January 8, 2021 Reference No. 11208041

Mr. Zachary Sasnow
Corrective Action Project Manager
U.S. EPA, Region 5
77 West Jackson Boulevard DW-8J
Chicago, Illinois
60604 3590

Dear Mr. Sasnow:

Re: 2020 CA 750 Environmental Indicator Annual Monitoring Results and Additional Monitoring Results
EPA ID #MID 041 793 340
RACER Nodular Industrial Land – Saginaw, Michigan

This letter summarizes the CA 750 Environmental Indicator (EI) monitoring activities related to the Nodular Facility that is owned by RACER Properties, LLC, a wholly owned entity of Revitalizing Auto Communities Environmental Response (RACER) Trust in Saginaw, Michigan.

2020 CA 750 EI Monitoring

The annual CA 750 EI monitoring was completed between October 19 and 27, 2020 in accordance with the sampling program identified in the 2019 CA 750 EI Annual Monitoring Results letter dated January 17, 2020.

GHD (formerly CRA) submitted a memorandum that discussed ammonia in groundwater at the Site on April 6, 2015 for USEPA review and it was subsequently forwarded to MDEQ for review on April 8, 2015. Results submitted since submittal of that letter have been modified to incorporate evaluation of the toxic fraction of ammonia (unionized ammonia) consistent with the evaluation included in the memorandum.

Figure 1 presents databoxes for all RACER EI locations, as well as additional monitoring well data collected in the area of elevated pH and ammonia. The databoxes show data for the past 10 years including the 2020 EI results. All EI monitoring data is presented in Attachment A. As indicated on Figure 1:

Groundwater/Surface Water/EI Wells (MW-03945, MW-04051, MW-04250R, MW-04257, and MW-04757)

- Unionized ammonia was calculated for each monitoring well utilizing the pH and temperature of each individual monitoring well and averaged with the Saginaw River pH and temperature. The calculated unionized ammonia results were compared to the warmwater unionized ammonia acute toxicity criterion of (420 micrograms per liter [µg/L]), which was the criteria recommended in the mixing zone determination, dated January 12, 2010. The results were below applicable criteria and are summarized in Table 1.
- pH was reported above the lowest applicable screening criterion (the Nonresidential Drinking Water criterion of 8.5 S.U.) in one monitoring well, MW-04250R at 8.90 S.U.

GHD
455 Phillip Street Unit #100A Waterloo Ontario N2L 3X2 Canada
T 519 884 0510 **F** 519 884 0525 **W** www.ghd.com

Source Area Wells (MW-04438R, MW-04836R, MW-05036R, MW-8R, MW-04040, MW-04336, MW-05038, and MW-05443)

- Unionized ammonia was calculated for each monitoring well utilizing the pH and temperature of each individual monitoring well and averaged with the Saginaw River pH and temperature. The calculated unionized ammonia results were compared to the warmwater unionized ammonia acute toxicity criterion of (420 µg/L), which was the criteria recommended in the mixing zone determination, dated January 12, 2010. Unionized ammonia was reported above applicable criterion in one monitoring well, MW-8R at 421 µg/L. Results are summarized in Table 1.
- pH was reported above the lowest applicable screening criterion (the Nonresidential Drinking Water criterion of 8.5 S.U.) in three monitoring wells, MW-8R at 10.60 S.U., MW-05036 at 11.40 S.U., and MW-04438R at 9.10 S.U.

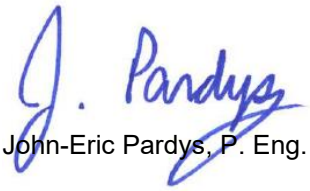
In summary, the results of the 2020 EI monitoring results are generally consistent with the data evaluated in the RCRA CA725 & CA750 Environmental Indicators Supporting Documentation dated September 17, 2003. Figures 2 and 3 present the concentration trend graphs for Ammonia and pH, respectively, for select monitoring wells MW-03945 (at the river), MW-04051 (at the river), MW-04836 (between source and river), and MW-8 (near the apparent source area). The observed exceedances of ammonia and pH do not represent an unacceptable risk or require further action because groundwater will be prohibited for use as a potable source (via a deed restriction), Site use will be limited to nonresidential (via a deed restriction), future Site owners will have due care obligations pursuant to Michigan law, and based on the many years of groundwater monitoring data, groundwater/surface water interface compliance continues to be below the applicable criteria and levels are stable.

In the 2019 CA 750 EI Annual Monitoring Results letter dated January 17, 2020, RACER requested to terminate groundwater monitoring if 2020 monitoring data is consistent with previous data or when USEPA completes its formal RCRA Corrective Action decision, whichever came first. The CA 750 EI Monitoring Program has been completed annually since 2005. The monitoring wells included in the EI groundwater monitoring program are located within or downgradient of Investigative Unit G - Former Nodular Iron Plant, which was demolished in 1999, and a small portion of Investigative Unit H – Wastewater Treatment System and Stormwater Discharge Ditch, specifically the North Ditch, which stopped receiving water from the Former Nodular Iron Plant when it was demolished in 1999. There have been no activities in these areas since the Former Nodular Iron Plant was demolished in 1999 beyond investigation and remedial actions. Since the 2020 results are generally consistent with previous data and groundwater/surface water interface compliance continues to be below the applicable criteria and levels are stable, RACER respectfully requests to terminate groundwater monitoring.

Should you have any questions, please do not hesitate to call.

Yours truly,

GHD



John-Eric Pardys, P. Eng.

JEP/kf/5

Encl.

cc: Dave Favero, RACER
Michael Tomka, GHD

List of Supporting Files:

Figure 1	Summary of EI Locations and Results (2011 – 2020)
Figure 2	Total Ammonia Trend Graph
Figure 3	pH Trend Graph
Table 1	Groundwater Ammonia FAV Compliance Worksheet
Table 2	EI Monitoring Program
Attachment A	Summary of EI Locations and Results

MW-04757	11/01/2011	11/07/2012	07/16/2013	11/12/2013	11/14/2014	11/03/2015	11/07/2016	05/18/2017	11/28/2018	11/11/2019	10/20/2020
Ammonia	-	14000	1100 J/1700 J	200 U	220	300	280	300	230	450	450
Cyanide (amenable)	10 UJ	10 U	-	10 U	-	-	-	-	-	-	-
Cyanide (total)	10 UJ	10 U	-	10 U	-	-	-	-	-	-	-
Un-ionized ammonia	-	-	-	-	-	10	5.5	10.7	3.7	6.03	15.5

MW-04257	11/02/2011	11/08/2012	07/16/2013	11/12/2013	11/14/2014	11/03/2015	11/08/2016	05/18/2017	11/28/2018	11/13/2019	10/21/2020
Ammonia	820	340	-	630	350	620	380	500	780	680	1100
Chromium VI (hexavalent)	20 UJ	20 U	-	-	-	-	-	-	-	-	-
Cyanide (amenable)	10 UJ	10 U	-	10 U	-	-	-	-	-	-	-
Cyanide (total)	10 UJ	10 U	-	10 U	-	-	-	-	-	-	-
pH	7.0 J/6.88	6.79/6.97 J	7.22	7.30 J/7.35	7.32 J	6.96 J	7.06	7.32/7.3 J	7.3 J	7.5 J	7.5 J
Un-ionized ammonia	-	-	-	-	-	5	1.8	6.0	3.6	4.07	13.0

MW-04250R	11/01/2011	11/08/2012	07/16/2013	11/12/2013	11/14/2014	11/03/2015	11/07/2016	05/17/2017	11/28/2018	11/11/2019	10/20/2020
Ammonia	4400	4800/6800	-	5000/5200	2700 J/1600 J	2200/2400	2700/2900	2000	4200	3700	5100
Chromium VI (hexavalent)	20 UJ	20 U/20 U	-	-	-	-	-	-	-	-	-
Cyanide (amenable)	10 UJ	10 U/10 U	-	10 U/10 U	-	-	-	-	-	-	-
Cyanide (total)	10 UJ	10 U/10 U	-	10 U/10 U	-	-	-	-	-	-	-
Mercury	0.0024 J	0.20 U/0.20 U	-	0.20 U/0.20 U	0.20 U/0.20 U	0.20 U/0.20 U	0.20 U/0.20 U	-	-	-	-
pH	9.43/9.3 J	9.95/9.55 J/9.49 J	10.83	9.68 J/9.7/9.68 J	9.98 J/10.0 J	9.26 J/9.31 J	8.77	8.93/8.9 J	8.8 J	8.8 J	8.9 J
Un-ionized ammonia	-	-	-	-	-	122	60.3	99.8	89.3	50.48	212.1

MW-04051	11/01/2011	11/08/2012	07/16/2013	11/12/2013	11/14/2014	11/03/2015	11/08/2016	05/18/2017	11/28/2018	11/13/2019	10/21/2020
Ammonia	5700/5300	5800	-	4600	4400	5800	530	6300	7200	5900	10000
Chromium VI (hexavalent)	9.7 J/4.7 J	100 U	-	-	-	-	-	-	-	-	-
Cyanide (amenable)	10 UJ/10 UJ	10 U	-	10 U	-	-	-	-	-	-	-
Cyanide (total)	10 UJ/10 UJ	10 U	-	10 U	-	-	-	-	-	-	-
Mercury	0.0005 UJ/0.0005 UJ	0.20 U	-	-	-	-	-	-	-	-	-
pH	6.8 J/6.58/6.8 J	6.88/6.89 J	6.85	6.94/7.03 J	7.13 J	6.60 J	6.71	6.84/6.7 J	6.8 J	7.0 J	6.9 J
Un-ionized ammonia	-	-	-	-	-	19	1.3	28.6	12.5	15.65	36.4

MW-03945	11/01/2011	11/08/2012	07/16/2013	11/12/2013	11/14/2014	11/03/2015	11/08/2016	05/18/2017	11/28/2018	11/11/2019	10/20/2020
Ammonia	6700	8800	9100	5100	7300	7600	7400	8300	8000	9500/9500	10000
Chromium VI (hexavalent)	3.4 J	200 U	-	-	-	-	-	-	-	-	-
Cyanide (amenable)	10 UJ	10 U	-	10 U	-	-	-	-	-	-	-
Cyanide (total)	10 UJ	10 U	-	10 U	-	-	-	-	-	-	-
Mercury	0.0005 UJ	0.20 U	-	-	-	-	-	-	-	-	-
pH	6.57/6.7 J	6.63/6.70 J	6.68	6.7/6.93 J	7.01 J	6.63 J	6.56	6.6 J/6.7	6.7 J	7.0 J/6.9 J	6.9 J
Un-ionized ammonia	-	-	-	-	-	20	11.3	27.4	9.5	21.64	33.0

we should only be showing 2011 to 2020 data in databoxes

this well should not be showing up as being abandoned

MW-04040	11/12/2014	11/03/2015	11/07/2016	05/17/2017	11/28/2018	11/12/2019	10/20/2020
Ammonia	610	460	710	450	1100	860	950
pH	-	-	7.47	7.9 J/9.62	7.5 J	7.8 J	7.5 J
Un-ionized ammonia	-	7	4.6	22.9	6.4	6.66	9.5

MW-04438R	11/27/2018	11/12/2019	10/27/2020
Ammonia	2000	96 J	510
pH	11.5 J	7.8 J	9.1 J
Un-ionized ammonia	50.1	0.71	19.4

MW-04438	05/17/2017
Ammonia	1100
pH	11.81/11.6 J
Un-ionized ammonia	60.4

MW-04836R	11/27/2018	11/11/2019	10/19/2020
Ammonia	25000	17000	7550
pH	7.4 J	7.8 J	7.8 J/7.7 J
Un-ionized ammonia	123.5	124.46	111.8

MW-04836	07/16/2013	11/13/2013	11/12/2014	11/03/2015	11/07/2016	05/17/2017
Ammonia	11000	35000	33000	51000	18000	3400/3500
pH	7.72	7.45/7.31 J	7.39 J	6.82 J	7.33	8.01/7.4 J/8.01/7.3 J
Un-ionized ammonia	-	-	-	161	47.8	107.2

MW-04336	11/28/2018	11/12/2019	10/27/2020
Ammonia	7900	7500	8100
pH	7.3 J	7.4 J	7.2 J
Un-ionized ammonia	32.0	33.89	202.6

MW-04835	11/13/2013
Ammonia	900
pH	7.20 J/7.29

MW-05443	07/16/2013	11/27/2018	11/13/2019	10/20/2020
Ammonia	7200	6700	6700	9600
pH	7.21	-	7.4 J	7.1 J
Un-ionized ammonia	-	-	31.52	46.5

MW-05038	11/28/2018	11/12/2019	10/27/2020
Ammonia	5000	5100	5100
pH	10.0 J	10.1 J	8.2 J
Un-ionized ammonia	126.6	72.99	197.9

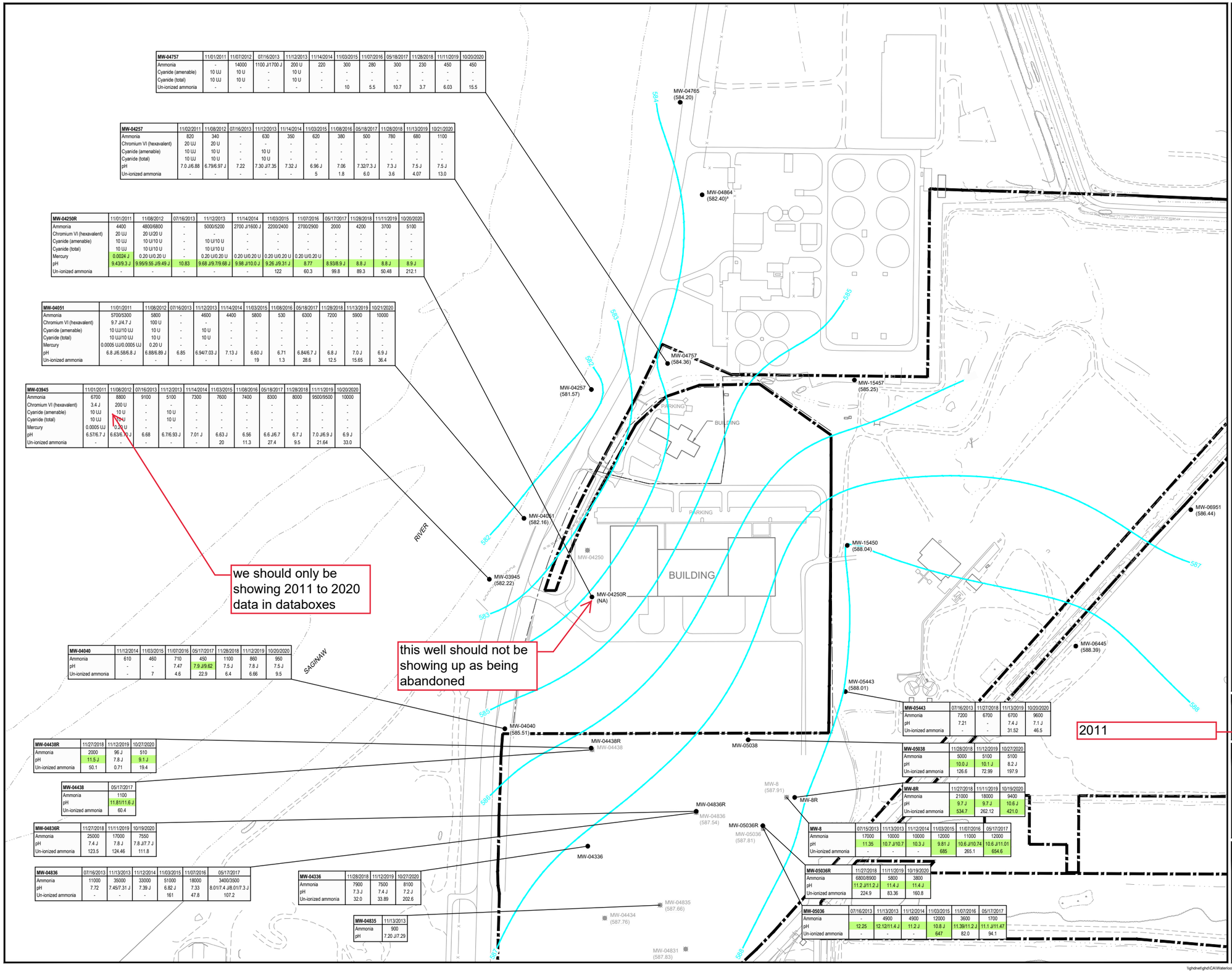
MW-8R	11/27/2018	11/11/2019	10/19/2020
Ammonia	21000	18000	9400
pH	9.7 J	9.7 J	10.6 J
Un-ionized ammonia	534.7	262.12	421.0

MW-8	07/15/2013	11/13/2013	11/12/2014	11/03/2015	11/07/2016	05/17/2017
Ammonia	17000	10000	10000	12000	11000	12000
pH	11.35	10.7 J/10.7	10.3 J	9.81 J	10.6 J/10.74	10.6 J/11.01
Un-ionized ammonia	-	-	685	265.1	654.6	

MW-05036R	11/27/2018	11/11/2019	10/19/2020
Ammonia	6800/8900	5800	3800
pH	11.2 J/11.2 J	11.4 J	11.4 J
Un-ionized ammonia	224.9	83.36	160.8

MW-05036	07/16/2013	11/13/2013	11/12/2014	11/03/2015	11/07/2016	05/17/2017
Ammonia	-	4900	4900	12000	3600	1700
pH	12.25	12.12/11.4 J	11.2 J	10.8 J	11.39/11.2 J	11.1 J/11.47
Un-ionized ammonia	-	-	-	647	82.0	94.1

2011



0 100 200 ft

LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- MW-8 — ABANDONED MONITORING WELL LOCATION
- MW-04765 — MONITORING WELL LOCATION
- (582.12) — GROUNDWATER ELEVATION - NOVEMBER 2015
- 586 — UPPER WATER BEARING ZONE GROUNDWATER CONTOUR - FT. AMSL (NAVD 88) - NOVEMBER 2015

MW-04438R	11/27/2018	11/12/2019
Ammonia	2000	96 J
pH	11.5 J	7.8
Un-ionized ammonia	50.1	-

- SAMPLE LOCATION
- SAMPLE DATE
- RESULT (ug/L) EXCEPT pH WHICH IS IN s.u.
- PARAMETER
- EXCEEDS CRITERIA

MICHIGAN PART 201 CRITERIA

fraction	Parameter	Lowest Criteria (ug/L or s.u. for pH)	
METAL	Chromium (total)	100	A
METAL	Chromium (VI)	11	B
METAL	Mercury	0.0013	B
METAL	Vanadium	12	B
WET	Cyanide (total)	5.2	B
WET	Cyanide (amenable)	5.2	B
WET	pH	6.5 - 8.5	A
WET	Unionized Ammonia	420	B

Chromium (total) use Chromium III (Trivalent) criteria.
A: Non-Residential Drinking Water Criteria
B: GSI Criteria

NOTES:

1. SEE TABLE 1 FOR HOW UNIONIZED AMMONIA WAS CALCULATED.
2. NOTE THAT THE GSI CRITIERIA DEVELOPED FOR TOTAL CHROMIUM WAS DEVELOPED FROM THE FINAL CHRONIC VALUE CALCULATION FOR TRIVALENT CHROMIUM, AS SPECIFIED IN THE MDEQ GUIDANCE. TOTAL CHROMIUM RESULTS WERE COMPARED TO TRIVALENT CHROMIUM CRITERIA SINCE EXTENSIVE SITE DATA SUPPORTS THAT THE MAJORITY OF THE TOTAL CHROMIUM IS TRIVALENT CHROMIUM. HEXAVALENT CHROMIUM IS STILL SAMPLED AT NUMEROUS LOCATIONS AND IS COMPARED TO HEXAVALENT CHROMIUM CRITERIA.
3. GROUNDWATER ELEVATION NOT USED IN DETERMINATION OF GROUNDWATER CONTOURS.

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

RACER
SAGINAW NODULAR INDUSTRIAL LAND

SAGINAW, MICHIGAN

SUMMARY OF EI LOCATIONS AND RESULTS (2011 - 2020)

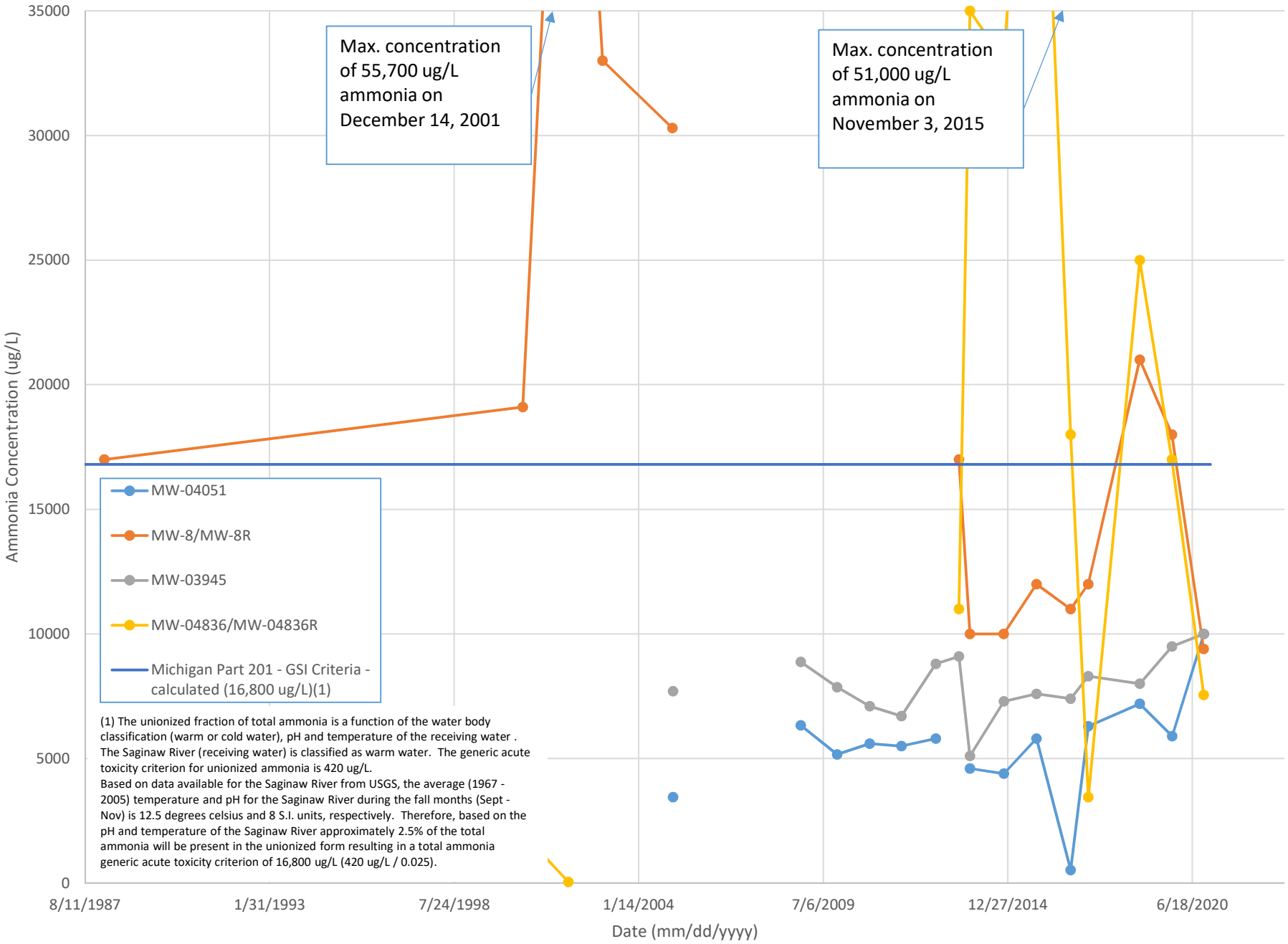
GHD

Source Reference:

Project Manager:	Reviewed By:	Date:	
M.T.	J.P.	DECEMBER 2020	
Scale: 1" = 200'	Project №: 11208041	Report №: SASNOW-5	Drawing №: figure 1

\\ghdnet\ghd\CA\Waterloo\Projects\662\11208041\Digital_Design\ACAD 2018\Figures\SASNOW-5\11208041(SASNOW-5)GN-WA001.DWG Plot Date: DEC 14, 2020

Figure 2 Total Ammonia Trend Graph



(1) The unionized fraction of total ammonia is a function of the water body classification (warm or cold water), pH and temperature of the receiving water . The Saginaw River (receiving water) is classified as warm water. The generic acute toxicity criterion for unionized ammonia is 420 ug/L.
Based on data available for the Saginaw River from USGS, the average (1967 - 2005) temperature and pH for the Saginaw River during the fall months (Sept - Nov) is 12.5 degrees celsius and 8 S.I. units, respectively. Therefore, based on the pH and temperature of the Saginaw River approximately 2.5% of the total ammonia will be present in the unionized form resulting in a total ammonia generic acute toxicity criterion of 16,800 ug/L (420 ug/L / 0.025).

Figure 3 pH Trend Graph

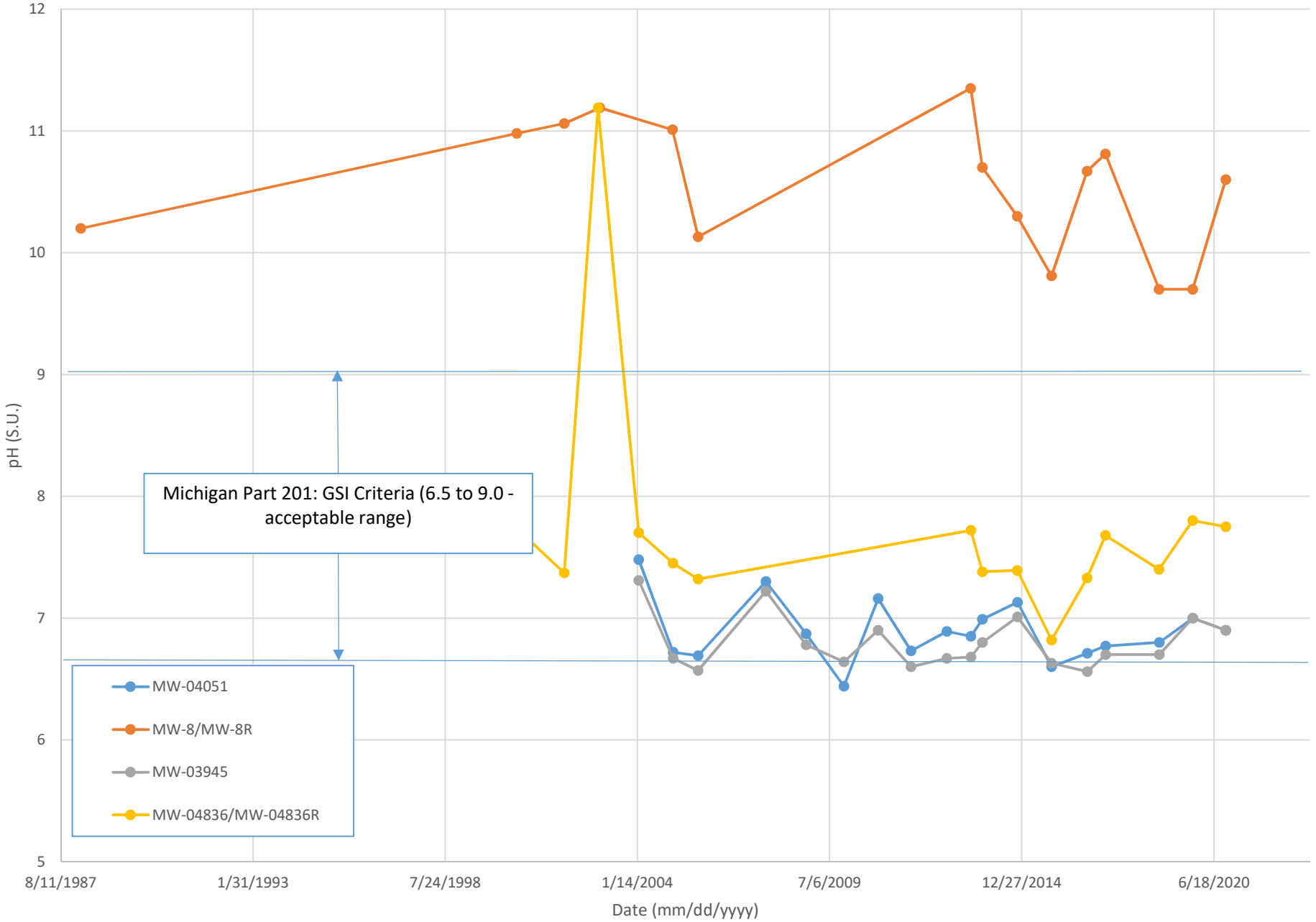


Table 1

Groundwater Ammonia FAV Compliance Worksheet
GSI Compliance Sampling Event of October 2020
RACER Nodular Industrial Land
Saginaw, Michigan

GSI Compliance Point Number (Well ID)	Measured Total NH3 (µg/L)	Groundwater Temperature (°C)	Groundwater pH	Saginaw River Temperature (°C)[4]	Saginaw River pH [4]	Average Temperature (°C)[1]	Average pH[2]	% Unionized NH_3[3]	Calculated Unionized NH3 (µg/L)
MW-04257	1100	16.90	7.50	10.3	8.03	13.60	7.69	1.18%	13.0
MW-04051	10000	17.10	6.90	10.3	8.03	13.70	7.17	0.36%	36.4
MW-03945	10000	14.50	6.90	10.3	8.03	12.40	7.17	0.33%	33.0
Other Wells									
MW-04250R	5100	15.20	8.90	10.3	8.03	12.75	8.28	4.16%	212.1
MW-04757	450	16.10	8.40	10.3	8.03	13.20	8.18	3.45%	15.5
MW-04836R [(5)]	7550	12.10	7.75	10.3	8.03	11.20	7.87	1.48%	111.8
MW-04040	950	12.60	7.50	10.3	8.03	11.45	7.69	1.00%	9.5
MW-8R	9400	14.00	10.60	10.3	8.03	12.15	8.33	4.48%	421.0
MW-05036R	3800	12.40	11.40	10.3	8.03	11.35	8.33	4.23%	160.8
MW-04438R	510	11.58	9.10	10.3	8.03	10.94	8.30	3.80%	19.4
MW-05038	5100	10.29	10.10	10.3	8.03	10.30	8.33	3.88%	197.9
MW-04336	8100	11.69	8.20	10.3	8.03	11.00	8.11	2.50%	202.6
MW-05443	9600	13.60	7.10	10.3	8.03	11.95	7.35	0.48%	46.5

Notes:

1. Temperature is the average of the groundwater temperature and the Saginaw River temperature
2. pH value for average of groundwater and Saginaw River H^+ concentrations
3. Ammonia toxicity equations taken from Steven C. Chapra "Surface Water-Quality Modeling", McGraw-Hill Series in Water Resources and Environmental Engineering 1997
4. The Saginaw River temperature and pH were measured on October 21, 2020
5. Measured Total NH3 and pH are an average of the parent sample and the duplicate

Boxed Value indicates exceedance of FAV criterion of 420 µg/L

Table 2

EI Monitoring Program
RACER Nodular Industrial Land
Saginaw, Michigan

IU	Location	Parameter	Monitoring Purpose	Propose to Eliminate from EI Monitoring	Comments
G	MW-04250/MW-04250R	pH	GSI	Yes	
G	MW-04250/MW-04250R	ammonia	GSI	Yes	
G	MW-04250/MW-04250R	temperature	GSI	Yes	
G	MW-04757	ammonia	GSI	Yes	
G	MW-04757	pH	GSI	Yes	
G	MW-04757	temperature	GSI	Yes	
Wells added in 2007 per EPA's email request dated August 8, 2007.					
G	MW-03945	pH	GSI	Yes	
G	MW-03945	ammonia	GSI	Yes	
G	MW-03945	temperature	GSI	Yes	
G	MW-04051	pH	GSI	Yes	
G	MW-04051	ammonia	GSI	Yes	
G	MW-04051	temperature	GSI	Yes	
G	MW-04257	pH	GSI	Yes	
G	MW-04257	ammonia	GSI	Yes	
G	MW-04257	temperature	GSI	Yes	
Wells added in 2013 per RACER's recommendation dated October 23, 2013					
G	MW-04836R	pH	GSI	Yes	
G	MW-04836R	ammonia	GSI	Yes	
G	MW-04836R	Temperature	GSI	Yes	
G	MW-05036R	pH	GSI	Yes	
G	MW-05036R	ammonia	GSI	Yes	
G	MW-05036R	Temperature	GSI	Yes	
G	MW-8R	pH	GSI	Yes	
G	MW-8R	ammonia	GSI	Yes	
G	MW-8R	Temperature	GSI	Yes	
Well added to the 2014 monitoring program					
G	MW-04040	ammonia	GSI	Yes	
G	MW-04040	pH	GSI	Yes	
G	MW-04040	temperature	GSI	Yes	
Sampling Location added to the 2016 monitoring program					
G	Saginaw River (next to MW-03945)	pH	GSI	Yes	
G	Saginaw River (next to MW-03945)	temperature	GSI	Yes	
Well added to the 2019 monitoring program					
G	MW-05443	ammonia	GSI	Yes	
G	MW-05444	pH	GSI	Yes	
G	MW-05445	temperature	GSI	Yes	

Notes:

- Wells evaluated using most recent groundwater data compared to appropriate EI criteria.
- GSI = Selected to monitor stability based on exceedances of groundwater surface water interface criteria in most recent samples.

Attachment A
Summary of EI Locations and Results

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			**MW-8**	**MW-8**	**MW-8**	**MW-8**	**MW-8**	**MW-8**	**MW-8**	**MW-8**	**MW-8**	**MW-8**
Sample ID:			**MW8**	**M30224**	**M70001**	**W70102**	**M-6-0509**	**MW-8**	**GW-58502-071513-SSH-276**	**MW-8**	**GW-58502-11/13/2013-JY-MW-8**	**GW-58502-111313-SSH-282**
Sample Date:			**03/07/1988**	**08/07/2000**	**12/14/2001**	**12/19/2002**	**01/14/2005**	**10/07/2005**	**07/15/2013**	**07/15/2013**	**11/13/2013**	**11/13/2013**
Parameters	**Units**	**Lower Criteria**										
Metals												
Chromium	µg/L	100	-	-	-	-	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-	-	-	-	-
Mercury	µg/L	0.0013	-	-	-	-	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-	-	-	-	-
WET												
Ammonia	µg/L		17000	19100	55700	33000	30300	-	17000	-	-	10000
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-	-	-	-	-
Cyanide (total)	µg/L	5.2	-	-	-	-	-	-	-	-	-	-
pH	s.u.	6.5-8.5	**10.2**	**10.98**	**11.06**	**11.19**	**11.01**	**10.13**	-	**11.35**	**10.7**	**10.7 J**
Un-ionized ammonia	µg/L	420	-	-	-	-	-	-	-	-	-	-

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			**MW-8**	**MW-8**	**MW-8**	**MW-8**	**MW-8**	**MW-8R**
Sample ID:			**GW-58502-111214-SSH-14001**	**GW-58502-110315-SSH-1596**	**MW-8**	**GW-58502-110716-SSH-1710**	**GW-58502-051717-SSH-17007**	**GW-58502-112718-SSH-1855**
Sample Date:			**11/12/2014**	**11/03/2015**	**11/03/2015**	**11/07/2016**	**05/17/2017**	**11/27/2018**
Parameters	**Units**	**Lower Criteria**						
Metals								
Chromium	µg/L	100	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-
Mercury	µg/L	0.0013	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-
WET								
Ammonia	µg/L		10000	12000	-	11000	12000	21000
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-
Cyanide (total)	µg/L	5.2	-	-	-	-	-	-
pH	s.u.	6.5-8.5	**10.3 J**	**9.81 J**	-	**10.74** / **10.6 J**	**11.01** / **10.6 J**	**9.7 J**
Un-ionized ammonia	µg/L	420	-	-	**685**	265.1	**654.6**	**534.7**

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-8R	MW-8R	MW-03945	MW-03945	MW-03945	MW-03945	MW-03945	MW-03945	MW-03945	MW-03945	MW-03945
Sample ID:			GW-58502-111119-SSH-3619	GW-11208041-101920-SSH-1020	MW-03945	M-6-0531	M-6-0532Q	MW-03945	M50564	M50574	MW-03945	M50607	M50608
Sample Date:			11/11/2019	10/19/2020	01/29/2004	01/21/2005	01/21/2005 (Duplicate)	10/08/2005	09/14/2007	11/05/2008	11/05/2008	12/03/2009	12/03/2009 (Duplicate)
Parameters	**Units**	**Lower Criteria**											
Metals													
Chromium	µg/L	100	-	-	-	5.0 U	5.0 U	-	5 U	5 U	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-	50 UJ	50 UJ	-	8 J	8 J
Mercury	µg/L	0.0013	-	-	-	-	-	-	0.0008 J	0.001 U	-	R	R
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	10.0 U	10.0 U	-	10 U	10 U	-	10.0 U	10.0 U
WET													
Ammonia	µg/L		18000	9400	-	7700	7700	-	-	8880	-	7690	8040
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-	-	-	-	R	R
Cyanide (total)	µg/L	5.2	-	-	-	-	-	-	**6 J**	2 J	-	R	R
pH	s.u.	6.5-8.5	**9.7 J**	**10.6 J**	7.31	6.82 / **6.32**	6.87	6.57	7.22	6.87 J	6.69	6.64 J	6.59 J
Un-ionized ammonia	µg/L	420	262.12	**421.0**	-	-	-	-	-	-	-	-	-

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-03945	MW-03945	MW-03945	MW-03945	MW-03945	MW-03945	MW-03945	MW-03945
Sample ID:			MW-03945	GW-58502-112310-SSH-001	GW-58502-112310-SSH-002	MW-03945	GW-58502-110111-JY-255	GW-58502-110812-SSH-264	GW-58502-071613-SSH-285	MW-03945
Sample Date:			12/03/2009	11/23/2010	11/23/2010 (Duplicate)	11/23/2010	11/01/2011	11/08/2012	07/16/2013	07/16/2013
Parameters	**Units**	**Lower Criteria**								
Metals										
Chromium	µg/L	100	-	-	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	200 U	200 U	-	3.4 J	200 U	-	-
Mercury	µg/L	0.0013	-	0.0005 UJ	0.0005 UJ	-	0.0005 UJ	0.20 U	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-	-	-
WET										
Ammonia	µg/L		-	7000	7200	-	6700	8800	9100	-
Cyanide (amenable)	µg/L	5.2	-	10 U	10 U	-	10 UJ	10 U	-	-
Cyanide (total)	µg/L	5.2	-	10 U	10 U	-	10 UJ	10 U	-	-
pH	s.u.	6.5-8.5	6.69	6.9 J	6.9 J	6.89	6.57 / 6.7 J	6.63 / 6.70 J	-	6.68
Un-ionized ammonia	µg/L	420	-	-	-	-	-	-	-	-

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			**MW-03945**	**MW-03945**	**MW-03945**	**MW-03945**	**MW-03945**	**MW-03945**
Sample ID:			**GW-58502-11/12/2013-JY-MW-03945**	**GW-58502-111213-SSH-274**	**GW-58502-111414-SSH-14010**	**GW-58502-110315-SSH-1589**	**MW-03945**	**GW-58502-110816-SSH-1712**
Sample Date:			**11/12/2013**	**11/12/2013**	**11/14/2014**	**11/03/2015**	**11/03/2015**	**11/08/2016**
Parameters	**Units**	**Lower Criteria**						
Metals								
Chromium	µg/L	100	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-
Mercury	µg/L	0.0013	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-
WET								
Ammonia	µg/L		-	5100	7300	7600	-	7400
Cyanide (amenable)	µg/L	5.2	-	10 U	-	-	-	-
Cyanide (total)	µg/L	5.2	-	10 U	-	-	-	-
pH	s.u.	6.5-8.5	6.7	6.93 J	7.01 J	6.63 J	-	6.56
Un-ionized ammonia	µg/L	420	-	-	-	-	20	11.3

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-03945	MW-03945	MW-03945	MW-03945	MW-03945	MW-04040	MW-04040
Sample ID:			GW-58502-051817-SSH-17013	GW-58502-112818-SSH-1869	GW-58502-111119-SSH-3419	GW-58502-111119-SSH-3519	GW-11208041-102020-SSH-1820	M10004	M20217
Sample Date:			05/18/2017	11/28/2018	11/11/2019	11/11/2019 (Duplicate)	10/20/2020	11/18/1998	08/02/2000
Parameters	**Units**	**Lower Criteria**							
Metals									
Chromium	µg/L	100	-	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-	-
Mercury	µg/L	0.0013	-	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-	-
WET									
Ammonia	µg/L		8300	8000	9500	9500	10000	-	-
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-	-
Cyanide (total)	µg/L	5.2	-	-	-	-	-	-	-
pH	s.u.	6.5-8.5	6.7 / 6.6 J	6.7 J	7.0 J	6.9 J	6.9 J	7.3	7.81
Un-ionized ammonia	µg/L	420	27.4	9.5	21.64	-	33.0	-	-

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			**MW-04040**	**MW-04040**	**MW-04040**	**MW-04040**	**MW-04040**	**MW-04040**	**MW-04040**	**MW-04040**
Sample ID:			**H90132**	**W-17075-020504-CA-123**	**M-2-0522**	**MW-04040**	**GW-58502-111214-SSH-14004**	**GW-58502-110315-SSH-1593**	**MW-04040**	**GW-58502-110716-SSH-1707**
Sample Date:			**12/19/2002**	**02/05/2004**	**01/20/2005**	**10/07/2005**	**11/12/2014**	**11/03/2015**	**11/03/2015**	**11/07/2016**
Parameters	**Units**	**Lower Criteria**								
Metals										
Chromium	µg/L	100	-	-	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-	-	-
Mercury	µg/L	0.0013	-	-	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-	-	-
WET										
Ammonia	µg/L		490	600	-	-	610	460	-	710
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-	-	-
Cyanide (total)	µg/L	5.2	-	-	-	-	-	-	-	-
pH	s.u.	6.5-8.5	7.22	7.4 / 7.44	7.36	7.11	-	-	-	7.47
Un-ionized ammonia	µg/L	420	-	-	-	-	-	-	7	4.6

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-04040	MW-04040	MW-04040	MW-04040	MW-04051	MW-04051	MW-04051	MW-04051
Sample ID:			GW-58502-051717-SSH-17012	GW-58502-112818-SSH-1865	GW-58502-111219-SSH-4119	GW-11208041-102020-SSH-1520	MW-04051	M-6-0534	MW-04051	M50565
Sample Date:			05/17/2017	11/28/2018	11/12/2019	10/20/2020	01/29/2004	01/21/2005	10/08/2005	09/14/2007
Parameters	**Units**	**Lower Criteria**								
Metals										
Chromium	µg/L	100	-	-	-	-	-	5.0 U	-	5 U
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-	-	50 UJ
Mercury	µg/L	0.0013	-	-	-	-	-	-	-	0.0007 J
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	10.0 U	-	10 U
WET										
Ammonia	µg/L		450	1100	860	950	-	3450	-	-
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-	-	-
Cyanide (total)	µg/L	5.2	-	-	-	-	-	-	-	4 J
pH	s.u.	6.5-8.5	**9.62** / 7.9 J	7.5 J	7.8 J	7.5 J	7.48	6.53 / 6.91	6.69	7.30
Un-ionized ammonia	µg/L	420	22.9	6.4	6.66	9.5	-	-	-	-

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-04051	MW-04051	MW-04051	MW-04051	MW-04051	MW-04051	MW-04051	MW-04051	MW-04051	MW-04051
Sample ID:			M50575	MW-04051	M50610	MW-04051	GW-58502-112310-SSH-003	MW-04051	GW-58502-110111-JY-253	GW-58502-110111-JY-254	GW-58502-110812-SSH-265	MW-04051
Sample Date:			11/05/2008	11/05/2008	12/03/2009	12/03/2009	11/23/2010	11/23/2010	11/01/2011	11/01/2011 (Duplicate)	11/08/2012	07/16/2013
Parameters	**Units**	**Lower Criteria**										
Metals												
Chromium	µg/L	100	5 U	-	-	-	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	50 UJ	-	8 J	-	200 U	-	9.7 J	4.7 J	100 U	-
Mercury	µg/L	0.0013	0.001 U	-	R	-	0.0005 UJ	-	0.0005 UJ	0.0005 UJ	0.20 U	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-	-	-	-	-
Vanadium	µg/L	27	10 U	-	10.0 U	-	-	-	-	-	-	-
WET												
Ammonia	µg/L		6330	-	5170	-	5600	-	5700	5300	5800	-
Cyanide (amenable)	µg/L	5.2	-	-	R	-	10 U	-	10 UJ	10 UJ	10 U	-
Cyanide (total)	µg/L	5.2	10 U	-	R	-	10 U	-	10 UJ	10 UJ	10 U	-
pH	s.u.	6.5-8.5	6.98 J	6.76	6.83 J	**6.05**	7.6 J	6.72	6.58 / 6.8 J	6.8 J	6.88 / 6.89 J	6.85
Un-ionized ammonia	µg/L	420	-	-	-	-	-	-	-	-	-	-

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-04051	MW-04051	MW-04051	MW-04051	MW-04051	MW-04051
Sample ID:			GW-58502-11/12/2013-JY-MW-04051	GW-58502-111213-SSH-275	GW-58502-111414-SSH-14009	GW-58502-110315-SSH-1590	MW-04051	GW-58502-110816-SSH-1713
Sample Date:			11/12/2013	11/12/2013	11/14/2014	11/03/2015	11/03/2015	11/08/2016
Parameters	**Units**	**Lower Criteria**						
Metals								
Chromium	µg/L	100	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-
Mercury	µg/L	0.0013	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-
WET								
Ammonia	µg/L		-	4600	4400	5800	-	530
Cyanide (amenable)	µg/L	5.2	-	10 U	-	-	-	-
Cyanide (total)	µg/L	5.2	-	10 U	-	-	-	-
pH	s.u.	6.5-8.5	6.94	7.03 J	7.13 J	6.60 J	-	6.71
Un-ionized ammonia	µg/L	420	-	-	-	-	19	1.3

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-04051	MW-04051	MW-04051	MW-04051	MW-04250	MW-04250	MW-04250	MW-04250R	MW-04250R
Sample ID:			GW-58502-051817-SSH-17014	GW-58502-112818-SSH-1871	GW-58502-111319-SSH-4519	GW-11208041-102120-SSH-2020	M30029	M30030	M30205	M7-0540	MW-04250
Sample Date:			05/18/2017	11/28/2018	11/13/2019	10/21/2020	12/04/1998	12/04/1998 (Duplicate)	07/18/2000	09/28/2005	10/07/2005
Parameters	**Units**	**Lower Criteria**									
Metals											
Chromium	µg/L	100	-	-	-	-	**186**	**173**	28	5.5	-
Chromium (dissolved)	µg/L	100	-	-	-	-	5 U	5 U	5 U	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-	10 U	-	-
Mercury	µg/L	0.0013	-	-	-	-	**0.2**	0.2 U	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	0.2 U	0.2 U	-	-	-
Vanadium	µg/L	27	-	-	-	-	**89**	**84**	**33**	13.7	-
WET											
Ammonia	µg/L		6300	7200	5900	10000	-	-	-	-	-
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-	-	-	-
Cyanide (total)	µg/L	5.2	-	-	-	-	10 U	10 U	**7**	-	-
pH	s.u.	6.5-8.5	6.7 J / 6.84	6.8 J	7.0 J	6.9 J	-	-	-	**11.01 J**	**10.48**
Un-ionized ammonia	µg/L	420	28.6	12.5	15.65	36.4	-	-	-	-	-

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-04250R	MW-04250R	MW-04250R	MW-04250R	MW-04250R	MW-04250R	MW-04250R	MW-04250R	MW-04250R	MW-04250R	MW-04250R	MW-04250R
Sample ID:			**M05515**	**M05516**	**M50563**	**M50572**	**M50573**	**M50590**	**MW-04250R**	**M50611**	**MW-04250R**	**GW-58502-112310-SSH-004**	**MW-04250R**	**GW-58502-110111-JY-250**
Sample Date:			**08/31/2006**	**08/31/2006 (Duplicate)**	**09/13/2007**	**11/05/2008**	**11/05/2008 (Duplicate)**	**12/17/2008**	**12/17/2008**	**12/03/2009**	**12/03/2009**	**11/23/2010**	**11/23/2010**	**11/01/2011**
Parameters	**Units**	**Lower Criteria**												
Metals														
Chromium	µg/L	100	2.2 J	2.2 J	5 U	5 U	5 U	-	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	**20 J**	**20 J**	50 U	50 UJ	50 UJ	-	-	50 UJ	-	40 U	-	20 UJ
Mercury	µg/L	0.0013	**0.0041**	**0.00443**	**0.0062**	**0.00477**	**0.00462**	-	-	**0.0027 J**	-	0.00065 UJ	-	**0.0024 J**
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	µg/L	27	6.8 J	6.1 J	10 U	10 U	10 U	-	-	10.0 U	-	-	-	-
WET														
Ammonia	µg/L		-	-	-	-	-	4080	-	4330	-	9100	-	4400
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-	-	R	-	10 U	-	10 UJ
Cyanide (total)	µg/L	5.2	**30 J**	**140 J**	10 U	10 U	10 U	-	-	R	-	10 U	-	10 UJ
pH	s.u.	6.5-8.5	**11.16**	**11.12**	**10.90**	**10.76 J**	**10.85 J**	-	**10.98**	**10.72 J**	**10.67**	**9.9 J**	**10.05**	**9.3 J** / **9.43**
Un-ionized ammonia	µg/L	420	-	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			**MW-04250R**	**MW-04250R**	**MW-04250R**	**MW-04250R**	**MW-04250R**	**MW-04250R**
Sample ID:			**GW-58502-110812-SSH-262**	**GW-58502-110812-SSH-263**	**MW-04250R**	**GW-58502-11/12/2013-JY-MW-04250R**	**GW-58502-111213-SSH-272**	**GW-58502-111213-SSH-273**
Sample Date:			**11/08/2012**	**11/08/2012 (Duplicate)**	**07/16/2013**	**11/12/2013**	**11/12/2013**	**11/12/2013 (Duplicate)**
Parameters	**Units**	**Lower Criteria**						
Metals								
Chromium	µg/L	100	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	20 U	20 U	-	-	-	-
Mercury	µg/L	0.0013	0.20 U	0.20 U	-	-	0.20 U	0.20 U
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-
WET								
Ammonia	µg/L		4800	6800	-	-	5000	5200
Cyanide (amenable)	µg/L	5.2	10 U	10 U	-	-	10 U	10 U
Cyanide (total)	µg/L	5.2	10 U	10 U	-	-	10 U	10 U
pH	s.u.	6.5-8.5	**9.55 J / 9.95**	**9.49 J**	**10.83**	**9.7**	**9.68 J**	**9.68 J**
Un-ionized ammonia	µg/L	420	-	-	-	-	-	-

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-04250R	MW-04250R	MW-04250R	MW-04250R	MW-04250R	MW-04250R
Sample ID:			GW-58502-111414-SSH-14005	GW-58502-111414-SSH-14006	GW-58502-110315-SSH-1587	GW-58502-110315-SSH-1588	MW-04250R	GW-58502-110716-SSH-1705
Sample Date:			11/14/2014	11/14/2014 (Duplicate)	11/03/2015	11/03/2015 (Duplicate)	11/03/2015	11/07/2016
Parameters	**Units**	**Lower Criteria**						
Metals								
Chromium	µg/L	100	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-
Mercury	µg/L	0.0013	0.20 U	0.20 U	0.20 U	0.20 U	-	0.20 U
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-
WET								
Ammonia	µg/L		2700 J	1600 J	2200	2400	-	2700
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-
Cyanide (total)	µg/L	5.2	-	-	-	-	-	-
pH	s.u.	6.5-8.5	**9.98 J**	**10.0 J**	**9.26 J**	**9.31 J**	-	**8.77**
Un-ionized ammonia	µg/L	420	-	-	-	-	122	60.3

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-04250R	MW-04250R	MW-04250R	MW-04250R	MW-04250R	MW-04257	MW-04257
Sample ID:			GW-58502-110716-SSH-1706	GW-58502-051717-SSH-17006	GW-58502-112818-SSH-1868	GW-58502-111119-SSH-3219	GW-11208041-102020-SSH-1620	MW-04257	M-2-0531
Sample Date:			11/07/2016 (Duplicate)	05/17/2017	11/28/2018	11/11/2019	10/20/2020	01/29/2004	01/24/2005
Parameters	**Units**	**Lower Criteria**							
Metals									
Chromium	µg/L	100	-	-	-	-	-	-	5.0 U
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-	-
Mercury	µg/L	0.0013	0.20 U	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-	10.0 U
WET									
Ammonia	µg/L		2900	2000	4200	3700	5100	-	990
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-	-
Cyanide (total)	µg/L	5.2	-	-	-	-	-	-	-
pH	s.u.	6.5-8.5	-	**8.93** / **8.9 J**	**8.8 J**	**8.8 J**	**8.9 J**	6.90	6.79 / 7.25
Un-ionized ammonia	µg/L	420	-	99.8	89.3	50.48	212.1	-	-

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-04257	MW-04257	MW-04257	MW-04257	MW-04257	MW-04257	MW-04257	MW-04257	MW-04257	MW-04257
Sample ID:			M50557	M50579	MW-04257	M50609	MW-04257	GW-58502-113010-SSH-008	MW-04257	GW-58502-110211-JY-257	GW-58502-110812-SSH-266	MW-04257
Sample Date:			09/12/2007	11/12/2008	11/12/2008	12/03/2009	12/03/2009	11/30/2010	11/30/2010	11/02/2011	11/08/2012	07/16/2013
Parameters	**Units**	**Lower Criteria**										
Metals												
Chromium	µg/L	100	150	116 J	-	-	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	50 U	R	-	5 J	-	10 J	-	20 UJ	20 U	-
Mercury	µg/L	0.0013	-	-	-	-	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-	-	-	-	-
Vanadium	µg/L	27	10 U	10 U	-	10.0 U	-	-	-	-	-	-
WET												
Ammonia	µg/L		-	1170	-	1070	-	1200	-	820	340	-
Cyanide (amenable)	µg/L	5.2	-	-	-	R	-	10 U	-	10 UJ	10 U	-
Cyanide (total)	µg/L	5.2	10 U	10 U	-	R	-	10 U	-	10 UJ	10 U	-
pH	s.u.	6.5-8.5	7.27	7.13 J	7.15	6.97 J	6.64	7.2 J	6.84	7.0 J / 6.88	6.79 / 6.97 J	7.22
Un-ionized ammonia	µg/L	420	-	-	-	-	-	-	-	-	-	-

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-04257	MW-04257	MW-04257	MW-04257	MW-04257	MW-04257
Sample ID:			GW-58502-11/12/2013-JY-MW-04257	GW-58502-111213-SSH-271	GW-58502-111414-SSH-14008	GW-58502-110315-SSH-1591	MW-04257	GW-58502-110816-SSH-1714
Sample Date:			11/12/2013	11/12/2013	11/14/2014	11/03/2015	11/03/2015	11/08/2016
Parameters	**Units**	**Lower Criteria**						
Metals								
Chromium	µg/L	100	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-
Mercury	µg/L	0.0013	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-
WET								
Ammonia	µg/L		-	630	350	620	-	380
Cyanide (amenable)	µg/L	5.2	-	10 U	-	-	-	-
Cyanide (total)	µg/L	5.2	-	10 U	-	-	-	-
pH	s.u.	6.5-8.5	7.35	7.30 J	7.32 J	6.96 J	-	7.06
Un-ionized ammonia	µg/L	420	-	-	-	-	5	1.8

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-04257	MW-04257	MW-04257	MW-04257	MW-04336	MW-04336
Sample ID:			GW-58502-051817-SSH-17015	GW-58502-112818-SSH-1870	GW-58502-111319-SSH-4619	GW-11208041-102120-SSH-1920	GW-58502-112818-SSH-1866	GW-58502-111219-SSH-4219
Sample Date:			05/18/2017	11/28/2018	11/13/2019	10/21/2020	11/28/2018	11/12/2019
Parameters	**Units**	**Lower Criteria**						
Metals								
Chromium	µg/L	100	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-
Mercury	µg/L	0.0013	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-
WET								
Ammonia	µg/L		500	780	680	1100	7900	7500
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-
Cyanide (total)	µg/L	5.2	-	-	-	-	-	-
pH	s.u.	6.5-8.5	7.32 / 7.3 J	7.3 J	7.5 J	7.5 J	7.3 J	7.4 J
Un-ionized ammonia	µg/L	420	6.0	3.6	4.07	13.0	32.0	33.89

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			**MW-04336**	**MW-04438**	**MW-04438**	**MW-04438**	**MW-04438R**	**MW-04438R**	**MW-04438R**
Sample ID:			**GW-11208041-102720-SSH-2022**	**M-2-0534**	**MW-04438**	**GW-58502-051717-SSH-17011**	**GW-58502-112718-SSH-1859**	**GW-58502-111219-SSH-4019**	**GW-11208041-102720-SSH-2021**
Sample Date:			**10/27/2020**	**01/24/2005**	**10/07/2005**	**05/17/2017**	**11/27/2018**	**11/12/2019**	**10/27/2020**
Parameters	**Units**	**Lower Criteria**							
Metals									
Chromium	µg/L	100	-	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-	-
Mercury	µg/L	0.0013	-	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-	-
WET									
Ammonia	µg/L		8100	-	-	1100	2000	96 J	510
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-	-
Cyanide (total)	µg/L	5.2	-	-	-	-	-	-	-
pH	s.u.	6.5-8.5	7.2 J	**11.89 / 11.76**	**10.91**	**11.81 / 11.6 J**	**11.5 J**	7.8 J	**9.1 J**
Un-ionized ammonia	µg/L	420	202.6	-	-	60.4	50.1	0.71	19.4

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-04757	MW-04757	MW-04757	MW-04757	MW-04757	MW-04757	MW-04757	MW-04757	MW-04757	MW-04757	MW-04757
Sample ID:			**M20001**	**M20215**	**M80155**	**M-6-0539**	**M05513**	**M50553**	**M50581**	**M50604**	**GW-58502-113010-SSH-007**	**GW-58502-110111-JY-251**	**GW-58502-110712-SSH-261**
Sample Date:			**11/16/1998**	**07/18/2000**	**01/05/2003**	**01/25/2005**	**08/31/2006**	**09/12/2007**	**11/12/2008**	**12/02/2009**	**11/30/2010**	**11/01/2011**	**11/07/2012**
Parameters	**Units**	**Lower Criteria**											
Metals													
Chromium	µg/L	100	**126 J**	97.1	-	5.0 U	5 U	5 U	11.5 J	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	10 U	-	-	50 UJ	50 U	R	50 U	6 J	-	-
Mercury	µg/L	0.0013	-	-	-	-	-	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-	-	-	-	-	-
Vanadium	µg/L	27	**54 J**	**36.3**	-	10.0 U	10 U	10 U	10 U	-	-	-	-
WET													
Ammonia	µg/L		-	-	700	-	-	-	170	178	300	-	14000
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-	-	-	10 U	10 UJ	10 U
Cyanide (total)	µg/L	5.2	10 U	**7**	-	-	**8 J**	10 U	**10**	10 U	10 U	10 UJ	10 U
pH	s.u.	6.5-8.5	-	-	-	-	-	-	-	-	-	-	-
Un-ionized ammonia	µg/L	420	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-04757	MW-04757	MW-04757	MW-04757	MW-04757	MW-04757	MW-04757
Sample ID:			GW-58502-071613-SSH-283	GW-58502-071613-SSH-284	GW-58502-111213-SSH-270	GW-58502-111414-SSH-14007	GW-58502-110315-SSH-1592	MW-04757	GW-58502-110716-SSH-1711
Sample Date:			07/16/2013	07/16/2013	11/12/2013	11/14/2014	11/03/2015	11/03/2015	11/07/2016
Parameters	**Units**	**Lower Criteria**							
Metals									
Chromium	µg/L	100	-	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-	-
Mercury	µg/L	0.0013	-	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-	-
WET									
Ammonia	µg/L		1100 J	1700 J	200 U	220	300	-	280
Cyanide (amenable)	µg/L	5.2	-	-	10 U	-	-	-	-
Cyanide (total)	µg/L	5.2	-	-	10 U	-	-	-	-
pH	s.u.	6.5-8.5	-	-	-	-	-	-	-
Un-ionized ammonia	µg/L	420	-	-	-	-	-	10	5.5

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-04757	MW-04757	MW-04757	MW-04757	MW-04835	MW-04835	MW-04835
Sample ID:			GW-58502-051817-SSH-17016	GW-58502-112818-SSH-1867	GW-58502-111119-SSH-3319	GW-11208041-102020-SSH-1720	M60015	M90129	MW-04835
Sample Date:			05/18/2017	11/28/2018	11/11/2019	10/20/2020	12/17/2001	12/19/2002	01/29/2004
Parameters	**Units**	**Lower Criteria**							
Metals									
Chromium	µg/L	100	-	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-	-
Mercury	µg/L	0.0013	-	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-	-
WET									
Ammonia	µg/L		300	230	450	450	-	-	-
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-	-
Cyanide (total)	µg/L	5.2	-	-	-	-	-	-	-
pH	s.u.	6.5-8.5	-	-	-	-	8.05	6.91	8.44
Un-ionized ammonia	µg/L	420	10.7	3.7	6.03	15.5	-	-	-

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-04835	MW-04835	MW-04836	MW-04836	MW-04836	MW-04836	MW-04836	MW-04836	MW-04836	MW-04836
Sample ID:			GW-58502-11/13/2013-JY-MW-04835	GW-58502-111313-SSH-279	M10218	M60011	MW-04836	MW-04836	M-2-0512	MW-04836	GW-58502-071613-SSH-281	MW-04836
Sample Date:			11/13/2013	11/13/2013	08/02/2000	12/14/2001	12/01/2002	01/29/2004	01/18/2005	10/07/2005	07/16/2013	07/16/2013
Parameters	**Units**	**Lower Criteria**										
Metals												
Chromium	µg/L	100	-	-	-	-	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-	-	-	-	-
Mercury	µg/L	0.0013	-	-	-	-	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-	-	-	-	-
WET												
Ammonia	µg/L		-	900	2030	50	-	-	-	-	11000	-
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-	-	-	-	-
Cyanide (total)	µg/L	5.2	-	-	-	-	-	-	-	-	-	-
pH	s.u.	6.5-8.5	7.29	7.20 J	7.74	7.37	**11.19**	7.70	7.45	7.32	-	7.72
Un-ionized ammonia	µg/L	420	-	-	-	-	-	-	-	-	-	-

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-04836	MW-04836	MW-04836	MW-04836	MW-04836	MW-04836
Sample ID:			GW-58502-11/13/2013-JY-MW-04836	GW-58502-111313-SSH-280	GW-58502-111214-SSH-14003	GW-58502-110315-SSH-1594	MW-04836	GW-58502-110716-SSH-1708
Sample Date:			11/13/2013	11/13/2013	11/12/2014	11/03/2015	11/03/2015	11/07/2016
Parameters	**Units**	**Lower Criteria**						
Metals								
Chromium	µg/L	100	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-
Mercury	µg/L	0.0013	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-
WET								
Ammonia	µg/L		-	35000	33000	51000	-	18000
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-
Cyanide (total)	µg/L	5.2	-	-	-	-	-	-
pH	s.u.	6.5-8.5	7.45	7.31 J	7.39 J	6.82 J	-	7.33
Un-ionized ammonia	µg/L	420	-	-	-	-	161	47.8

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			MW-04836	MW-04836	MW-04836R	MW-04836R	MW-04836R	MW-04836R
Sample ID:			GW-58502-051717-SSH-17009	GW-58502-051717-SSH-17010	GW-58502-112718-SSH-1858	GW-58502-111119-SSH-3819	GW-11208041-101920-SSH-1220	GW-11208041-101920-SSH-1320
Sample Date:			05/17/2017	05/17/2017 (Duplicate)	11/27/2018	11/11/2019	10/19/2020	10/19/2020 (Duplicate)
Parameters	**Units**	**Lower Criteria**						
Metals								
Chromium	µg/L	100	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-
Mercury	µg/L	0.0013	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-
WET								
Ammonia	µg/L		3400	3500	25000	17000	7550	-
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-
Cyanide (total)	µg/L	5.2	-	-	-	-	-	-
pH	s.u.	6.5-8.5	7.4 J / 8.01	8.01 / 7.3 J	7.4 J	7.8 J	7.8 J	7.7 J
Un-ionized ammonia	µg/L	420	107.2	-	123.5	124.46	111.8	-

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table A.1

Summary of EI Locations and Results
RACER Nodular Industrial Land
Saginaw, Michigan

Sample Location:			**MW-05036**	**MW-05036**	**MW-05036**	**MW-05036**	**MW-05036**	**MW-05036**	**MW-05036**	**MW-05036**	**MW-05036**	**MW-05036**
Sample ID:			**M30024**	**M10208**	**M60010**	**MW-05036**	**M-2-0511**	**MW-05036**	**MW-05036**	**GW-58502-11/13/2013-JY-MW-05036**	**GW-58502-111313-SSH-281**	**GW-58502-111214-SSH-14002**
Sample Date:			**12/03/1998**	**08/02/2000**	**12/14/2001**	**01/29/2004**	**01/18/2005**	**10/07/2005**	**07/16/2013**	**11/13/2013**	**11/13/2013**	**11/12/2014**
Parameters	**Units**	**Lower Criteria**										
Metals												
Chromium	µg/L	100	-	-	-	-	-	-	-	-	-	-
Chromium (dissolved)	µg/L	100	-	-	-	-	-	-	-	-	-	-
Chromium VI (hexavalent)	µg/L	11	-	-	-	-	-	-	-	-	-	-
Mercury	µg/L	0.0013	-	-	-	-	-	-	-	-	-	-
Mercury (dissolved)	µg/L	0.0013	-	-	-	-	-	-	-	-	-	-
Vanadium	µg/L	27	-	-	-	-	-	-	-	-	-	-
WET												
Ammonia	µg/L		-	-	2400	-	-	-	-	-	4900	4900
Cyanide (amenable)	µg/L	5.2	-	-	-	-	-	-	-	-	-	-
Cyanide (total)	µg/L	5.2	-	-	-	-	-	-	-	-	-	-
pH	s.u.	6.5-8.5	6.76	**10.49**	**9.35**	**10.80**	**9.94**	**9.49**	**12.25**	**12.12**	**11.4 J**	**11.2 J**
Un-ionized ammonia	µg/L	420	-	-	-	-	-	-	-	-	-	-

Footnotes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.