical Laboratory Report

Lab Sample ID: S55756.04

Sample Tag: MW-2-1

Collected Date/Time: 03/14/2013 13:15

Matrix: Groundwater

COC Reference: 79611

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

Extraction / Prep.

Metal Digestion	Completed			3015A	03/22/13 01:00	SLR		
-----------------	-----------	--	--	-------	----------------	-----	--	--

Metal Digestion	Completed			3015A	03/22/13 01:00	SLR		
-----------------	-----------	--	--	-------	----------------	-----	--	--

Metals

Arsenic, Dissolved	0.011	mg/L	0.002	E200.8	03/22/13 14:30	SLS	7440-38-2	
--------------------	-------	------	-------	--------	----------------	-----	-----------	--

Arsenic	0.010	mg/L	0.002	E200.8	03/22/13 13:52	SLS	7440-38-2	
---------	-------	------	-------	--------	----------------	-----	-----------	--

Lead, Dissolved	0.007	mg/L	0.003	E200.8	03/22/13 16:14	SLS	7439-92-1	
-----------------	-------	------	-------	--------	----------------	-----	-----------	--

Lead	0.008	mg/L	0.003	E200.8	03/22/13 15:48	SLS	7439-92-1	
------	-------	------	-------	--------	----------------	-----	-----------	--

Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	03/22/13 14:30	SLS	7782-49-2	
---------------------	--------------	------	-------	--------	----------------	-----	-----------	--

Selenium	Not detected	mg/L	0.005	E200.8	03/22/13 13:52	SLS	7782-49-2	
----------	--------------	------	-------	--------	----------------	-----	-----------	--

Silver, Dissolved	Not detected	mg/L	0.0002	E200.8	03/22/13 14:30	SLS	7440-22-4	
-------------------	--------------	------	--------	--------	----------------	-----	-----------	--

Silver	Not detected	mg/L	0.0002	E200.8	03/22/13 13:52	SLS	7440-22-4	
--------	--------------	------	--------	--------	----------------	-----	-----------	--



Analytical Laboratory Report

Lab Sample ID: S55756.05

Sample Tag: MW-2-1 MS

Collected Date/Time: 03/14/2013 13:15

Matrix: Groundwater

COC Reference: 79611

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

Extraction / Prep.

Metal Digestion	Completed			3015A	03/22/13 01:00	SLR		
-----------------	-----------	--	--	-------	----------------	-----	--	--

Metal Digestion	Completed			3015A	03/22/13 01:00	SLR		
-----------------	-----------	--	--	-------	----------------	-----	--	--

Metals

Arsenic, Dissolved	0.274	mg/L	0.002	E200.8	03/22/13 14:33	SLS	7440-38-2	
--------------------	-------	------	-------	--------	----------------	-----	-----------	--

Arsenic	0.278	mg/L	0.002	E200.8	03/22/13 13:55	SLS	7440-38-2	
---------	-------	------	-------	--------	----------------	-----	-----------	--

Lead, Dissolved	0.268	mg/L	0.003	E200.8	03/22/13 16:16	SLS	7439-92-1	
-----------------	-------	------	-------	--------	----------------	-----	-----------	--

Lead	0.264	mg/L	0.003	E200.8	03/22/13 15:50	SLS	7439-92-1	
------	-------	------	-------	--------	----------------	-----	-----------	--

Selenium, Dissolved	0.250	mg/L	0.005	E200.8	03/22/13 14:33	SLS	7782-49-2	
---------------------	-------	------	-------	--------	----------------	-----	-----------	--

Selenium	0.260	mg/L	0.005	E200.8	03/22/13 13:55	SLS	7782-49-2	
----------	-------	------	-------	--------	----------------	-----	-----------	--

Silver, Dissolved	0.2548	mg/L	0.0002	E200.8	03/22/13 14:33	SLS	7440-22-4	
-------------------	--------	------	--------	--------	----------------	-----	-----------	--

Silver	0.2563	mg/L	0.0002	E200.8	03/22/13 13:55	SLS	7440-22-4	
--------	--------	------	--------	--------	----------------	-----	-----------	--



Analytical Laboratory Report

Lab Sample ID: S55756.06
Sample Tag: MW-2-1 MSD
Collected Date/Time: 03/14/2013 13:15
Matrix: Groundwater
COC Reference: 79611

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

Extraction / Prep.

Metal Digestion	Completed			3015A	03/22/13 01:00	SLR		
Metal Digestion	Completed			3015A	03/22/13 01:00	SLR		

Metals

Arsenic, Dissolved	0.275	mg/L	0.002	E200.8	03/22/13 14:36	SLS	7440-38-2	
Arsenic	0.277	mg/L	0.002	E200.8	03/22/13 13:59	SLS	7440-38-2	
Lead, Dissolved	0.267	mg/L	0.003	E200.8	03/22/13 16:18	SLS	7439-92-1	
Lead	0.264	mg/L	0.003	E200.8	03/22/13 15:52	SLS	7439-92-1	
Selenium, Dissolved	0.270	mg/L	0.005	E200.8	03/22/13 14:36	SLS	7782-49-2	
Selenium	0.261	mg/L	0.005	E200.8	03/22/13 13:59	SLS	7782-49-2	
Silver, Dissolved	0.2552	mg/L	0.0002	E200.8	03/22/13 14:36	SLS	7440-22-4	
Silver	0.2573	mg/L	0.0002	E200.8	03/22/13 13:59	SLS	7440-22-4	



Analytical Laboratory Report

Lab Sample ID: S55756.07

Sample Tag: MW-2

Collected Date/Time: 03/14/2013 15:40

Matrix: Groundwater

COC Reference: 79611

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

Extraction / Prep.

Metal Digestion Completed 3015A 03/22/13 01:00 SLR

Metal Digestion Completed 3015A 03/22/13 01:00 SLR

Metals

Arsenic, Dissolved 0.009 mg/L 0.002 E200.8 03/22/13 14:20 SLS 7440-38-2

Arsenic 0.027 mg/L 0.002 E200.8 03/22/13 14:17 SLS 7440-38-2

Lead, Dissolved 0.006 mg/L 0.003 E200.8 03/22/13 16:08 SLS 7439-92-1

Lead 0.005 mg/L 0.003 E200.8 03/22/13 16:06 SLS 7439-92-1

Selenium, Dissolved Not detected mg/L 0.005 E200.8 03/22/13 14:20 SLS 7782-49-2

Selenium Not detected mg/L 0.005 E200.8 03/22/13 14:17 SLS 7782-49-2

Silver, Dissolved Not detected mg/L 0.0002 E200.8 03/22/13 14:20 SLS 7440-22-4

Silver Not detected mg/L 0.0002 E200.8 03/22/13 14:17 SLS 7440-22-4



Analytical Laboratory Report

Lab Sample ID: S55756.08

Sample Tag: FB-1

Collected Date/Time: 03/14/2013 15:50

Matrix: Quality Control

COC Reference: 79611

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

Extraction / Prep.

Metal Digestion	Completed			3015A	03/22/13 01:00	SLR		
-----------------	-----------	--	--	-------	----------------	-----	--	--

Metals

Arsenic	Not detected	mg/L	0.002	E200.8	03/22/13 14:08	SLS	7440-38-2	
Lead	Not detected	mg/L	0.003	E200.8	03/22/13 16:02	SLS	7439-92-1	
Selenium	Not detected	mg/L	0.005	E200.8	03/22/13 14:08	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0002	E200.8	03/22/13 14:08	SLS	7440-22-4	



Analytical Laboratory Report

Lab Sample ID: S55756.09

Sample Tag: EB-1

Collected Date/Time: 03/14/2013 16:15

Matrix: Quality Control

COC Reference: 79611

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

Extraction / Prep.

Metal Digestion	Completed			3015A	03/22/13 01:00	SLR		
-----------------	-----------	--	--	-------	----------------	-----	--	--

Metals

Arsenic	Not detected	mg/L	0.002	E200.8	03/22/13 14:11	SLS	7440-38-2	
Lead	Not detected	mg/L	0.003	E200.8	03/22/13 16:04	SLS	7439-92-1	
Selenium	Not detected	mg/L	0.005	E200.8	03/22/13 14:11	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0002	E200.8	03/22/13 14:11	SLS	7440-22-4	



Analytical Laboratory Report

Lab Sample ID: S55756.10
Sample Tag: DUP-1
Collected Date/Time: 03/14/2013 00:01
Matrix: Groundwater
COC Reference: 79611

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

Extraction / Prep.

Metal Digestion	Completed			3015A	03/22/13 01:00	SLR		
Metal Digestion	Completed			3015A	03/22/13 01:00	SLR		

Metals

Arsenic, Dissolved	0.010	mg/L	0.002	E200.8	03/22/13 14:27	SLS	7440-38-2	
Arsenic	0.027	mg/L	0.002	E200.8	03/22/13 14:23	SLS	7440-38-2	
Lead, Dissolved	0.008	mg/L	0.003	E200.8	03/22/13 16:12	SLS	7439-92-1	
Lead	0.009	mg/L	0.003	E200.8	03/22/13 16:10	SLS	7439-92-1	
Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	03/22/13 14:27	SLS	7782-49-2	
Selenium	Not detected	mg/L	0.005	E200.8	03/22/13 14:23	SLS	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	E200.8	03/22/13 14:27	SLS	7440-22-4	
Silver	Not detected	mg/L	0.0002	E200.8	03/22/13 14:23	SLS	7440-22-4	

Merit

Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823

Phone (517) 332-0167 Fax (517) 332-4034

www.meritlabs.com

C.O.C. PAGE # 1 OF 1

79611

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Clifford Yantz			
COMPANY O'Brien & Gere			
ADDRESS 37000 Grand River			
CITY Farmington Hills	STATE MI	ZIP CODE 48335	
PHONE NO. 248-477-5701	FAX NO. 248-477-5962	P.O. NO. 11311200	
E-MAIL ADDRESS Clifford.Yantz@obg.com		QUOTE NO.	

CONTACT NAME X SAME	
COMPANY	
ADDRESS	
CITY	STATE ZIP CODE
PHONE NO.	E-MAIL ADDRESS

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME RACER Dirt Hwy Land	SAMPLER(S) - PLEASE PRINT/SIGN NAME Kevin Schneider X SK
TURNAROUND TIME REQUIRED <input type="checkbox"/> 1 DAY <input type="checkbox"/> 2 DAYS <input type="checkbox"/> 3 DAYS <input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> OTHER	
DELIVERABLES REQUIRED <input type="checkbox"/> STD <input type="checkbox"/> LEVEL II <input checked="" type="checkbox"/> LEVEL III <input type="checkbox"/> LEVEL IV <input type="checkbox"/> EDD <input type="checkbox"/> OTHER	

MATRIX CODE:	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER DW=DRINKING WATER	S=SOIL O=OIL	L=LIQUID WP=WIFE	SD=SOLID A=AIR	W=WASTE
--------------	-----------------------------	------------------------------------	-----------------	---------------------	-------------------	---------

MERIT LAB NO. FOR LAB USE ONLY	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	Arsenic Silver (D)	Arsenic Silver (D)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
--------------------------------------	------	--	--	--------	-----------------	------	-----	------------------	--------------------------------	------	------	-------	--------------------------	--------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

RELINQUISHED BY: SIGNATURE/ORGANIZATION	X SK	386	X Sampler	DATE 3/15/13	TIME 12-
RECEIVED BY: SIGNATURE/ORGANIZATION	Ma			DATE 3-15-13	TIME 12-
RELINQUISHED BY: SIGNATURE/ORGANIZATION				DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION				DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	JW Mont	DATE 3-15-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Talbot Faust	DATE 3-15-13	TIME 1465
SEAL NO.	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	INITIALS	NOTES:
SEAL NO.	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	INITIALS	TEMP. ON ARRIVAL 48

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



Analytical Laboratory Report

Report ID: S56059.01(01)
Generated on 04/26/2013

Report to

Attention: Clifford Yantz
O'Brien & Gere Engineers, Inc.
37000 Grand River Ave.
Suite 260
Farmington, MI 48335

Phone: 248-477-5701 FAX:
Email: Clifford.Yantz@obg.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S56059.01
Project: RACER Dort Hwy Land
Collected Date: 04/10/2013
Submitted Date/Time: 04/12/2013 12:00
Sampled by: Kevin Schneider
P.O. #: 11311200

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:

Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56059.01	MW-4	Groundwater	04/10/2013 11:25



Analytical Laboratory Report

Lab Sample ID: S56059.01

Sample Tag: MW-4

Collected Date/Time: 04/10/2013 11:25

Matrix: Groundwater

COC Reference: 041190

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

Extraction / Prep.

Metal Digestion Completed 3015A 04/26/13 10:00 PER

Metal Digestion Completed 3015A 04/26/13 10:00 PER

Metals

Arsenic, Dissolved Not detected mg/L 0.002 E200.8 04/26/13 14:00 PER 7440-38-2

Arsenic Not detected mg/L 0.002 E200.8 04/26/13 13:56 PER 7440-38-2

Lead, Dissolved Not detected mg/L 0.003 E200.8 04/26/13 14:00 PER 7439-92-1

Lead Not detected mg/L 0.003 E200.8 04/26/13 13:56 PER 7439-92-1

Selenium, Dissolved Not detected mg/L 0.005 E200.8 04/26/13 14:00 PER 7782-49-2

Selenium Not detected mg/L 0.005 E200.8 04/26/13 13:56 PER 7782-49-2

Silver, Dissolved Not detected mg/L 0.0005 E200.8 04/26/13 14:00 PER 7440-22-4

Silver Not detected mg/L 0.0005 E200.8 04/26/13 13:56 PER 7440-22-4



www.meritlabs.com

O

INVOICE TO

CHAIN OF CUSTODY RECORD

CONTACT NAME				Clifford Yantz			
COMPANY				O'Brien & Gere			
ADDRESS				37000 Grand River			
CITY			STATE		ZIP CODE		
Farmington Hills			MI		48335		
PHONE NO.		FAX NO.		P.O. NO.			
248-477-5701		248-477-5962		11311200			
E-MAIL ADDRESS				QUOTE NO.			
clifford.yantz@obg.com							

CONTACT NAME		<input checked="" type="checkbox"/> SAME	
COMPANY			
ADDRESS			
CITY		STATE	ZIP CODE
PHONE NO.	FAX NO.	P.O. NO.	

ANALYSIS (ATTACH LIST IF MORE SPACE REQUIRED)

[illegible]

RELINQUISHED BY: SIGNATURE/ORGANIZATION	<i>[Signature]</i> 513 Ben & Gump	DATE 4/12/13	TIME 1030
RECEIVED BY: SIGNATURE/ORGANIZATION	<i>[Signature]</i> Men	DATE 4-13	TIME 1030
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		<i>Shy Mont</i>		DATE 4-12-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		<i>Tahira Faust</i>		DATE 4-12-13	TIME 1200
SEAL NO.	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	INITIALS	NOTES:	TEMP. ON ARRIVAL	46
SEAL NO.	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	INITIALS			

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE