Dave Favero

From: Horch, Christine <CHorch@haleyaldrich.com>
Sent: Tuesday, September 9, 2014 11:24 AM
To: Ronda Blayer (DEQ) (BLAYERR@michigan.gov)
Cc: MCCABEJ@michigan.gov; CarnagieM@michigan.gov; Dave Favero; Hoertt, Susan
Subject: RACER Romulus: Status Update/Preliminary Results
Attachments: Binder1.pdf; RPT.COC.S62577.01(01)_RACER_ROMULUS.PDF

Rhonda,

This correspondence provides a summary of results collected during the recent monitoring activities conducted at the RACER Romulus Engineering Center (the Site). The scope of work, approved by MDEQ via email on August 21, 2014, was conducted in accordance with procedures presented in the Field Sampling Plan and QAPP for the Site (Haley & Aldrich, September 24, 2012, approved by MDEQ in correspondence to RACER dated November 15, 2012).

Groundwater elevations were collected on Tuesday, September 2, 2014 from each of the temporary wells on-site. The elevations are posted in the attached table and the draft potentiometric surface contours are provided in "Binder1.pdf".

- Consistent with other recent elevation events, observed groundwater flow conditions show that groundwater at the Site is flowing toward the northeast.

Groundwater samples were collected on Tuesday and Wednesday September 2 and 3, 2014 from temporary wells 01-107 and 03-116 and the following down-gradient wells: 01-101, 01-104, 01-105, and 02-109. Samples were analyzed for total and dissolved copper and selenium using laboratory method E 200.8. The laboratory analytical data is provided in the attached lab PDF. Following is a preliminary review of the raw (not yet validated by Haley & Aldrich) data:

- Analytical results are considered draft until the data is validated in accordance with procedures outlined in the site FSP and QAPP.
- Analytical results for all four downgradient wells are below all screening criteria, including groundwater-surface water interface (GSI) screening criteria.
- Analytical results observed at well TW-01-107 are also below all screening criteria.
- Total and dissolved copper observed at well TW-03-116 are non-detect and below all screening criteria.
- Low levels of total and dissolved selenium observed at well TW-03-116 exceed the GSI criteria. However, this location is separated from the nearest point of exposure by distance and several wells in which selenium does not exceed criteria.

Low levels of copper and selenium do not extend downgradient, as such these results continue to demonstrate plume stability as considered by the CA750.

The RFI will be updated for submittal. Please let us know if you wish to discuss these results in the meantime.

Thank you.

Christine Horch, P.G.
Senior Hydrogeologist | Project Manager

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+1 937.620.7142 Cellular
+1 937.530.1456 Fax
CHorch@HaleyAldrich.com

From: Blayer, Ronda (DEQ) [mailto:BLAYERR@michigan.gov]
Sent: Thursday, August 21, 2014 9:51 AM
To: Hoertt, Susan
Cc: McCabe, John (DEQ); Carnagie, Mary (DEQ); David Favero (dfavero@racertrust.org); Horch, Christine; Blayer, Ronda (DEQ)
Subject: RE: RACER Romulus Site (MID000809905) - Proposed Additional GW Sampling

Good Morning Susan,
Your e-mail accurately summarizes our discussions during the conference call on August 19, 2014. We are in agreement with your approach for the purposes of looking at the environmental indicator CA750. Please plan to proceed as discussed and let us know the actual dates as they become available.

Please contact Mary Carnagie (517-284-6557 or CarnagieM@michigan.gov) or myself if you have further questions. Thank you.

Regards,
Ronda

From: Hoertt, Susan [mailto:SHoertt@haleyaldrich.com]
Sent: Wednesday, August 20, 2014 10:43 AM
To: Blayer, Ronda (DEQ)
Cc: McCabe, John (DEQ); Carnagie, Mary (DEQ); David Favero (dfavero@racertrust.org); Horch, Christine
Subject: RACER Romulus Site (MID000809905) - Proposed Additional GW Sampling

Ronda,
This correspondence is to summarize the discussion held by RACER Trust (Dave Favero), Haley & Aldrich (Susan Hoertt and Christine Horch), and MDEQ (Ronda Blayer, Mary Carnegie, and John McCabe) via conference call on August 19, 2014 regarding the RACER Romulus Engineering Center (the Site).

Groundwater elevation data collected since January 2013 (in July 2013, October 2013, April 2014, and July 2014) shows that groundwater at the Site is flowing toward the northeast.

Analytical results for groundwater samples collected from temporary wells 01-107 and 03-116 in January/February 2013 identified low levels of copper and/or selenium detections above groundwater-surface water interface (GSI) screening criteria; however, sitewide groundwater analytical results for copper and selenium show that the down-gradient extents were defined below criteria.

To confirm groundwater conditions at the Site, we propose to collect an additional round of groundwater samples from temporary wells 01-107 and 03-116 and the following down-gradient wells: 01-101, 01-104, 01-105, and 02-109. Each sample collected from these 6 temporary wells will be analyzed for total and dissolved copper and selenium using laboratory method E 200.8. Sample collection and data evaluation for this additional sampling will be consistent with the Field Sampling Plan and QAPP for the Site (Haley & Aldrich, September 24, 2012, approved by MDEQ in correspondence to RACER dated November 15, 2012). Laboratory analysis of the groundwater samples will be expedited and the results shared with MDEQ.

Pursuant to your request, we will also collect static groundwater elevation measurements at each of the temporary wells located at the Site. This data will be provided to MDEQ as available in an updated groundwater elevation data table and a groundwater potentiometric surface contour.

We currently anticipate performing the groundwater elevation measurements on September 2, 2014 and groundwater sampling on September 3, 2014. We understand MDEQ may wish to split groundwater samples. We will inform MDEQ of the actual dates of sampling once the field work is scheduled. Meanwhile, please contact Dave Favero or me if you have any questions.

Thank you.

Susan Hoertt, R.S., CPEA
Senior Scientist|Client Leader

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SHoertt@HaleyAldrich.com

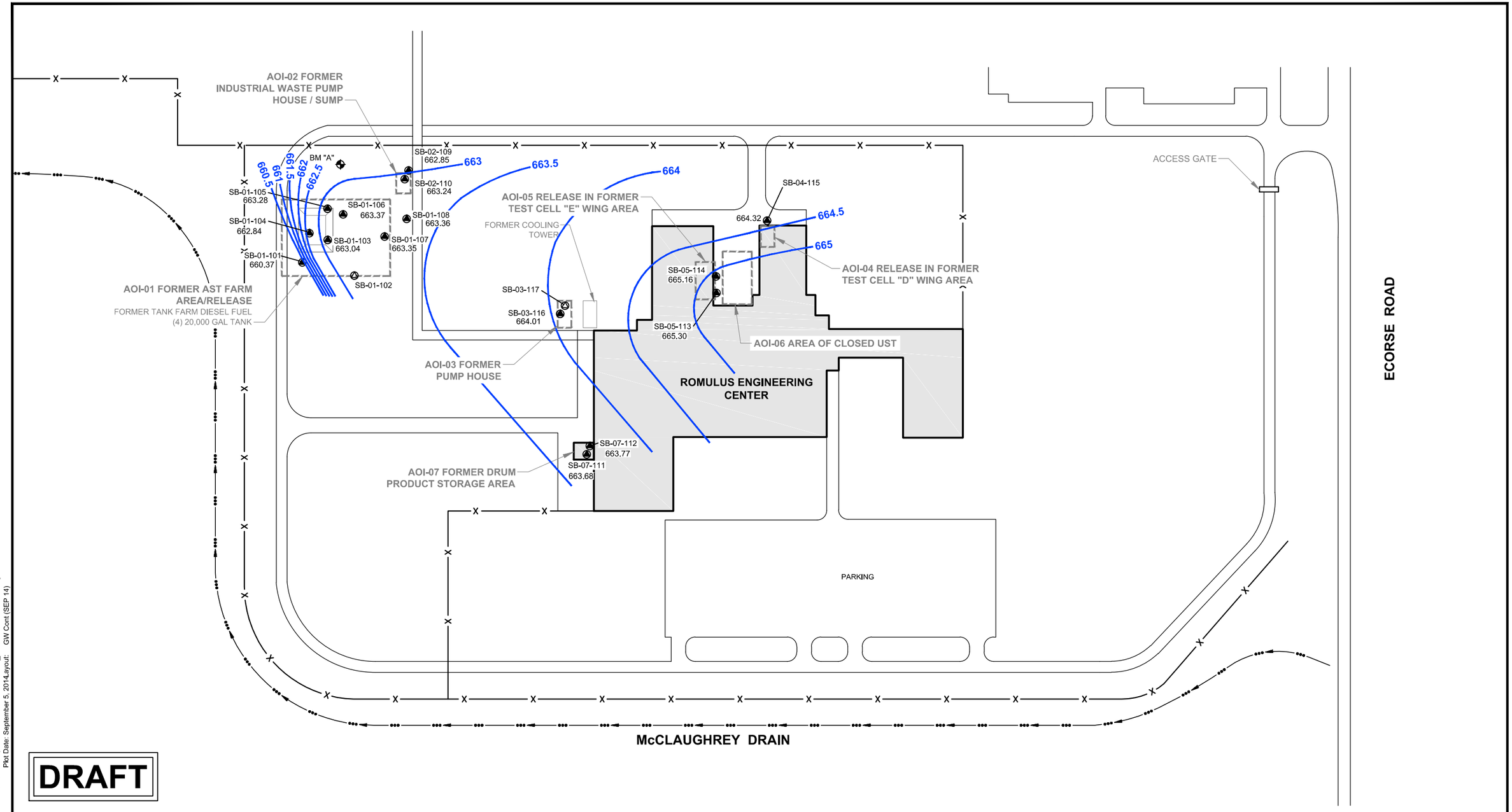
TABLE III (Updated 3 Sept 2014)
TEMPORARY MONITORING WELL INVENTORY AND COMPLETION SUMMARY
RACER FORMER ROMULUS ENGINEERING CENTER
ROMULUS, MICHIGAN

DRAFT

Well ID	AOI Location	Date Installed	Approximate Location		Ground Elevation (ft. AMSL)	Top of Riser Elevation (ft. AMSL)	Well Diameter (in.)	Depth of Well from ground surface (ft.)	Screened Interval (ft BGS)	Screen Elevation (ft. AMSL)
			Northing	Easting						
01-101	AOI-01	12/17/2012	277830.45	13382927.68	664.61	666.46	1.5	8	3-8	661.61 - 665.61
01-103	AOI-01	12/18/2012	277779.47	13382976.34	663.98	665.58	1.5	10	5-10	658.98 - 653.98
01-104	AOI-01	12/17/2012	277817.94	13382989.27	665.05	666.01	1.5	14	9-14	656.05 - 651.05
01-105	AOI-01	12/18/2012	277782.11	13383041.15	665.16	665.71	1.5	10	5-10	660.16 - 655.16
01-106	AOI-01	12/18/2012	277749.46	13383030.55	661.09	664.12	1.5	13	3-13	658.09 - 648.09
01-107	AOI-01	12/20/2012	277661.69	13382987.52	662.91	665.77	1.5	7	2-7	660.91 - 655.91
01-108	AOI-01	12/20/2012	277617.38	13383025.68	662.01	664.94	1.5	7	2-7	660.01 - 655.01
02-109	AOI-02	12/18/2012	277616.85	13383125.95	665.20	666.95	1.5	13	3-13	662.20 - 652.20
02-110	AOI-02	12/18/2012	277624.32	13383107.85	664.81	666.44	1.5	9	4-9	660.81 - 655.81
07-111	AOI-07	12/18/2012	277227.83	13382549.99	664.82	665.68	1.5	9	4-9	660.82 - 655.82
07-112	AOI-07	12/18/2012	277222.09	13382567.78	664.56	665.91	1.5	8.5	3.5-8.5	661.06 - 656.06
05-113	AOI-05	12/19/2012	276970.49	13382893.70	665.50	667.36	1.5	8	3-8	662.50 - 657.50
05-114	AOI-05	12/19/2012	276972.49	13382927.88	665.53	668.56	1.5	7	2-7	663.53 - 658.53
04-115	AOI-04	12/19/2012	276870.59	13383047.21	665.41	666.57	1.5	9	4-9	661.41 - 656.41
03-116	AOI-03	12/19/2012	277292.61	13382839.32	665.46	668.15	1.5	10	5-10	660.46 - 655.46

Date of GW Level Monitoring	1/30/2013			7/25/2013			10/3/2013			4/15/2014			7/17/2014			9/2/2014		
Well ID	Measured Depth to Bottom from TOR (ft.)	Depth to Water (ft. below TOR)	GW Elevation (ft. AMSL)	Measured Depth to Bottom from TOR (ft.)	Depth to Water (ft. below TOR)	GW Elevation (ft. AMSL)	Measured Depth to Bottom from TOR (ft.)	Depth to Water (ft. below TOR)	GW Elevation (ft. AMSL)	Measured Depth to Bottom from TOR (ft.)	Depth to Water (ft. below TOR)	GW Elevation (ft. AMSL)	Measured Depth to Bottom from TOR	Depth to Water (ft below TOR)	GW Elevation (ft. AMSL)	Measured Depth to Bottom from TOR	Depth to Water (ft below TOR)	GW Elevation (ft. AMSL)
01-101	10.03	3.27	663.19	NT	4.55	661.91	10.05	6.75	659.71	10.05	3.08	663.38	10.05	6.21	660.25	10.05	6.09	660.37
01-103	11.55	3.12	662.46	NT	2.20	663.38	11.60	3.23	662.35	11.60	1.93	663.65	11.60	2.63	662.95	11.60	2.54	663.04
01-104	15.03	3.43	662.58	NT	2.90	663.11	15.08	4.02	661.99	15.05	2.55	663.46	15.05	3.46	662.55	15.05	3.17	662.84
01-105	10.30	2.67	663.04	NT	2.40	663.31	10.05	2.72	662.99	10.04	2.34	663.37	10.04	2.61	663.10	10.04	2.43	663.28
01-106	NT	NT	NT	NT	1.41	662.71	16.65	0.95	663.17	16.60	0.68	663.44	16.60	0.83	663.29	16.60	0.75	663.37
01-107	10.03	3.02	662.75	NT	2.40	663.37	10.05	2.62	663.15	10.04	2.32	663.45	10.04	2.5	663.27	10.04	2.42	663.35
01-108	10.30	2.26	662.68	NT	1.55	663.39	10.03	1.76	663.18	10.00	1.48	663.46	10.00	1.66	663.28	10.00	1.58	663.36
02-109	15.03	3.95	663.00	NT	4.02	662.93	15.05	4.65	662.30	15.05	3.85	663.10	15.05	4.46	662.49	15.05	4.10	662.85
02-110	10.02	3.45	662.99	NT	3.18	663.26	10.05	3.48	662.96	10.03	3.15	663.29	10.03	3.39	663.05	10.03	3.20	663.24
07-111	10.03	1.65	664.03	NT	2.10	663.58	10.05	2.73	662.95	10.05	1.81	663.87	10.05	2.31	663.37	10.05	2.00	663.68
07-112	10.00	1.78	664.13	NT	2.26	663.65	10.07	2.91	663.00	10.05	1.95	663.96	10.05	2.48	663.43	10.05	2.14	663.77
05-113	NT	1.81	665.55	NT	2.30	665.06	10.05	2.91	664.45	10.03	2.03	665.33	10.03	2.53	664.83	10.03	2.06	665.30
05-114	10.02	3.06	665.50	NT	3.56	665.00	10.06	4.15	664.41	10.05	3.01	665.55	10.05	3.75	664.81	10.05	3.40	665.16
04-115	10.30	1.50	665.07	NT	2.50	664.07	10.07	3.94	662.63	10.05	1.95	664.62	10.05	3.21	663.36	10.05	2.25	664.32
03-116	12.55	3.61	664.54	NT	4.22	663.93	12.60	4.98	663.17	12.60	4.13	664.02	12.60	4.55	663.60	12.60	4.14	664.01

Notes:
AMSL = Above Mean Sea Level
AOI = Area of Interest
BGS = Below Ground Surface
ft. = Feet
GW = Groundwater
in. = Inches
NT = Not Taken
TOR = Top of Riser



DRAFT

LEGEND

- FENCE LINE
- McCLAUGHREY DRAIN
- TEMPORARY MONITORING WELL
- SOIL BORING
- BENCHMARK
- 664 — GROUNDWATER CONTOUR LINE
- 663.93 — GROUNDWATER ELEVATION

NOTES

1. BASE MAP DEVELOPED FROM SITE PLAN PROVIDED BY GM POWERTRAIN.
2. THE SITE IS COMPLETELY DEMOLISHED.
3. BENCHMARK "A" ELEVATION = 664.49 (NAVD88) A TOP RAILROAD SPIKE IN NW FACE OF 22 INCH OAK. LOCATED 200'± SOUTH AND 40'± WEST OF THE NE FENCE CORNER AT 37350 ECORSE ROAD.

N E S W

0 200 400

APPROXIMATE SCALE IN FEET

HALEY & ALDRICH

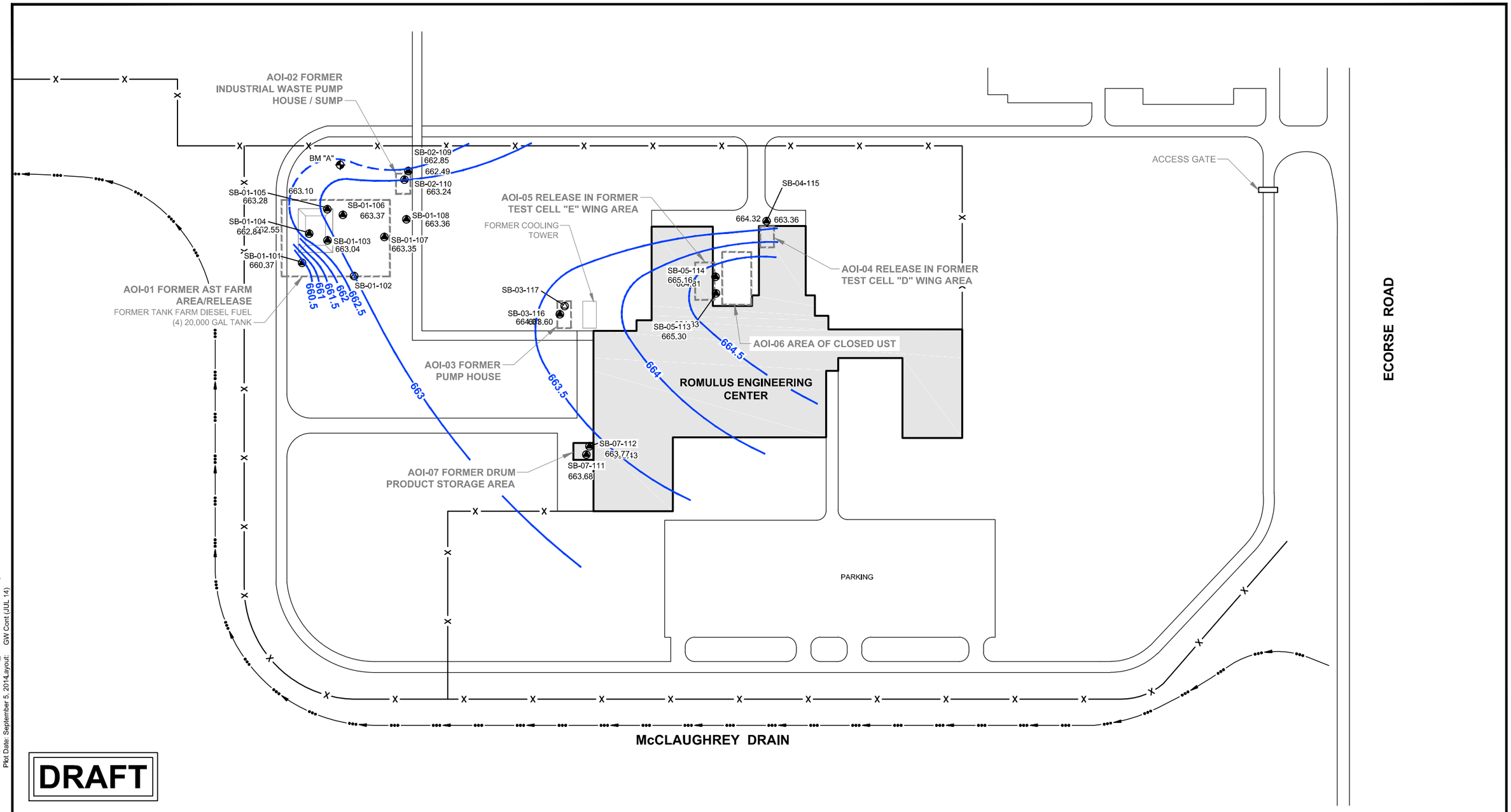
FORMER ROMULUS ENGINEERING CENTER
RACER SITE ID 1002
37350 ECORSE ROAD
ROMULUS, MICHIGAN

SHALLOW GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS SEPTEMBER 2, 2014

SCALE: AS SHOWN
SEPTEMBER 2014

FIGURE 1

Drawing Name: G:\37515-Romulus Engineering Center\005-RFI Implementation\CAD\37515-005_08 GW CNTRS 2014.dwg
Operator Name: ROWLAND, QUA
Plot Date: September 5, 2014,layout: GW Cont (SEP 14)



DRAFT

LEGEND

- FENCE LINE
- McCLAUGHREY DRAIN
- TEMPORARY MONITORING WELL
- SOIL BORING
- BENCHMARK
- 664 — GROUNDWATER CONTOUR LINE
- 663.93 GROUNDWATER ELEVATION

NOTES

1. BASE MAP DEVELOPED FROM SITE PLAN PROVIDED BY GM POWERTRAIN.
2. THE SITE IS COMPLETELY DEMOLISHED.
3. BENCHMARK "A" ELEVATION = 664.49 (NAVD88) A TOP RAILROAD SPIKE IN NW FACE OF 22 INCH OAK. LOCATED 200'± SOUTH AND 40'± WEST OF THE NE FENCE CORNER AT 37350 ECORSE ROAD.

N E S W

0 200 400

APPROXIMATE SCALE IN FEET

HALEY & ALDRICH

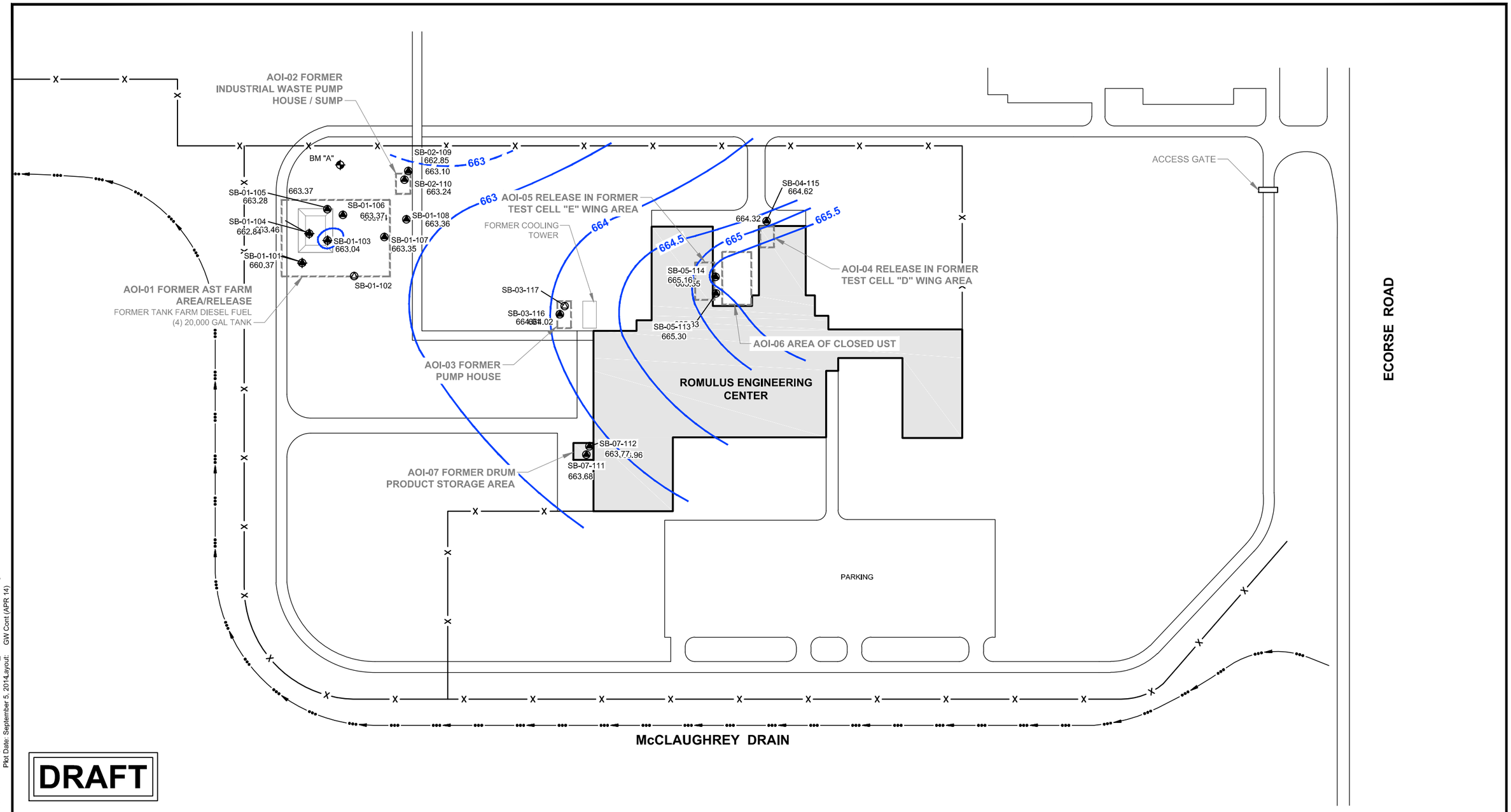
FORMER ROMULUS ENGINEERING CENTER
RACER SITE ID 1002
37350 ECORSE ROAD
ROMULUS, MICHIGAN

SHALLOW GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS JULY 17, 2014

SCALE: AS SHOWN
AUGUST 2014

FIGURE 2

Drawing Name: G:\37515-Romulus Engineering Center\005-RFI Implementation\CAD\37515-005_08 GW CNTRS 2014.dwg
Operator Name: ROWLAND, QUA
Plot Date: September 5, 2014,layout: GW Cont (JUL 14)



DRAFT

LEGEND

- FENCE LINE
- McCLAUGHREY DRAIN
- TEMPORARY MONITORING WELL
- SOIL BORING
- BENCHMARK
- 664 — GROUNDWATER CONTOUR LINE
- 663.93 — GROUNDWATER ELEVATION

NOTES

1. BASE MAP DEVELOPED FROM SITE PLAN PROVIDED BY GM POWERTRAIN.
2. THE SITE IS COMPLETELY DEMOLISHED.
3. BENCHMARK "A" ELEVATION = 664.49 (NAVD88) A TOP RAILROAD SPIKE IN NW FACE OF 22 INCH OAK. LOCATED 200'± SOUTH AND 40'± WEST OF THE NE FENCE CORNER AT 37350 ECORSE ROAD.

N E S W

0 200 400

APPROXIMATE SCALE IN FEET

HALEY & ALDRICH

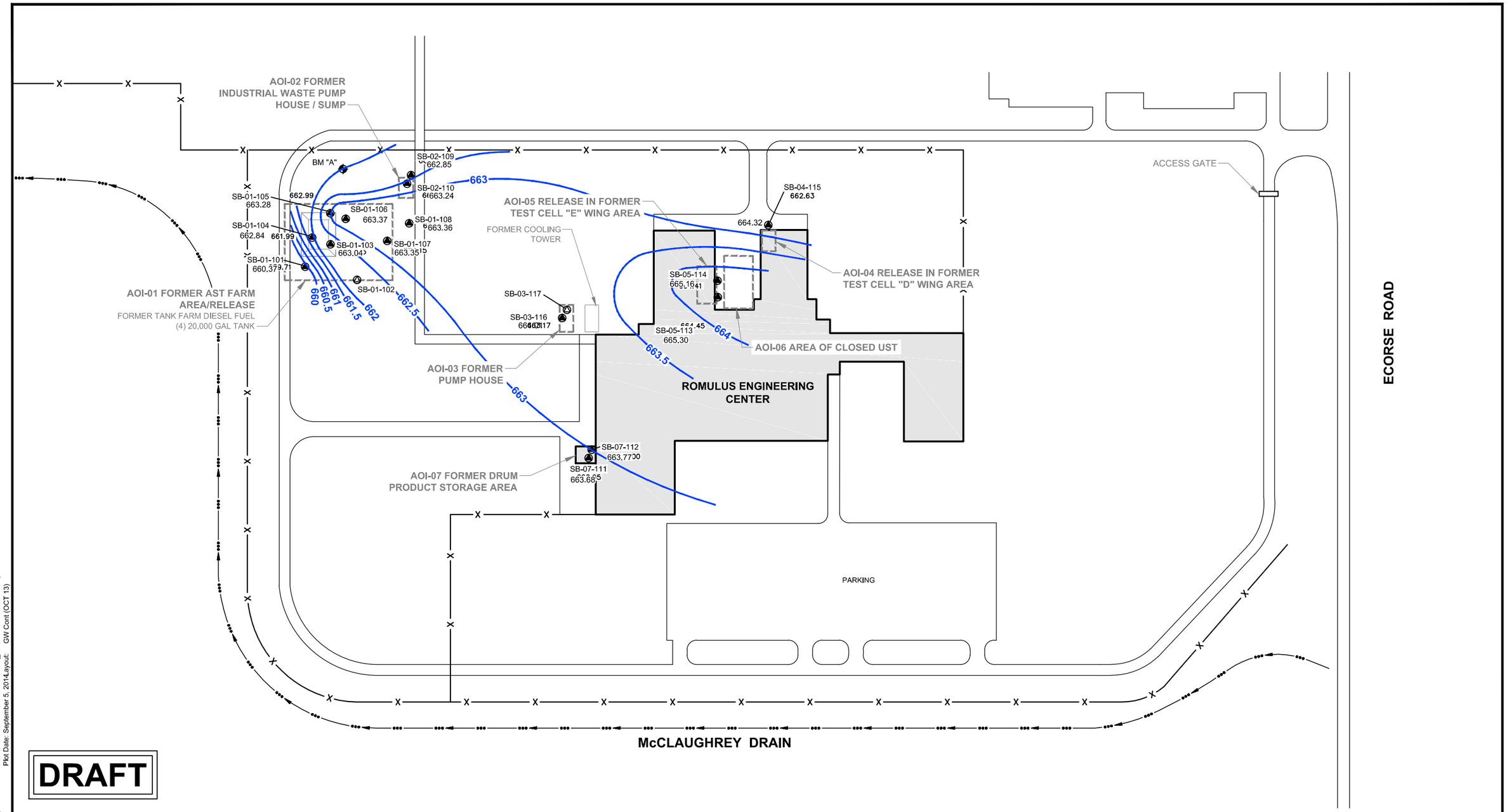
FORMER ROMULUS ENGINEERING CENTER
RACER SITE ID 1002
37350 ECORSE ROAD
ROMULUS, MICHIGAN

SHALLOW GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS APRIL 15, 2014

SCALE: AS SHOWN
AUGUST 2014

FIGURE 3

Drawing Name: G:\37515-Romulus Engineering Center\005-RFI Implementation\CAD\37515-005_08 GW CNTRS 2014.dwg
Operator Name: ROWLAND, QUA
Plot Date: September 5, 2014,layout: GW Cont (APR 14)



DRAFT

LEGEND

- FENCE LINE
- McCLAUGHREY DRAIN
- TEMPORARY MONITORING WELL
- SOIL BORING
- BENCHMARK
- 662.5 — GROUNDWATER CONTOUR LINE
- 662.95 — GROUNDWATER ELEVATION

NOTES

1. BASE MAP DEVELOPED FROM SITE PLAN PROVIDED BY GM POWERTRAIN.
2. THE SITE IS COMPLETELY DEMOLISHED.
3. BENCHMARK "A" ELEVATION = 664.49 (NAVD88) A TOP RAILROAD SPIKE IN NW FACE OF 22 INCH OAK. LOCATED 200'± SOUTH AND 40'± WEST OF THE NE FENCE CORNER AT 37350 ECORSE ROAD.

N E S W

0 200 400

APPROXIMATE SCALE IN FEET

HALEY & ALDRICH

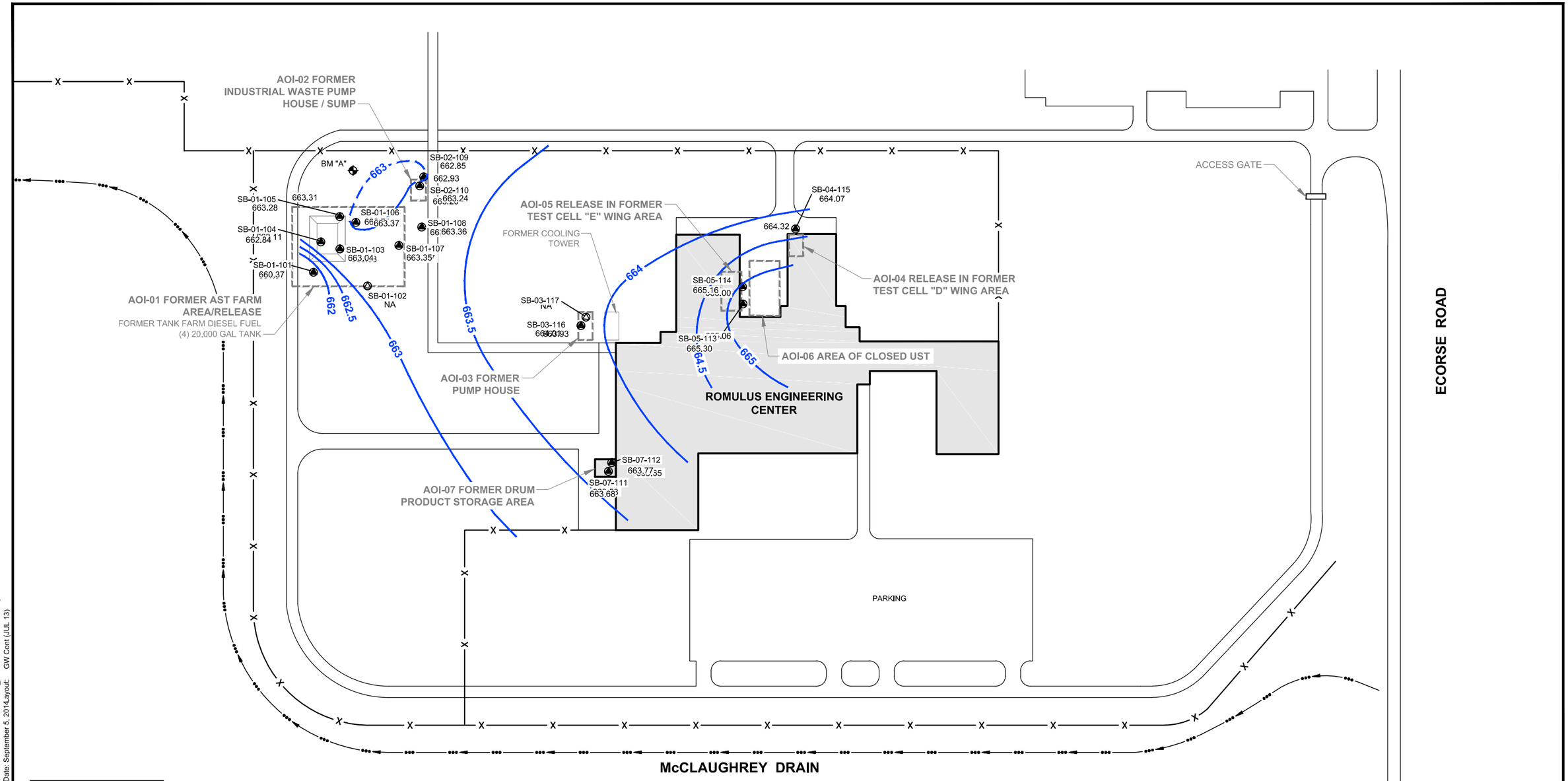
FORMER ROMULUS ENGINEERING CENTER
RACER SITE ID 1002
37350 ECORSE ROAD
ROMULUS, MICHIGAN

SHALLOW GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS OCTOBER 3, 2013

SCALE: AS SHOWN
AUGUST 2014

FIGURE 4

Drawing Name: G:\37515-Romulus Engineering Center\005-RFI Implementation\CAD\37515-005_08 GW CNTRS 2014.dwg
Operator Name: ROWLAND, QUA
Plot Date: September 5, 2014 Layout: GW Cont (OCT 13)



DRAFT

LEGEND

- FENCE LINE
- McCLAUGHREY DRAIN
- TEMPORARY MONITORING WELL
- SOIL BORING
- BENCHMARK
- 665 — GROUNDWATER CONTOUR LINE
- 665.07 GROUNDWATER ELEVATION

NOTES

1. BASE MAP DEVELOPED FROM SITE PLAN PROVIDED BY GM POWERTRAIN.
2. THE SITE IS COMPLETELY DEMOLISHED.
3. BENCHMARK "A" ELEVATION = 664.49 (NAVD88) A TOP RAILROAD SPIKE IN NW FACE OF 22 INCH OAK. LOCATED 200'± SOUTH AND 40'± WEST OF THE NE FENCE CORNER AT 37350 ECORSE ROAD.

N E S W

0 200 400

APPROXIMATE SCALE IN FEET

HALEY & ALDRICH

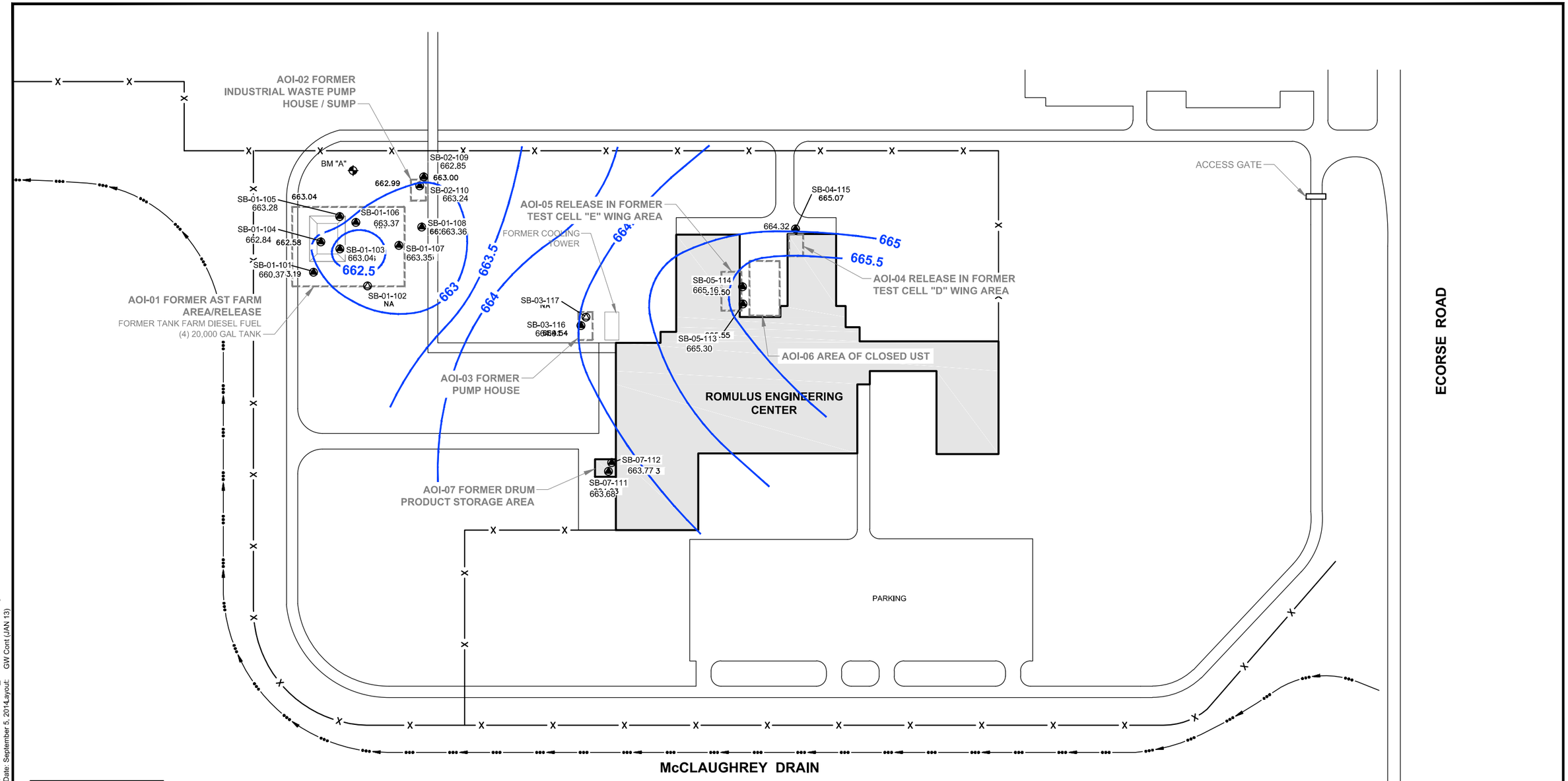
FORMER ROMULUS ENGINEERING CENTER
RACER SITE ID 1002
37350 ECORSE ROAD
ROMULUS, MICHIGAN

SHALLOW GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS JULY 25, 2013

SCALE: AS SHOWN
AUGUST 2014

FIGURE 5

Drawing Name: G:\37515-Romulus Engineering Center\005-RFI Implementation\CAD\37515-005_08 GW CNTRS 2014.dwg
Operator Name: ROWLAND, QUA
Plot Date: September 5, 2014,layout: GW Cont (JUL 13)



DRAFT

LEGEND

- FENCE LINE
- McCLAUGHREY DRAIN
- TEMPORARY MONITORING WELL
- SOIL BORING
- BENCHMARK
- 665 — GROUNDWATER CONTOUR LINE
- 665.07 — GROUNDWATER ELEVATION

NOTES

1. BASE MAP DEVELOPED FROM SITE PLAN PROVIDED BY GM POWERTRAIN.
2. THE SITE IS COMPLETELY DEMOLISHED.
3. BENCHMARK "A" ELEVATION = 664.49 (NAVD88) A TOP RAILROAD SPIKE IN NW FACE OF 22 INCH OAK. LOCATED 200'± SOUTH AND 40'± WEST OF THE NE FENCE CORNER AT 37350 ECORSE ROAD.

N E S W

0 200 400

APPROXIMATE SCALE IN FEET

HALEY & ALDRICH

FORMER ROMULUS ENGINEERING CENTER
RACER SITE ID 1002
37350 ECORSE ROAD
ROMULUS, MICHIGAN

SHALLOW GROUNDWATER POTENTIOMETRIC SURFACE CONTOURS JANUARY 30, 2013

SCALE: AS SHOWN
AUGUST 2014

FIGURE 6

Drawing Name: G:\37515-Romulus Engineering Center\005-RFI Implementation\CAD\37515-005_08 GW CNTRS 2014.dwg
Operator Name: ROWLAND, QUA
Plot Date: September 5, 2014 Layout: GW Cont (JAN 13)

Analytical Laboratory Report

Report ID: S62577.01(01)
Generated on 09/05/2014

Report to

Attention: Susan Hoertt
Haley & Aldrich, Inc.
8899 Gander Creek Dr.
Miamisburg, OH 45342

Phone: 937-384-9940 FAX: 937-384-9946
Email: SHoertt@haleyaldrich.com

Addtional Contacts: Christine Horch

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:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S62577.01-S62577.11
Project: RACER Romulus
Collected Date: 09/02/2014 - 09/03/2014
Submitted Date/Time: 09/04/2014 13:15
Sampled by: Eric Shirley
P.O. #: 37515-014

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.

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (11 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S62577.01	DUP-01(09-02-2014)	Groundwater Quality	09/02/2014 00:01
S62577.02	RB-01(09-02-2014)	Groundwater Quality	09/02/2014 00:02
S62577.03	TW116(09-02-2014)(1430)	Groundwater	09/02/2014 14:30
S62577.04	TW101(09-02-2014)(1600)	Groundwater	09/02/2014 16:00
S62577.05	TW104(09-02-2014)(1705)	Groundwater	09/02/2014 17:05
S62577.06	RB-02(09-03-2014)	Groundwater Quality	09/03/2014 00:01
S62577.07	TW105(09-03-2014)(0825)	Groundwater	09/03/2014 08:25
S62577.08	TW107(09-03-2014)(1000)	Groundwater	09/03/2014 10:00
S62577.09	TW109(09-03-2014)(1150)	Groundwater	09/03/2014 11:50
S62577.10	TW109(09-03-2014)(1150) MS	Groundwater	09/03/2014 11:50
S62577.11	TW109(09-03-2014)(1150) MSD	Groundwater	09/03/2014 11:50

Analytical Laboratory Report

Lab Sample ID: S62577.01
Sample Tag: DUP-01(09-02-2014)
Collected Date/Time: 09/02/2014 00:01
Matrix: Groundwater Quality
COC Reference: 86743

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metals								
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:35	JRH	7440-50-8	
Copper	0.005	mg/L	0.005	E200.8	09/05/14 10:57	JRH	7440-50-8	
Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:35	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	E200.8	09/05/14 10:57	JRH	7782-49-2	

Analytical Laboratory Report

Lab Sample ID: S62577.02
Sample Tag: RB-01(09-02-2014)
Collected Date/Time: 09/02/2014 00:02
Matrix: Groundwater Quality
COC Reference: 86743

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metals								
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:38	JRH	7440-50-8	
Copper	Not detected	mg/L	0.005	E200.8	09/05/14 10:59	JRH	7440-50-8	
Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:38	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	E200.8	09/05/14 10:59	JRH	7782-49-2	

Analytical Laboratory Report

Lab Sample ID: S62577.03
Sample Tag: TW116(09-02-2014)(1430)
Collected Date/Time: 09/02/2014 14:30
Matrix: Groundwater
COC Reference: 86743

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metals								
Copper, Dissolved	0.013	mg/L	0.005	E200.8	09/05/14 11:40	JRH	7440-50-8	
Copper	0.019	mg/L	0.005	E200.8	09/05/14 11:02	JRH	7440-50-8	
Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:40	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	E200.8	09/05/14 11:02	JRH	7782-49-2	

Analytical Laboratory Report

Lab Sample ID: S62577.04
Sample Tag: TW101(09-02-2014)(1600)
Collected Date/Time: 09/02/2014 16:00
Matrix: Groundwater
COC Reference: 86743

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metals								
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:43	JRH	7440-50-8	
Copper	0.007	mg/L	0.005	E200.8	09/05/14 11:04	JRH	7440-50-8	
Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:43	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	E200.8	09/05/14 11:04	JRH	7782-49-2	

Analytical Laboratory Report

Lab Sample ID: S62577.05
Sample Tag: TW104(09-02-2014)(1705)
Collected Date/Time: 09/02/2014 17:05
Matrix: Groundwater
COC Reference: 86743

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metals								
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:45	JRH	7440-50-8	
Copper	Not detected	mg/L	0.005	E200.8	09/05/14 11:07	JRH	7440-50-8	
Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:45	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	E200.8	09/05/14 11:07	JRH	7782-49-2	

Analytical Laboratory Report

Lab Sample ID: S62577.06
Sample Tag: RB-02(09-03-2014)
Collected Date/Time: 09/03/2014 00:01
Matrix: Groundwater Quality
COC Reference: 86743

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metals								
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:48	JRH	7440-50-8	
Copper	Not detected	mg/L	0.005	E200.8	09/05/14 11:09	JRH	7440-50-8	
Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:48	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	E200.8	09/05/14 11:09	JRH	7782-49-2	

Analytical Laboratory Report

Lab Sample ID: S62577.07
Sample Tag: TW105(09-03-2014)(0825)
Collected Date/Time: 09/03/2014 08:25
Matrix: Groundwater
COC Reference: 86743

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metals								
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:50	JRH	7440-50-8	
Copper	Not detected	mg/L	0.005	E200.8	09/05/14 11:12	JRH	7440-50-8	
Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:50	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	E200.8	09/05/14 11:12	JRH	7782-49-2	

Analytical Laboratory Report

Lab Sample ID: S62577.08
Sample Tag: TW107(09-03-2014)(1000)
Collected Date/Time: 09/03/2014 10:00
Matrix: Groundwater
COC Reference: 86743

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metals								
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:53	JRH	7440-50-8	
Copper	0.005	mg/L	0.005	E200.8	09/05/14 11:15	JRH	7440-50-8	
Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:53	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	E200.8	09/05/14 11:15	JRH	7782-49-2	

Analytical Laboratory Report

Lab Sample ID: S62577.09
Sample Tag: TW109(09-03-2014)(1150)
Collected Date/Time: 09/03/2014 11:50
Matrix: Groundwater
COC Reference: 86743

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metals								
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:56	JRH	7440-50-8	
Copper	Not detected	mg/L	0.005	E200.8	09/05/14 11:17	JRH	7440-50-8	
Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	09/05/14 11:56	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	E200.8	09/05/14 11:17	JRH	7782-49-2	

Analytical Laboratory Report

Lab Sample ID: S62577.10
Sample Tag: TW109(09-03-2014)(1150) MS
Collected Date/Time: 09/03/2014 11:50
Matrix: Groundwater
COC Reference: 86743

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metals								
Copper, Dissolved	0.251	mg/L	0.005	E200.8	09/05/14 11:58	JRH	7440-50-8	
Copper	0.248	mg/L	0.005	E200.8	09/05/14 11:20	JRH	7440-50-8	
Selenium, Dissolved	0.273	mg/L	0.005	E200.8	09/05/14 11:58	JRH	7782-49-2	
Selenium	0.271	mg/L	0.005	E200.8	09/05/14 11:20	JRH	7782-49-2	

Analytical Laboratory Report

Lab Sample ID: S62577.11
Sample Tag: TW109(09-03-2014)(1150) MSD
Collected Date/Time: 09/03/2014 11:50
Matrix: Groundwater
COC Reference: 86743

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metal Digestion	Completed			SW3015A	09/05/14 09:00	JRH		
Metals								
Copper, Dissolved	0.250	mg/L	0.005	E200.8	09/05/14 12:01	JRH	7440-50-8	
Copper	0.251	mg/L	0.005	E200.8	09/05/14 11:22	JRH	7440-50-8	
Selenium, Dissolved	0.272	mg/L	0.005	E200.8	09/05/14 12:01	JRH	7782-49-2	
Selenium	0.274	mg/L	0.005	E200.8	09/05/14 11:22	JRH	7782-49-2	

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C.O.C. PAGE # 1 OF 1

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CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Susan Hoertt
COMPANY: Haley & Aldrich
ADDRESS: 8899 Gander Creek Dr
CITY: Miamisburg | STATE: OH | ZIP CODE: 45342
PHONE NO.: 937-384-9940 | FAX NO.: 937-384-9946 | P.O. NO.: 37515-014
E-MAIL ADDRESS: Shoert@haleyaldrich.com/CKorch@haleyaldrich.com | QUOTE NO.:

INVOICE TO

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

PROJECT NO./NAME: RACER Romulus
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Eric Shirley

TURNAROUND TIME REQUIRED ☒ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

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

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Total Copper	Total Selenium	Dissolved Copper	Dissolved Selenium	Special Instructions
62577.01	9/2/14	0001	DUP-01 (09-02-2014)	GWQ	2			2					X	X	X	X	FD
.02	↓	0002	RB-01 (09-02-2014)	GWQ	2			2					X	X	X	X	RB
.03		1430	TW116 (09-02-2014) (1430)	GW	2			2					X	X	X	X	N
.04		1600	TW101 (09-02-2014) (1600)	GW	2			2					X	X	X	X	N
.05	↓	1705	TW104 (09-02-2014) (1705)	GW	2			2					X	X	X	X	N
.06	9/3/14	0001	RB-02 (09-03-2014)	GWQ	2			2					X	X	X	X	RB
.07	↓	0825	TW105 (09-03-2014) (0825)	GW	2			2					X	X	X	X	N
.08		1000	TW107 (09-03-2014) (1000)	GW	2			2					X	X	X	X	N
.09/.10/.11	↓	1150	TW109 (09-03-2014) (1150)	GW	6			6					X	X	X	X	MS/MSD + N

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler H&A	DATE 9/4/14	TIME 940
RECEIVED BY: SIGNATURE/ORGANIZATION	MEI	DATE 9.4.14	TIME 940
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	MEI	9.4.14 DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin Geauge	9/4/14 DATE	1315 TIME

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 4.7

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

Rev. 5.18.12