



Revitalizing Auto Communities
Environmental Response Trust

June 7, 2016

Mr. Keith Noble
Michigan Department of Environmental Quality
Saginaw Bay District Office
401 Ketchum Street, Suite B
Bay City, MI 48708

Re: RACER NPDES Permit No. MI0059042
Outfall modification

Dear Keith:

As we discussed, in order to effectively evaluate the environmental and engineering characteristics of the sediment in the large secondary ponds at the Saginaw Nodular Iron site it is necessary to lower the water level. As you know we have been using a valve controlled overflow pipe to keep the water levels under control by discharging excess water from the ponds when needed. We are requesting your concurrence with our proposal to lower this discharge pipe to allow lowering the water level.

We have enclosed sample results from the water column and previous discharge monitoring demonstrating essentially clean water in the pond consistent with applicable discharge requirements. This gives us a high level of confidence we can lower the water level safely.

GHD has supplied two figures for your review. Figure 1 presents the top of sediment contours, top of sediment elevations, measured sediment thicknesses, and top of clay elevations for the western portion of the secondary pond. Figure 2 presents a graphic that depicts the location and design of this revised discharge pipe which we believe minimizes the potential to draw any turbid water into the discharge line. The proposed material for the pipe will be ductile iron to allow for greater cantilever into the pond. A 90 degree elbow will be placed on the end of the pipe in the secondary pond with 1-ft removable sections installed to the surface of the water. This will allow for discharge of water from near the surface of the water while minimizing sediment disturbance. We propose to install this line and begin with daily field measurement of turbidity of a discharge sample, the weekly permit required sampling and analysis, and daily observations for a week – and if that sampling proves full compliance we could then drop back the field measurement of turbidity and the observations to twice per week.

Please let us know if you have any further questions or require further information.

Sincerely,

A handwritten signature in blue ink, appearing to read "Grant Trigger".

Grant Trigger

Michigan Cleanup Manager



Nº	Revision	Date	Initial

LEGEND

APPROXIMATE LIMITS OF RACER PROPERTY

SAMPLE LOCATION SURVEYED MAY 2016

DEPTH OF SEDIMENT (FEET)

TOP OF SEDIMENT (FT AMSL)

TOP OF CLAY ELEVATION (FT AMSL)

NOTES:

- POND ELEVATION APPROX. 591.9 FT AMSL (JUNE 7, 2016)
- 100-YEAR FLOODPLAIN ELEVATION AT THIS LOCATION ON THE SAGINAW RIVER IS 589.3 FEET NGVD29.

AERIAL PHOTO: USGS, 2010.

SOURCE:
GHD SURVEY, OCTOBER 2015.

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

Approved	

DRAWING STATUS		

RACER TRUST

SAGINAW NODULAR INDUSTRIAL LAND

SAGINAW, MICHIGAN

TOPOGRAPHY OF NORTHWESTERN

PORTION OF SECONDARY POND

Source Reference: 58502-T02(C3D-TRIG002)GN-WA001

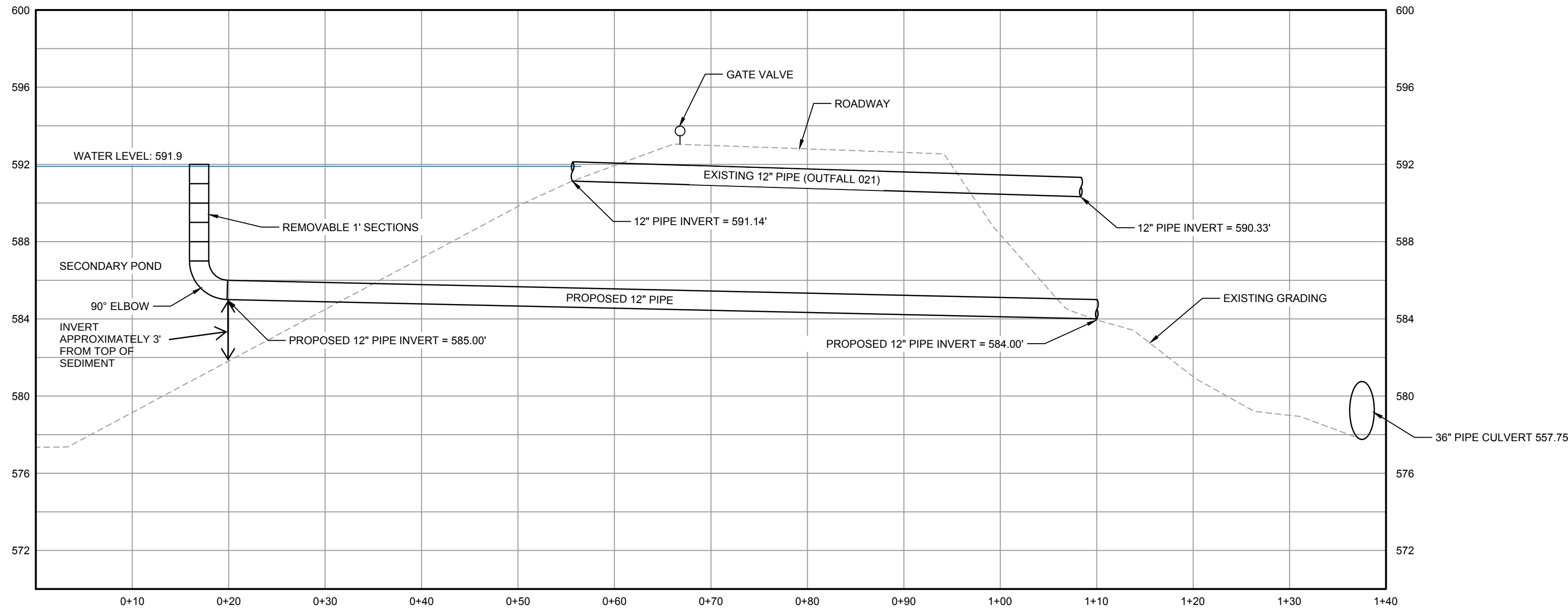
Project Manager: MT	Reviewed By: JEP	Date: JUNE 2016
Scale: AS SHOWN	Project Nº: 58502-T02	Report Nº: BAUE001
		Drawing Nº: figure 1



PLAN

SOUTHWEST

NORTHEAST



PROFILE

SCALE: HORZ. 1" = 10'
VERT. 1" = 5'

Nº	Revision	Date	Initial

LEGEND

- Ground Shot
592.506

Top Bank
593.198

Bottom Bank
591.363
- ●

●
- LOCATION SURVEYED OCTOBER 2016
(FT AMSL)

TOP BANK ELEVATION (FT AMSL)

BOTTOM BANK ELEVATION (FT AMSL)

- NOTES:
- POND ELEVATION APPROX. 591.9 FT AMSL (JUNE 7, 2016)
 - 100-YEAR FLOODPLAIN ELEVATION AT THIS LOCATION ON THE SAGINAW RIVER IS 589.3 FEET NGVD29.

SOURCE:
GHD SURVEY, OCTOBER 2015.

SCALE VERIFICATION

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



Approved

DRAWING STATUS

Status	Date	Initial

RACER TRUST
SAGINAW NODULAR INDUSTRIAL LAND

SAGINAW, MICHIGAN

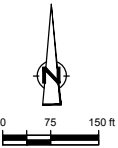
OUTFALL 2 PROFILE



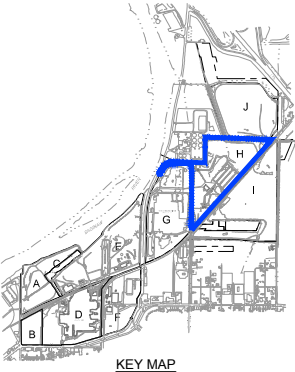
Source Reference: 58502-T02(C3D-TRIG002)GN-WA001			
Project Manager: MT	Reviewed By: JEP	Date: JUNE 2016	
Scale: AS SHOWN	Project Nº: 58502-T02	Report Nº: BAUE001	Drawing Nº: figure 2



SOURCES:
EXISTING GROUND CONTOURS ARE DERIVED FROM:
TOPOGRAPHY DRAWING RECEIVED FROM SANBORN
(AN AERIAL PHOTOGRAPHY COMPANY)
JANUARY 3, 1996 - STATE PLANE;
2009 SURVEY OF CLAY PILE BY SPICER;
2013 SURVEY OF SAND/CLAY PILES BY WILCOX.



- LEGEND
- A** INVESTIGATIVE UNIT BOUNDARY AND IDENTIFIER
 - APPROXIMATE LIMITS OF RACER PROPERTY
 - EXISTING GROUND CONTOUR (NGVD)
 - ▲** POND WATER AND SEDIMENT SAMPLE LOCATION
 - WATER SAMPLE LOCATION
 - SEDIMENT SAMPLE LOCATION
 - 100-FOOT GRID**
 - Ⓜ** PROPOSED SEDIMENT SAMPLE LOCATION



KEY MAP

SCALE VERIFICATION

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



REVITALIZING AUTOMOTIVE COMMUNITY ENVIRONMENTAL RESPONSE

SAGINAW, MICHIGAN

POND WATER AND SEDIMENT SAMPLE LOCATIONS



Source Reference: MICHIGAN STATE PLANE SOUTH, NAD 83 USING INTERNATIONAL FEET, NGVD 88 TOPO - SANBORN, 1996			
Project Manager: I.R.	Reviewed By: M.T.	Date: APRIL 2016	
Scale: 1" = 200'	Project N°: 58502-T02	Report N°: MEMO018	Drawing N°: figure 1

SECONDARY POND WATER SAMPLE ANALYTICAL RESULTS SUMMARY
NODULAR INDUSTRIAL LAND
SAGINAW, MICHIGAN

Page 1 of 20

Sample Location:
Sample ID:
Sample Date:

BD-340-16 BD-345-16 BD-349-16 MD-333-16
W-58502-032416-SSH-1637 W-58502-032416-SSH-1634 W-58502-031716-SSH-1623 W-58502-032416-SSH-1645
3/24/2016 3/24/2016 3/17/2016 3/24/2016

Parameters	Units	Res/Non_ Re s/GW Re Interface a	FCV b	HCV Drink c	HNV Drink d	WV e				
VOAs										
1,1,1-Trichloroethane	mg/L	0.089	0.089		62		-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	0.078	0.2	0.0032	0.18		-	-	-	-
1,1,2-Trichloroethane	mg/L	0.33	0.73	0.012	0.11		-	-	-	-
1,1-Dichloroethane	mg/L	0.74	0.74		9.8		-	-	-	-
1,1-Dichloroethene	mg/L	0.13	0.13		1.2		-	-	-	-
1,2,4-Trichlorobenzene	mg/L	0.099	0.13		0.08		-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/L			0.00024			-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.0057	0.015	0.00017	0.25		-	-	-	-
1,2-Dichlorobenzene	mg/L	0.013	0.013		2		-	-	-	-
1,2-Dichloroethane	mg/L	0.36	2	0.006	6.9		-	-	-	-
1,2-Dichloropropane	mg/L	0.23	0.23	0.0091	12		-	-	-	-
1,3-Dichlorobenzene	mg/L	0.028	0.028		0.037		-	-	-	-
1,4-Dichlorobenzene	mg/L	0.017	0.017	0.024	1.1		-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	2.2	2.2		17		-	-	-	-
2-Hexanone	mg/L				9.7		-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L						-	-	-	-
Acetone	mg/L	1.7	1.7		5.6		-	-	-	-
Benzene	mg/L	0.2	0.2	0.012	0.019		-	-	-	-
Bromodichloromethane	mg/L			0.0068	0.17		-	-	-	-
Bromoform	mg/L			0.052	0.47		-	-	-	-
Bromomethane (Methyl bromide)	mg/L	0.035	0.0042		0.039		-	-	-	-
Carbon disulfide	mg/L				1		-	-	-	-
Carbon tetrachloride	mg/L	0.045	0.077	0.0047	0.018		-	-	-	-
Chlorobenzene	mg/L	0.025	0.025		0.47		-	-	-	-
Chloroethane	mg/L	1.1	1.1	0.17	500		-	-	-	-
Chloroform (Trichloromethane)	mg/L	0.35	0.63		0.35		-	-	-	-
Chloromethane (Methyl chloride)	mg/L			0.11	3.5		-	-	-	-
cis-1,2-Dichloroethene	mg/L	0.62	0.62		0.88		-	-	-	-
cis-1,3-Dichloropropene	mg/L		0.009	0.0033	0.93		-	-	-	-
Cyclohexane	mg/L						-	-	-	-
Dibromochloromethane	mg/L			0.0068	0.57		-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/L				2.9		-	-	-	-
Ethylbenzene	mg/L	0.018	0.018	0.025	2.1		-	-	-	-
Isopropyl benzene	mg/L	0.028	0.028		1.7		-	-	-	-
Methyl acetate	mg/L						-	-	-	-
Methyl cyclohexane	mg/L						-	-	-	-
Methyl tert butyl ether (MTBE)	mg/L	7.1	32	0.1	0.92		-	-	-	-
Methylene chloride	mg/L	1.5	1.5	0.047	1.6		-	-	-	-
Styrene	mg/L	0.08	0.16	0.02	4.2		-	-	-	-
Tetrachloroethene	mg/L	0.06	0.19	0.011	0.32		-	-	-	-
Toluene	mg/L	0.27	0.27		5.6		-	-	-	-
trans-1,2-Dichloroethene	mg/L	1.5	1.5		0.47		-	-	-	-
trans-1,3-Dichloropropene	mg/L		0.009	0.0033	0.93		-	-	-	-
Trichloroethene	mg/L	0.2	0.2	0.029	0.044		-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/L						-	-	-	-
Trifluorotrchloroethane (CFC-113)	mg/L	0.032	0.032		444		-	-	-	-
Vinyl chloride	mg/L	0.013	0.93	0.00025	0.083		-	-	-	-
Xylenes (total)	mg/L	0.041	0.049		3.8		-	-	-	-
VOAsBTEX										
1,1,1-Trichloroethane	mg/L	0.089	0.089		62	0.001 U		0.001 U	0.001 U	-
1,1,2,2-Tetrachloroethane	mg/L	0.078	0.2	0.0032	0.18	0.001 U		0.001 U	0.001 U	-
1,1,2-Trichloroethane	mg/L	0.33	0.73	0.012	0.11	0.001 U		0.001 U	0.001 U	-
1,1-Dichloroethane	mg/L	0.74	0.74		9.8	0.001 U		0.001 U	0.001 U	-
1,1-Dichloroethene	mg/L	0.13	0.13		1.2	0.001 U		0.001 U	0.001 U	-

SECONDARY POND WATER SAMPLE ANALYTICAL RESULTS SUMMARY
NODULAR INDUSTRIAL LAND
SAGINAW, MICHIGAN

Page 2 of 20

Sample Location:
Sample ID:
Sample Date:

BD-340-16 BD-345-16 BD-349-16 MD-333-16
W-58502-032416-SSH-1637 W-58502-032416-SSH-1634 W-58502-031716-SSH-1623 W-58502-032416-SSH-1645
3/24/2016 3/24/2016 3/17/2016 3/24/2016

Parameters	Units	Res/Non_Re s/GW SW Interface a	FCV b	HCV Drink c	HNV Drink d	WV e				
1,2,4-Trichlorobenzene	mg/L	0.099	0.13		0.08	0.001 U	0.001 U	0.001 U	-	
1,2-Dibromo-3-chloropropane (DBCP)	mg/L			0.00024		0.001 U	0.001 U	0.001 U	-	
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.0057	0.015	0.00017	0.25	0.001 U	0.001 U	0.001 U	-	
1,2-Dichlorobenzene	mg/L	0.013	0.013		2	0.001 U	0.001 U	0.001 U	-	
1,2-Dichloroethane	mg/L	0.36	2	0.006	6.9	0.001 U	0.001 U	0.001 U	-	
1,2-Dichloropropane	mg/L	0.23	0.23	0.0091	12	0.001 U	0.001 U	0.001 U	-	
1,3-Dichlorobenzene	mg/L	0.028	0.028		0.037	0.001 U	0.001 U	0.001 U	-	
1,4-Dichlorobenzene	mg/L	0.017	0.017	0.024	1.1	0.001 U	0.001 U	0.001 U	-	
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	2.2	2.2		17	0.01 U	0.01 U	0.01 U	-	
2-Hexanone	mg/L				9.7	0.01 U	0.01 U	0.01 U	-	
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L					0.01 U	0.01 U	0.01 U	-	
Acetone	mg/L	1.7	1.7		5.6	0.01 U	0.01 U	0.01 U	-	
Benzene	mg/L	0.2	0.2	0.012	0.019	0.001 U	0.001 U	0.001 U	-	
Bromodichloromethane	mg/L			0.0068	0.17	0.001 U	0.001 U	0.001 U	-	
Bromoform	mg/L			0.052	0.47	0.001 U	0.001 U	0.001 U	-	
Bromomethane (Methyl bromide)	mg/L	0.035	0.0042		0.039	0.001 U	0.001 U	0.001 U	-	
Carbon disulfide	mg/L				1	0.005 U	0.005 U	0.005 U	-	
Carbon tetrachloride	mg/L	0.045	0.077	0.0047	0.018	0.001 U	0.001 U	0.001 U	-	
Chlorobenzene	mg/L	0.025	0.025		0.47	0.001 U	0.001 U	0.001 U	-	
Chloroethane	mg/L	1.1	1.1	0.17	500	0.001 U	0.001 U	0.001 U	-	
Chloroform (Trichloromethane)	mg/L	0.35	0.63		0.35	0.001 U	0.001 U	0.001 U	-	
Chloromethane (Methyl chloride)	mg/L			0.11	3.5	0.001 U	0.001 U	0.001 U	-	
cis-1,2-Dichloroethene	mg/L	0.62	0.62		0.88	0.001 U	0.001 U	0.001 U	-	
cis-1,3-Dichloropropene	mg/L		0.009	0.0033	0.93	0.001 U	0.001 U	0.001 U	-	
Cyclohexane	mg/L					0.001 U	0.001 U	0.001 U	-	
Dibromochloromethane	mg/L			0.0068	0.57	0.001 U	0.001 U	0.001 U	-	
Dichlorodifluoromethane (CFC-12)	mg/L				2.9	0.001 U	0.001 U	0.001 U	-	
Ethylbenzene	mg/L	0.018	0.018	0.025	2.1	0.001 U	0.001 U	0.001 U	-	
Isopropyl benzene	mg/L	0.028	0.028		1.7	0.001 U	0.001 U	0.001 U	-	
Methyl acetate	mg/L					0.01 U	0.01 U	0.01 U	-	
Methyl cyclohexane	mg/L					0.001 U	0.001 U	0.001 U	-	
Methyl tert butyl ether (MTBE)	mg/L	7.1	32	0.1	0.92	0.001 U	0.001 U	0.001 U	-	
Methylene chloride	mg/L	1.5	1.5	0.047	1.6	0.005 U	0.005 U	0.005 U	-	
Styrene	mg/L	0.08	0.16	0.02	4.2	0.001 U	0.001 U	0.001 U	-	
Tetrachloroethene	mg/L	0.06	0.19	0.011	0.32	0.001 U	0.001 U	0.001 U	-	
Toluene	mg/L	0.27	0.27		5.6	0.001 U	0.001 U	0.001 U	-	
trans-1,2-Dichloroethene	mg/L	1.5	1.5		0.47	0.001 U	0.001 U	0.001 U	-	
trans-1,3-Dichloropropene	mg/L		0.009	0.0033	0.93	0.001 U	0.001 U	0.001 U	-	
Trichloroethene	mg/L	0.2	0.2	0.029	0.044	0.001 U	0.001 U	0.001 U	-	
Trichlorofluoromethane (CFC-11)	mg/L					0.001 U	0.001 U	0.001 U	-	
Trifluorotrichloroethane (CFC-113)	mg/L	0.032	0.032		444	0.001 U	0.001 U	0.001 U	-	
Vinyl chloride	mg/L	0.013	0.93	0.00025	0.083	0.001 U	0.001 U	0.001 U	-	
Xylenes (total)	mg/L	0.041	0.049		3.8	0.002 U	0.002 U	0.002 U	-	
SVOAs										
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L			0.006	0.99	0.0048 U	0.0052 U	0.0049 U	-	
2,4,5-Trichlorophenol	mg/L					0.0048 U	0.0052 U	0.0049 U	-	
2,4,6-Trichlorophenol	mg/L	0.005	0.005	0.041	1.9	0.0038 U	0.0042 U	0.0039 U	-	
2,4-Dichlorophenol	mg/L	0.011	0.011		0.22	0.0095 U	0.01 U	0.0098 U	-	
2,4-Dimethylphenol	mg/L	0.38	0.38		0.45	0.0048 U	0.0052 U	0.0049 U	-	
2,4-Dinitrophenol	mg/L		0.019		0.055	0.019 U	0.021 U	0.02 U	-	
2,4-Dinitrotoluene	mg/L					0.0048 U	0.0052 U	0.0049 U	-	
2,6-Dinitrotoluene	mg/L					0.0048 U	0.0052 U	0.0049 U	-	
2-Chloronaphthalene	mg/L					0.0048 U	0.0052 U	0.0049 U	-	
2-Chlorophenol	mg/L	0.018	0.018		0.19	0.0048 U	0.0052 U	0.0049 U	-	
2-Methylnaphthalene	mg/L	0.019	0.019		0.6	0.0048 U	0.0052 U	0.0049 U	-	

SECONDARY POND WATER SAMPLE ANALYTICAL RESULTS SUMMARY
NODULAR INDUSTRIAL LAND
SAGINAW, MICHIGAN

Sample Location:
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BD-340-16 BD-345-16 BD-349-16 MD-333-16
W-58502-032416-SSH-1637 W-58502-032416-SSH-1634 W-58502-032416-SSH-1623 W-58502-032416-SSH-1645
3/24/2016 3/24/2016 3/17/2016 3/24/2016

Parameters	Units	Res/Non_Res/GW SW Interface a	FCV b	HCV Drink c	HNV Drink d	WV e				
2-Methylphenol	mg/L	0.03	0.076		1.4	0.0048 U	0.0052 U	0.0049 U	-	
2-Nitroaniline	mg/L					0.019 U	0.021 U	0.02 U	-	
2-Nitrophenol	mg/L		0.056			0.0048 U	0.0052 U	0.0049 U	-	
3&4-Methylphenol	mg/L	0.03	0.025		1.4	0.0048 U	0.0052 U	0.0049 U	-	
3,3'-Dichlorobenzidine	mg/L	0.0003	0.0045	0.00014	0.65	0.00095 U	0.001 U	0.00098 U	-	
3-Nitroaniline	mg/L					0.019 U	0.021 U	0.02 U	-	
4,6-Dinitro-2-methylphenol	mg/L					0.019 U	0.021 U	0.02 U	-	
4-Bromophenyl phenyl ether	mg/L					0.0048 U	0.0052 U	0.0049 U	-	
4-Chloro-3-methylphenol	mg/L	0.0074	0.0074		6.9	0.0048 U	0.0052 U	0.0049 U	-	
4-Chloroaniline	mg/L			0.002	0.039	0.0095 U	0.01 U	0.0098 U	-	
4-Chlorophenyl phenyl ether	mg/L					0.0048 U	0.0052 U	0.0049 U	-	
4-Nitroaniline	mg/L					0.019 U	0.021 U	0.02 U	-	
4-Nitrophenol	mg/L		0.2		0.68	0.019 U	0.021 U	0.02 U	-	
Acenaphthene	mg/L	0.038	0.038		0.58	0.0048 U	0.0052 U	0.0049 U	-	
Acenaphthylene	mg/L					0.0048 U	0.0052 U	0.0049 U	-	
Acetophenone	mg/L					0.0048 U	0.0052 U	0.0049 U	-	
Anthracene	mg/L				1.9	0.0048 U	0.0052 U	0.0049 U	-	
Atrazine	mg/L	0.0073	0.0073		0.88	0.0029 U	0.0031 U	0.0029 U	-	
Benzaldehyde	mg/L					0.0048 U	0.0052 U	0.0049 U	-	
Benzo(a)anthracene	mg/L					0.00095 U	0.001 U	0.00098 U	-	
Benzo(a)pyrene	mg/L					0.00095 U	0.001 U	0.00098 U	-	
Benzo(b)fluoranthene	mg/L					0.00095 U	0.001 U	0.00098 U	-	
Benzo(g,h,i)perylene	mg/L					0.00095 U	0.001 U	0.00098 U	-	
Benzo(k)fluoranthene	mg/L					0.00095 U	0.001 U	0.00098 U	-	
Biphenyl (1,1-Biphenyl)	mg/L		0.013		0.46	0.0048 U	0.0052 U	0.0049 U	-	
bis(2-Chloroethoxy)methane	mg/L					0.0048 U	0.0052 U	0.0049 U	-	
bis(2-Chloroethyl)ether	mg/L	0.001		0.00079		0.00095 U	0.001 U	0.00098 U	-	
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.025		0.014	0.12	0.0048 U	0.0052 U	0.0049 U	-	
Butyl benzylphthalate (BBP)	mg/L	0.067	0.067		0.0069	0.0048 U	0.0052 U	0.0049 U	-	
Caprolactam	mg/L					0.0095 U	0.01 U	0.0098 U	-	
Carbazole	mg/L	0.01	0.004	0.019		0.0095 U	0.01 U	0.0098 U	-	
Chrysene	mg/L					0.00095 U	0.001 U	0.00098 U	-	
Dibenz(a,h)anthracene	mg/L					0.0019 U	0.0021 U	0.002 U	-	
Dibenzofuran	mg/L	0.004	0.004			0.0038 U	0.0042 U	0.0039 U	-	
Diethyl phthalate	mg/L	0.11	0.11		14	0.0048 U	0.0052 U	0.0049 U	-	
Dimethyl phthalate	mg/L					0.0048 U	0.0052 U	0.0049 U	-	
Di-n-butylphthalate (DBP)	mg/L	0.0097	0.0097		0.64	0.0048 U	0.0052 U	0.0049 U	-	
Di-n-octyl phthalate (DnOP)	mg/L				0.24	0.0048 U	0.0052 U	0.0049 U	-	
Fluoranthene	mg/L	0.0016	0.0016		0.018	0.00095 U*	0.001 U*	0.00098 U	-	
Fluorene	mg/L	0.012	0.012		0.14	0.0048 U	0.0052 U	0.0049 U	-	
Hexachlorobenzene	mg/L	0.0002		0.00000045	0.000046	0.00019 U	0.00021 U	0.0002 U	-	
Hexachlorobutadiene	mg/L	0.000053	0.001	0.00033	0.000093	0.00095 U	0.001 U	0.00098 U	-	
Hexachlorocyclopentadiene	mg/L				0.14	0.0048 U	0.0052 U	0.0049 U	-	
Hexachloroethane	mg/L	0.0067	0.013	0.0053	0.006	0.0048 U	0.0052 U	0.0049 U	-	
Indeno(1,2,3-cd)pyrene	mg/L					0.0019 U	0.0021 U	0.002 U	-	
Isophorone	mg/L	1.3	1.3	0.31	4.1	0.0048 U	0.0052 U	0.0049 U	-	
Naphthalene	mg/L	0.011	0.011		1.1	0.0048 U	0.0052 U	0.0049 U	-	
Nitrobenzene	mg/L	0.18	0.23	0.0047	0.026	0.0029 U	0.0031 U	0.0029 U	-	
N-Nitrosodi-n-propylamine	mg/L					0.0048 U	0.0052 U	0.0049 U	-	
N-Nitrosodiphenylamine	mg/L					0.0048 U	0.0052 U	0.0049 U	-	
Pentachlorophenol	mg/L			0.0018	0.3	0.0048 U	0.0052 U	0.0049 U	-	
Phenanthrene	mg/L	0.002	0.0017			0.0019 U	0.0021 U	0.002 U	-	
Phenol	mg/L	0.45	0.45		1.1	0.0048 U	0.0052 U	0.0049 U	-	
Pyrene	mg/L				0.015	0.0048 U	0.0052 U	0.0049 U	-	

Metals

SECONDARY POND WATER SAMPLE ANALYTICAL RESULTS SUMMARY
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BD-340-16 BD-345-16 BD-349-16 MD-333-16
W-58502-032416-SSH-1637 W-58502-032416-SSH-1634 W-58502-031716-SSH-1623 W-58502-032416-SSH-1645
3/24/2016 3/24/2016 3/17/2016 3/24/2016

Parameters	Units	Res/Non_Re s/GW Re Interface	FCV	HCV Drink	HNV Drink	WV				
		a	b	c	d	e				
Aluminum	mg/L					0.1		0.11	0.092	-
Antimony	mg/L	0.13	0.24		0.0017	0.002 U		0.002 U	0.002 U	-
Antimony, total recoverable	mg/L	0.13	0.24		0.0017	-		-	-	-
Arsenic	mg/L	0.01	0.15	0.01	0.01	0.005 U		0.005 U	0.005 U	-
Arsenic, total recoverable	mg/L	0.01	0.15	0.01	0.01	-		-	-	-
Barium	mg/L	0.69 (1)			1.9	0.1 U		0.1 U	0.1 U	-
Barium, total recoverable	mg/L	0.69 (1)			1.9	-		-	-	-
Beryllium	mg/L	0.0072 (1)			0.16	0.001 U		0.001 U	0.001 U	-
Beryllium, total recoverable	mg/L	0.0072 (1)			0.16	-		-	-	-
Cadmium	mg/L	0.0031 (1)			0.0025	0.001 U		0.001 U	0.001 U	-
Cadmium, total recoverable	mg/L	0.0031 (1)			0.0025	-		-	-	-
Calcium	mg/L					57		63	56	-
Calcium, total recoverable	mg/L					-		-	-	-
Chromium	mg/L	0.11 (1)(2)			0.12	0.01 U		0.01 U	0.01 U	-
Chromium, total recoverable	mg/L	0.11 (1)(2)			0.12	-		-	-	-
Cobalt	mg/L	0.1	0.1			0.02 U		0.02 U	0.02 U	-
Cobalt, total recoverable	mg/L	0.1	0.1			-		-	-	-
Copper	mg/L	0.013 (1)			0.47	0.004 U		0.004 U	0.004 U	-
Copper, total recoverable	mg/L	0.013 (1)			0.47	-		-	-	-
Iron	mg/L					0.2 U		0.2 U	0.2 U	-
Lead	mg/L	0.029 (1)			0.014	0.003 U		0.003 U	0.003 U	-
Lead, total recoverable	mg/L	0.029 (1)			0.014	-		-	-	-
Magnesium	mg/L					16		17	18	-
Magnesium, total recoverable	mg/L					-		-	-	-
Manganese	mg/L	2.90 (1)			1.3	0.29		0.32	0.18	-
Manganese, total recoverable	mg/L	2.90 (1)			1.3	-		-	-	-
Mercury	mg/L	0.0000013			0.0000018	0.000013		0.0002 U	0.0002 U	-
Nickel	mg/L	0.075 (1)			2.6	0.02 U		0.02 U	0.02 U	-
Nickel, total recoverable	mg/L	0.075 (1)			2.6	-		-	-	-
Potassium	mg/L					12		13	13	-
Selenium	mg/L	0.005	0.005		0.12	0.005 U		0.005 U	0.005 U	-
Selenium, total recoverable	mg/L	0.005	0.005		0.12	-		-	-	-
Silver	mg/L	0.0002	0.00006		0.13	0.0002 U		0.0002 U	0.0002 U	-
Silver, total recoverable	mg/L	0.0002	0.00006		0.13	-		-	-	-
Sodium	mg/L					190		210	150	-
Thallium	mg/L	0.0037	0.0072		0.0012	0.002 U		0.002 U	0.002 U	-
Thallium, total recoverable	mg/L	0.0037	0.0072		0.0012	-		-	-	-
Vanadium	mg/L	0.027	0.027		0.053	0.004 U		0.004 U	0.004 U	-
Vanadium, total recoverable	mg/L	0.027	0.027		0.053	-		-	-	-
Zinc	mg/L	0.17 (1)			3.3	0.05 U		0.05 U	0.05 U	-
Zinc, total recoverable	mg/L	0.17 (1)			3.3	-		-	-	-
PCBs										
Aroclor-1016 (PCB-1016)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	0.000095 U	0.000095 U	0.000096 U	-
Aroclor-1221 (PCB-1221)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	0.000095 U	0.000095 U	0.000096 U	-
Aroclor-1232 (PCB-1232)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	0.000095 U	0.000095 U	0.000096 U	-
Aroclor-1242 (PCB-1242)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	0.000095 U	0.000095 U	0.000096 U	-
Aroclor-1248 (PCB-1248)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	0.000095 U	0.000095 U	0.000096 U	-
Aroclor-1254 (PCB-1254)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	0.000095 U	0.000095 U	0.000096 U	-
Aroclor-1260 (PCB-1260)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	0.000095 U	0.000095 U	0.000096 U	-
Aroclor-1262 (PCB-1262)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	-	-	-	-

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W-58502-032416-SSH-1637 W-58502-032416-SSH-1634 W-58502-031716-SSH-1623 W-58502-032416-SSH-1645
3/24/2016 3/24/2016 3/17/2016 3/24/2016

Parameters	Units	Res/Non_Res/GW SW Interface a	FCV b	HCV Drink c	HNV Drink d	WV e				
Wet										
Ammonia	mg/L		0.029				-	-	-	-
Ammonia-N	mg/L						0.20 U	0.20 U	-	-
Biochemical oxygen demand (BOD)	mg/L						-	-	-	-
Biochemical oxygen demand (carbonaceous)	mg/L						6.3	5.4	-	-
Chemical oxygen demand (COD)	mg/L						-	-	-	-
Cyanide (amenable)	mg/L						-	-	-	-
Cyanide (total)	mg/L	0.0052	0.0052		0.6		-	-	-	-
Formaldehyde	mg/L	0.12	0.18		5		0.050 U	0.050 U	-	0.050 U
Hardness, carbonate	mg/L						-	-	-	-
Nitrate (as N)	mg/L						-	-	-	-
Oil and grease (HEM), polar	mg/L						-	-	-	-
pH, lab	s.u.						-	-	-	-
Phenolics (total)	mg/L						-	-	-	-
Total organic carbon (TOC)	mg/L						-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.

J Estimated concentration.

UJ Not detected; associated reporting limit is estimated.

(1) Calculated GSI value, based on assumed value of hardness of 154.3 mg/kg (average calculated in the North Ditch - 2013)

(2) Chromium III criteria utilized since speciated data in the RFI indicated that available chromium was Chromium III

(3) PCB TSCA Criteria

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W-58502-032416-SSH-1636 W-58502-032416-SSH-1633 W-58502-031716-SSH-1622 W-58502-032416-SSH-1644
3/24/2016 3/24/2016 3/17/2016 3/24/2016

Parameters	Units	Res/Non_Res/GW Re Interface a	FCV b	HCV Drink c	HNV Drink d	WV e				
VOAs										
1,1,1-Trichloroethane	mg/L	0.089	0.089		62		-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	0.078	0.2	0.0032	0.18		-	-	-	-
1,1,2-Trichloroethane	mg/L	0.33	0.73	0.012	0.11		-	-	-	-
1,1-Dichloroethane	mg/L	0.74	0.74		9.8		-	-	-	-
1,1-Dichloroethene	mg/L	0.13	0.13		1.2		-	-	-	-
1,2,4-Trichlorobenzene	mg/L	0.099	0.13		0.08		-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/L			0.00024			-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.0057	0.015	0.00017	0.25		-	-	-	-
1,2-Dichlorobenzene	mg/L	0.013	0.013		2		-	-	-	-
1,2-Dichloroethane	mg/L	0.36	2	0.006	6.9		-	-	-	-
1,2-Dichloropropane	mg/L	0.23	0.23	0.0091	12		-	-	-	-
1,3-Dichlorobenzene	mg/L	0.028	0.028		0.037		-	-	-	-
1,4-Dichlorobenzene	mg/L	0.017	0.017	0.024	1.1		-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	2.2	2.2		17		-	-	-	-
2-Hexanone	mg/L				9.7		-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L						-	-	-	-
Acetone	mg/L	1.7	1.7		5.6		-	-	-	-
Benzene	mg/L	0.2	0.2	0.012	0.019		-	-	-	-
Bromodichloromethane	mg/L			0.0068	0.17		-	-	-	-
Bromoform	mg/L			0.052	0.47		-	-	-	-
Bromomethane (Methyl bromide)	mg/L	0.035	0.0042		0.039		-	-	-	-
Carbon disulfide	mg/L				1		-	-	-	-
Carbon tetrachloride	mg/L	0.045	0.077	0.0047	0.018		-	-	-	-
Chlorobenzene	mg/L	0.025	0.025		0.47		-	-	-	-
Chloroethane	mg/L	1.1	1.1	0.17	500		-	-	-	-
Chloroform (Trichloromethane)	mg/L	0.35	0.63		0.35		-	-	-	-
Chloromethane (Methyl chloride)	mg/L			0.11	3.5		-	-	-	-
cis-1,2-Dichloroethene	mg/L	0.62	0.62		0.88		-	-	-	-
cis-1,3-Dichloropropene	mg/L		0.009	0.0033	0.93		-	-	-	-
Cyclohexane	mg/L						-	-	-	-
Dibromochloromethane	mg/L			0.0068	0.57		-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/L				2.9		-	-	-	-
Ethylbenzene	mg/L	0.018	0.018	0.025	2.1		-	-	-	-
Isopropyl benzene	mg/L	0.028	0.028		1.7		-	-	-	-
Methyl acetate	mg/L						-	-	-	-
Methyl cyclohexane	mg/L						-	-	-	-
Methyl tert butyl ether (MTBE)	mg/L	7.1	32	0.1	0.92		-	-	-	-
Methylene chloride	mg/L	1.5	1.5	0.047	1.6		-	-	-	-
Styrene	mg/L	0.08	0.16	0.02	4.2		-	-	-	-
Tetrachloroethene	mg/L	0.06	0.19	0.011	0.32		-	-	-	-
Toluene	mg/L	0.27	0.27		5.6		-	-	-	-
trans-1,2-Dichloroethene	mg/L	1.5	1.5		0.47		-	-	-	-
trans-1,3-Dichloropropene	mg/L		0.009	0.0033	0.93		-	-	-	-
Trichloroethene	mg/L	0.2	0.2	0.029	0.044		-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/L						-	-	-	-
Trifluorotrchloroethane (CFC-113)	mg/L	0.032	0.032		444		-	-	-	-
Vinyl chloride	mg/L	0.013	0.93	0.00025	0.083		-	-	-	-
Xylenes (total)	mg/L	0.041	0.049		3.8		-	-	-	-
VOAsBTEX										
1,1,1-Trichloroethane	mg/L	0.089	0.089		62	0.001 U		0.001 U	0.001 U	-
1,1,2,2-Tetrachloroethane	mg/L	0.078	0.2	0.0032	0.18	0.001 U		0.001 U	0.001 U	-
1,1,2-Trichloroethane	mg/L	0.33	0.73	0.012	0.11	0.001 U		0.001 U	0.001 U	-
1,1-Dichloroethane	mg/L	0.74	0.74		9.8	0.001 U		0.001 U	0.001 U	-
1,1-Dichloroethene	mg/L	0.13	0.13		1.2	0.001 U		0.001 U	0.001 U	-

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W-58502-032416-SSH-1636 W-58502-032416-SSH-1633 W-58502-031716-SSH-1622 W-58502-032416-SSH-1644
3/24/2016 3/24/2016 3/17/2016 3/24/2016

Parameters	Units	Res/Non_Re s/GW SW Interface a	FCV b	HCV Drink c	HNV Drink d	WV e				
1,2,4-Trichlorobenzene	mg/L	0.099	0.13		0.08	0.001 U	0.001 U	0.001 U	-	
1,2-Dibromo-3-chloropropane (DBCP)	mg/L			0.00024		0.001 U	0.001 U	0.001 U	-	
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.0057	0.015	0.00017	0.25	0.001 U	0.001 U	0.001 U	-	
1,2-Dichlorobenzene	mg/L	0.013	0.013		2	0.001 U	0.001 U	0.001 U	-	
1,2-Dichloroethane	mg/L	0.36	2	0.006	6.9	0.001 U	0.001 U	0.001 U	-	
1,2-Dichloropropane	mg/L	0.23	0.23	0.0091	12	0.001 U	0.001 U	0.001 U	-	
1,3-Dichlorobenzene	mg/L	0.028	0.028		0.037	0.001 U	0.001 U	0.001 U	-	
1,4-Dichlorobenzene	mg/L	0.017	0.017	0.024	1.1	0.001 U	0.001 U	0.001 U	-	
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	2.2	2.2		17	0.01 U	0.01 U	0.01 U	-	
2-Hexanone	mg/L				9.7	0.01 U	0.01 U	0.01 U	-	
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L					0.01 U	0.01 U	0.01 U	-	
Acetone	mg/L	1.7	1.7		5.6	0.01 U	0.01 U	0.01 U	-	
Benzene	mg/L	0.2	0.2	0.012	0.019	0.001 U	0.001 U	0.001 U	-	
Bromodichloromethane	mg/L			0.0068	0.17	0.001 U	0.001 U	0.001 U	-	
Bromoform	mg/L			0.052	0.47	0.001 U	0.001 U	0.001 U	-	
Bromomethane (Methyl bromide)	mg/L	0.035	0.0042		0.039	0.001 U	0.001 U	0.001 U	-	
Carbon disulfide	mg/L				1	0.005 U	0.005 U	0.005 U	-	
Carbon tetrachloride	mg/L	0.045	0.077	0.0047	0.018	0.001 U	0.001 U	0.001 U	-	
Chlorobenzene	mg/L	0.025	0.025		0.47	0.001 U	0.001 U	0.001 U	-	
Chloroethane	mg/L	1.1	1.1	0.17	500	0.001 U	0.001 U	0.001 U	-	
Chloroform (Trichloromethane)	mg/L	0.35	0.63		0.35	0.001 U	0.001 U	0.001 U	-	
Chloromethane (Methyl chloride)	mg/L			0.11	3.5	0.001 U	0.001 U	0.001 U	-	
cis-1,2-Dichloroethene	mg/L	0.62	0.62		0.88	0.001 U	0.001 U	0.001 U	-	
cis-1,3-Dichloropropene	mg/L		0.009	0.0033	0.93	0.001 U	0.001 U	0.001 U	-	
Cyclohexane	mg/L					0.001 U	0.001 U	0.001 U	-	
Dibromochloromethane	mg/L			0.0068	0.57	0.001 U	0.001 U	0.001 U	-	
Dichlorodifluoromethane (CFC-12)	mg/L				2.9	0.001 U	0.001 U	0.001 U	-	
Ethylbenzene	mg/L	0.018	0.018	0.025	2.1	0.001 U	0.001 U	0.001 U	-	
Isopropyl benzene	mg/L	0.028	0.028		1.7	0.001 U	0.001 U	0.001 U	-	
Methyl acetate	mg/L					0.01 U	0.01 U	0.01 U	-	
Methyl cyclohexane	mg/L					0.001 U	0.001 U	0.001 U	-	
Methyl tert butyl ether (MTBE)	mg/L	7.1	32	0.1	0.92	0.001 U	0.001 U	0.001 U	-	
Methylene chloride	mg/L	1.5	1.5	0.047	1.6	0.005 U	0.005 U	0.005 U	-	
Styrene	mg/L	0.08	0.16	0.02	4.2	0.001 U	0.001 U	0.001 U	-	
Tetrachloroethene	mg/L	0.06	0.19	0.011	0.32	0.001 U	0.001 U	0.001 U	-	
Toluene	mg/L	0.27	0.27		5.6	0.001 U	0.001 U	0.001 U	-	
trans-1,2-Dichloroethene	mg/L	1.5	1.5		0.47	0.001 U	0.001 U	0.001 U	-	
trans-1,3-Dichloropropene	mg/L		0.009	0.0033	0.93	0.001 U	0.001 U	0.001 U	-	
Trichloroethene	mg/L	0.2	0.2	0.029	0.044	0.001 U	0.001 U	0.001 U	-	
Trichlorofluoromethane (CFC-11)	mg/L					0.001 U	0.001 U	0.001 U	-	
Trifluorotrichloroethane (CFC-113)	mg/L	0.032	0.032		444	0.001 U	0.001 U	0.001 U	-	
Vinyl chloride	mg/L	0.013	0.93	0.00025	0.083	0.001 U	0.001 U	0.001 U	-	
Xylenes (total)	mg/L	0.041	0.049		3.8	0.002 U	0.002 U	0.002 U	-	
SVOAs										
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L			0.006	0.99	0.0052 U	0.0052 U	0.005 U	-	
2,4,5-Trichlorophenol	mg/L					0.0052 U	0.0052 U	0.005 U	-	
2,4,6-Trichlorophenol	mg/L	0.005	0.005	0.041	1.9	0.0042 U	0.0042 U	0.004 U	-	
2,4-Dichlorophenol	mg/L	0.011	0.011		0.22	0.01 U	0.01 U	0.01 U	-	
2,4-Dimethylphenol	mg/L	0.38	0.38		0.45	0.0052 U	0.0052 U	0.005 U	-	
2,4-Dinitrophenol	mg/L		0.019		0.055	0.021 U	0.021 U	0.02 U	-	
2,4-Dinitrotoluene	mg/L					0.0052 U	0.0052 U	0.005 U	-	
2,6-Dinitrotoluene	mg/L					0.0052 U	0.0052 U	0.005 U	-	
2-Chloronaphthalene	mg/L					0.0052 U	0.0052 U	0.005 U	-	
2-Chlorophenol	mg/L	0.018	0.018		0.19	0.0052 U	0.0052 U	0.005 U	-	
2-Methylnaphthalene	mg/L	0.019	0.019		0.6	0.0052 U	0.0052 U	0.005 U	-	

SECONDARY POND WATER SAMPLE ANALYTICAL RESULTS SUMMARY
NODULAR INDUSTRIAL LAND
SAGINAW, MICHIGAN

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MD-339-16 MD-344-16 MD-348-16 MD-350-16
W-58502-032416-SSH-1636 W-58502-032416-SSH-1633 W-58502-031716-SSH-1622 W-58502-032416-SSH-1644
3/24/2016 3/24/2016 3/17/2016 3/24/2016

Parameters	Units	Res/Non_Res/GW SW Interface a	FCV b	HCV Drink c	HNV Drink d	WV e				
2-Methylphenol	mg/L	0.03	0.076		1.4	0.0052 U	0.0052 U	0.005 U	-	
2-Nitroaniline	mg/L					0.021 U	0.021 U	0.02 U	-	
2-Nitrophenol	mg/L		0.056			0.0052 U	0.0052 U	0.005 U	-	
3&4-Methylphenol	mg/L	0.03	0.025		1.4	0.0052 U	0.0052 U	0.005 U	-	
3,3'-Dichlorobenzidine	mg/L	0.0003	0.0045	0.00014	0.65	0.001 U	0.001 U	0.001 U	-	
3-Nitroaniline	mg/L					0.021 U	0.021 U	0.02 U	-	
4,6-Dinitro-2-methylphenol	mg/L					0.021 U	0.021 U	0.02 U	-	
4-Bromophenyl phenyl ether	mg/L					0.0052 U	0.0052 U	0.005 U	-	
4-Chloro-3-methylphenol	mg/L	0.0074	0.0074		6.9	0.0052 U	0.0052 U	0.005 U	-	
4-Chloroaniline	mg/L			0.002	0.039	0.01 U	0.01 U	0.01 U	-	
4-Chlorophenyl phenyl ether	mg/L					0.0052 U	0.0052 U	0.005 U	-	
4-Nitroaniline	mg/L					0.021 U	0.021 U	0.02 U	-	
4-Nitrophenol	mg/L		0.2		0.68	0.021 U	0.021 U	0.02 U	-	
Acenaphthene	mg/L	0.038	0.038		0.58	0.0052 U	0.0052 U	0.005 U	-	
Acenaphthylene	mg/L					0.0052 U	0.0052 U	0.005 U	-	
Acetophenone	mg/L					0.0052 U	0.0052 U	0.005 U	-	
Anthracene	mg/L				1.9	0.0052 U	0.0052 U	0.005 U	-	
Atrazine	mg/L	0.0073	0.0073		0.88	0.0031 U	0.0031 U	0.003 U	-	
Benzaldehyde	mg/L					0.0052 U	0.0052 U	0.005 U	-	
Benzo(a)anthracene	mg/L					0.001 U	0.001 U	0.001 U	-	
Benzo(a)pyrene	mg/L					0.001 U	0.001 U	0.001 U	-	
Benzo(b)fluoranthene	mg/L					0.001 U	0.001 U	0.001 U	-	
Benzo(g,h,i)perylene	mg/L					0.001 U	0.001 U	0.001 U	-	
Benzo(k)fluoranthene	mg/L					0.001 U	0.001 U	0.001 U	-	
Biphenyl (1,1-Biphenyl)	mg/L		0.013		0.46	0.0052 U	0.0052 U	0.005 U	-	
bis(2-Chloroethoxy)methane	mg/L					0.0052 U	0.0052 U	0.005 U	-	
bis(2-Chloroethyl)ether	mg/L	0.001		0.00079		0.001 U	0.001 U	0.001 U	-	
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.025		0.014	0.12	0.0052 U	0.0052 U	0.005 U	-	
Butyl benzylphthalate (BBP)	mg/L	0.067	0.067		0.0069	0.0052 U	0.0052 U	0.005 U	-	
Caprolactam	mg/L					0.01 U	0.01 U	0.01 U	-	
Carbazole	mg/L	0.01	0.004	0.019		0.01 U	0.01 U	0.01 U	-	
Chrysene	mg/L					0.001 U	0.001 U	0.001 U	-	
Dibenz(a,h)anthracene	mg/L					0.0021 U	0.0021 U	0.002 U	-	
Dibenzofuran	mg/L	0.004	0.004			0.0042 U	0.0042 U	0.004 U	-	
Diethyl phthalate	mg/L	0.11	0.11		14	0.0052 U	0.0052 U	0.005 U	-	
Dimethyl phthalate	mg/L					0.0052 U	0.0052 U	0.005 U	-	
Di-n-butylphthalate (DBP)	mg/L	0.0097	0.0097		0.64	0.0052 U	0.0052 U	0.005 U	-	
Di-n-octyl phthalate (DnOP)	mg/L				0.24	0.0052 U	0.0052 U	0.005 U	-	
Fluoranthene	mg/L	0.0016	0.0016		0.018	0.001 U*	0.001 U*	0.001 U	-	
Fluorene	mg/L	0.012	0.012		0.14	0.0052 U	0.0052 U	0.005 U	-	
Hexachlorobenzene	mg/L	0.0002		0.00000045	0.000046	0.00021 U	0.00021 U	0.0002 U	-	
Hexachlorobutadiene	mg/L	0.000053	0.001	0.00033	0.000093	0.001 U	0.001 U	0.001 U	-	
Hexachlorocyclopentadiene	mg/L				0.14	0.0052 U	0.0052 U	0.005 U	-	
Hexachloroethane	mg/L	0.0067	0.013	0.0053	0.006	0.0052 U	0.0052 U	0.005 U	-	
Indeno(1,2,3-cd)pyrene	mg/L					0.0021 U	0.0021 U	0.002 U	-	
Isophorone	mg/L	1.3	1.3	0.31	4.1	0.0052 U	0.0052 U	0.005 U	-	
Naphthalene	mg/L	0.011	0.011		1.1	0.0052 U	0.0052 U	0.005 U	-	
Nitrobenzene	mg/L	0.18	0.23	0.0047	0.026	0.0031 U	0.0031 U	0.003 U	-	
N-Nitrosodi-n-propylamine	mg/L					0.0052 U	0.0052 U	0.005 U	-	
N-Nitrosodiphenylamine	mg/L					0.0052 U	0.0052 U	0.005 U	-	
Pentachlorophenol	mg/L			0.0018	0.3	0.0052 U	0.0052 U	0.005 U	-	
Phenanthrene	mg/L	0.002	0.0017			0.0021 U	0.0021 U	0.002 U	-	
Phenol	mg/L	0.45	0.45		1.1	0.0052 U	0.0052 U	0.005 U	-	
Pyrene	mg/L				0.015	0.0052 U	0.0052 U	0.005 U	-	

Metals

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W-58502-032416-SSH-1636 W-58502-032416-SSH-1633 W-58502-031716-SSH-1622 W-58502-032416-SSH-1644
3/24/2016 3/24/2016 3/17/2016 3/24/2016

Parameters	Units	Res/Non_Re s/GW SW Interface	FCV	HCV Drink	HNV Drink	WV				
		a	b	c	d	e				
Aluminum	mg/L					0.12	0.13	0.092	-	
Antimony	mg/L	0.13	0.24		0.0017	0.002 U	0.002 U	0.002 U	-	
Antimony, total recoverable	mg/L	0.13	0.24		0.0017	-	-	-	-	
Arsenic	mg/L	0.01	0.15	0.01	0.01	0.005 U	0.005 U	0.005 U	-	
Arsenic, total recoverable	mg/L	0.01	0.15	0.01	0.01	-	-	-	-	
Barium	mg/L	0.69 (1)			1.9	0.1 U	0.1 U	0.1 U	-	
Barium, total recoverable	mg/L	0.69 (1)			1.9	-	-	-	-	
Beryllium	mg/L	0.0072 (1)			0.16	0.001 U	0.001 U	0.001 U	-	
Beryllium, total recoverable	mg/L	0.0072 (1)			0.16	-	-	-	-	
Cadmium	mg/L	0.0031 (1)			0.0025	0.001 U	0.001 U	0.001 U	-	
Cadmium, total recoverable	mg/L	0.0031 (1)			0.0025	-	-	-	-	
Calcium	mg/L					62	65	54	-	
Calcium, total recoverable	mg/L					-	-	-	-	
Chromium	mg/L	0.11 (1)(2)			0.12	0.01 U	0.01 U	0.01 U	-	
Chromium, total recoverable	mg/L	0.11 (1)(2)			0.12	-	-	-	-	
Cobalt	mg/L	0.1	0.1			0.02 U	0.02 U	0.02 U	-	
Cobalt, total recoverable	mg/L	0.1	0.1			-	-	-	-	
Copper	mg/L	0.013 (1)			0.47	0.004 U	0.004 U	0.004 U	-	
Copper, total recoverable	mg/L	0.013 (1)			0.47	-	-	-	-	
Iron	mg/L					0.2 U	0.2 U	0.2 U	-	
Lead	mg/L	0.029 (1)			0.014	0.003 U	0.003 U	0.003 U	-	
Lead, total recoverable	mg/L	0.029 (1)			0.014	-	-	-	-	
Magnesium	mg/L					17	18	18	-	
Magnesium, total recoverable	mg/L					-	-	-	-	
Manganese	mg/L	2.90 (1)			1.3	0.31	0.34	0.18	-	
Manganese, total recoverable	mg/L	2.90 (1)			1.3	-	-	-	-	
Mercury	mg/L	0.0000013			0.0000018	0.000013	0.0002 U	0.0002 U	-	
Nickel	mg/L	0.075 (1)			2.6	0.02 U	0.02 U	0.02 U	-	
Nickel, total recoverable	mg/L	0.075 (1)			2.6	-	-	-	-	
Potassium	mg/L					13	14	13	-	
Selenium	mg/L	0.005	0.005		0.12	0.005 U	0.005 U	0.005 U	-	
Selenium, total recoverable	mg/L	0.005	0.005		0.12	-	-	-	-	
Silver	mg/L	0.0002	0.00006		0.13	0.0002 U	0.0002 U	0.0002 U	-	
Silver, total recoverable	mg/L	0.0002	0.00006		0.13	-	-	-	-	
Sodium	mg/L					200	220	150	-	
Thallium	mg/L	0.0037	0.0072		0.0012	0.002 U	0.002 U	0.002 U	-	
Thallium, total recoverable	mg/L	0.0037	0.0072		0.0012	-	-	-	-	
Vanadium	mg/L	0.027	0.027		0.053	0.004 U	0.004 U	0.004 U	-	
Vanadium, total recoverable	mg/L	0.027	0.027		0.053	-	-	-	-	
Zinc	mg/L	0.17 (1)			3.3	0.05 U	0.05 U	0.05 U	-	
Zinc, total recoverable	mg/L	0.17 (1)			3.3	-	-	-	-	
PCBs										
Aroclor-1016 (PCB-1016)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	0.000095 U	0.000095 U	0.000096 U	-
Aroclor-1221 (PCB-1221)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	0.000095 U	0.000095 U	0.000096 U	-
Aroclor-1232 (PCB-1232)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	0.000095 U	0.000095 U	0.000096 U	-
Aroclor-1242 (PCB-1242)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	0.000095 U	0.000095 U	0.000096 U	-
Aroclor-1248 (PCB-1248)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	0.000095 U	0.000095 U	0.000096 U	-
Aroclor-1254 (PCB-1254)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	0.000095 U	0.000095 U	0.000096 U	-
Aroclor-1260 (PCB-1260)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	0.000095 U	0.000095 U	0.000096 U	-
Aroclor-1262 (PCB-1262)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/L	0.0002	1 (3)		0.000000026	0.00000012	-	-	-	-

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3/24/2016 3/24/2016 3/17/2016 3/24/2016

Parameters	Units	Res/Non_Res/GW SW Interface a	FCV b	HCV Drink c	HNV Drink d	WV e				
Wet										
Ammonia	mg/L		0.029				-	-	-	-
Ammonia-N	mg/L						0.20 U	0.20 U	0.20 U	-
Biochemical oxygen demand (BOD)	mg/L						-	-	-	-
Biochemical oxygen demand (carbonaceous)	mg/L						6	5	2.0 U	-
Chemical oxygen demand (COD)	mg/L						-	-	-	-
Cyanide (amenable)	mg/L						-	-	-	-
Cyanide (total)	mg/L	0.0052	0.0052		0.6		-	-	-	-
Formaldehyde	mg/L	0.12	0.18		5		0.050 U	0.050 U	-	0.050 U
Hardness, carbonate	mg/L						-	-	-	-
Nitrate (as N)	mg/L						-	-	-	-
Oil and grease (HEM), polar	mg/L						-	-	-	-
pH, lab	s.u.						-	-	-	-
Phenolics (total)	mg/L						-	-	-	-
Total organic carbon (TOC)	mg/L						-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.

J Estimated concentration.

UJ Not detected; associated reporting limit is estimated.

(1) Calculated GSI value, based on assumed value of hardness of 154.3 mg/kg (average calcule

(2) Chromium III criteria utilized since speciated data in the RFI indicated that available chromium

(3) PCB TSCA Criteria

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W-58502-031616-SSH-1618 W-58502-031616-SSH-1619 W-58502-031616-SSH-1620 W-58502-032416-SSH-1635
3/16/2016 3/16/2016 3/16/2016 3/24/2016

Parameters	Units	Res/Non_Re s/GW SW Interface a	FCV b	HCV Drink c	HNV Drink d	WV e				
VOAs										
1,1,1-Trichloroethane	mg/L	0.089	0.089		62	0.001 U	0.001 U	0.001 U	-	
1,1,2,2-Tetrachloroethane	mg/L	0.078	0.2	0.0032	0.18	0.001 U	0.001 U	0.001 U	-	
1,1,2-Trichloroethane	mg/L	0.33	0.73	0.012	0.11	0.001 U	0.001 U	0.001 U	-	
1,1-Dichloroethane	mg/L	0.74	0.74		9.8	0.001 U	0.001 U	0.001 U	-	
1,1-Dichloroethene	mg/L	0.13	0.13		1.2	0.001 U	0.001 U	0.001 U	-	
1,2,4-Trichlorobenzene	mg/L	0.099	0.13		0.08	0.001 U	0.001 U	0.001 U	-	
1,2-Dibromo-3-chloropropane (DBCP)	mg/L			0.00024		0.001 U	0.001 U	0.001 U	-	
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.0057	0.015	0.00017	0.25	0.001 U	0.001 U	0.001 U	-	
1,2-Dichlorobenzene	mg/L	0.013	0.013		2	0.001 U	0.001 U	0.001 U	-	
1,2-Dichloroethane	mg/L	0.36	2	0.006	6.9	0.001 U	0.001 U	0.001 U	-	
1,2-Dichloropropane	mg/L	0.23	0.23	0.0091	12	0.001 U	0.001 U	0.001 U	-	
1,3-Dichlorobenzene	mg/L	0.028	0.028		0.037	0.001 U	0.001 U	0.001 U	-	
1,4-Dichlorobenzene	mg/L	0.017	0.017	0.024	1.1	0.001 U	0.001 U	0.001 U	-	
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	2.2	2.2		17	0.01 U	0.01 U	0.01 U	-	
2-Hexanone	mg/L				9.7	0.01 U	0.01 U	0.01 U	-	
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L					0.01 U	0.01 U	0.01 U	-	
Acetone	mg/L	1.7	1.7		5.6	0.01 U	0.01 U	0.01 U	-	
Benzene	mg/L	0.2	0.2	0.012	0.019	0.001 U	0.001 U	0.001 U	-	
Bromodichloromethane	mg/L			0.0068	0.17	0.001 U	0.001 U	0.001 U	-	
Bromoform	mg/L			0.052	0.47	0.001 U	0.001 U	0.001 U	-	
Bromomethane (Methyl bromide)	mg/L	0.035	0.0042		0.039	0.001 U	0.001 U	0.001 U	-	
Carbon disulfide	mg/L				1	0.005 U	0.005 U	0.005 U	-	
Carbon tetrachloride	mg/L	0.045	0.077	0.0047	0.018	0.001 U	0.001 U	0.001 U	-	
Chlorobenzene	mg/L	0.025	0.025		0.47	0.001 U	0.001 U	0.001 U	-	
Chloroethane	mg/L	1.1	1.1	0.17	500	0.001 U	0.001 U	0.001 U	-	
Chloroform (Trichloromethane)	mg/L	0.35	0.63		0.35	0.001 U	0.001 U	0.001 U	-	
Chloromethane (Methyl chloride)	mg/L			0.11	3.5	0.001 U	0.001 U	0.001 U	-	
cis-1,2-Dichloroethene	mg/L	0.62	0.62		0.88	0.001 U	0.001 U	0.001 U	-	
cis-1,3-Dichloropropene	mg/L		0.009	0.0033	0.93	0.001 U	0.001 U	0.001 U	-	
Cyclohexane	mg/L					0.001 U	0.001 U	0.001 U	-	
Dibromochloromethane	mg/L			0.0068	0.57	0.001 U	0.001 U	0.001 U	-	
Dichlorodifluoromethane (CFC-12)	mg/L				2.9	0.001 U	0.001 U	0.001 U	-	
Ethylbenzene	mg/L	0.018	0.018	0.025	2.1	0.001 U	0.001 U	0.001 U	-	
Isopropyl benzene	mg/L	0.028	0.028		1.7	0.001 U	0.001 U	0.001 U	-	
Methyl acetate	mg/L					0.01 U	0.01 U	0.01 U	-	
Methyl cyclohexane	mg/L					0.001 U	0.001 U	0.001 U	-	
Methyl tert butyl ether (MTBE)	mg/L	7.1	32	0.1	0.92	0.001 U	0.001 U	0.001 U	-	
Methylene chloride	mg/L	1.5	1.5	0.047	1.6	0.005 U	0.005 U	0.005 U	-	
Styrene	mg/L	0.08	0.16	0.02	4.2	0.001 U	0.001 U	0.001 U	-	
Tetrachloroethene	mg/L	0.06	0.19	0.011	0.32	0.001 U	0.001 U	0.001 U	-	
Toluene	mg/L	0.27	0.27		5.6	0.001 U	0.001 U	0.001 U	-	
trans-1,2-Dichloroethene	mg/L	1.5	1.5		0.47	0.001 U	0.001 U	0.001 U	-	
trans-1,3-Dichloropropene	mg/L		0.009	0.0033	0.93	0.001 U	0.001 U	0.001 U	-	
Trichloroethene	mg/L	0.2	0.2	0.029	0.044	0.001 U	0.001 U	0.001 U	-	
Trichlorofluoromethane (CFC-11)	mg/L					0.001 U	0.001 U	0.001 U	-	
Trifluorotrchloroethane (CFC-113)	mg/L	0.032	0.032		444	0.001 U	0.001 U	0.001 U	-	
Vinyl chloride	mg/L	0.013	0.93	0.00025	0.083	0.001 U	0.001 U	0.001 U	-	
Xylenes (total)	mg/L	0.041	0.049		3.8	0.002 U	0.002 U	0.002 U	-	
VOAsBTEX										
1,1,1-Trichloroethane	mg/L	0.089	0.089		62	-	-	-	0.001 U	
1,1,2,2-Tetrachloroethane	mg/L	0.078	0.2	0.0032	0.18	-	-	-	0.001 U*	
1,1,2-Trichloroethane	mg/L	0.33	0.73	0.012	0.11	-	-	-	0.001 U	
1,1-Dichloroethane	mg/L	0.74	0.74		9.8	-	-	-	0.001 U	
1,1-Dichloroethene	mg/L	0.13	0.13		1.2	-	-	-	0.001 U	

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W-58502-031616-SSH-1618 W-58502-031616-SSH-1619 W-58502-031616-SSH-1620 W-58502-032416-SSH-1635
3/16/2016 3/16/2016 3/16/2016 3/24/2016

Parameters	Units	Res/Non Re s/GW SW Interface a	FCV b	HCV Drink c	HNV Drink d	WV e				
1,2,4-Trichlorobenzene	mg/L	0.099	0.13		0.08		-	-	-	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L			0.00024			-	-	-	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.0057	0.015	0.00017	0.25		-	-	-	0.001 U*
1,2-Dichlorobenzene	mg/L	0.013	0.013		2		-	-	-	0.001 U
1,2-Dichloroethane	mg/L	0.36	2	0.006	6.9		-	-	-	0.001 U
1,2-Dichloropropane	mg/L	0.23	0.23	0.0091	12		-	-	-	0.001 U
1,3-Dichlorobenzene	mg/L	0.028	0.028		0.037		-	-	-	0.001 U
1,4-Dichlorobenzene	mg/L	0.017	0.017	0.024	1.1		-	-	-	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	2.2	2.2		17		-	-	-	0.01 U
2-Hexanone	mg/L				9.7		-	-	-	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L						-	-	-	0.01 U*
Acetone	mg/L	1.7	1.7		5.6		-	-	-	0.01 U
Benzene	mg/L	0.2	0.2	0.012	0.019		-	-	-	0.001 U
Bromodichloromethane	mg/L			0.0068	0.17		-	-	-	0.001 U
Bromoform	mg/L			0.052	0.47		-	-	-	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.035	0.0042		0.039		-	-	-	0.001 U*
Carbon disulfide	mg/L				1		-	-	-	0.005 U
Carbon tetrachloride	mg/L	0.045	0.077	0.0047	0.018		-	-	-	0.001 U
Chlorobenzene	mg/L	0.025	0.025		0.47		-	-	-	0.001 U
Chloroethane	mg/L	1.1	1.1	0.17	500		-	-	-	0.001 U
Chloroform (Trichloromethane)	mg/L	0.35	0.63		0.35		-	-	-	0.001 U
Chloromethane (Methyl chloride)	mg/L			0.11	3.5		-	-	-	0.001 U
cis-1,2-Dichloroethene	mg/L	0.62	0.62		0.88		-	-	-	0.001 U
cis-1,3-Dichloropropene	mg/L		0.009	0.0033	0.93		-	-	-	0.001 U
Cyclohexane	mg/L						-	-	-	0.001 U
Dibromochloromethane	mg/L			0.0068	0.57		-	-	-	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L				2.9		-	-	-	0.001 U
Ethylbenzene	mg/L	0.018	0.018	0.025	2.1		-	-	-	0.001 U
Isopropyl benzene	mg/L	0.028	0.028		1.7		-	-	-	0.001 U
Methyl acetate	mg/L						-	-	-	0.01 U*
Methyl cyclohexane	mg/L						-	-	-	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	7.1	32	0.1	0.92		-	-	-	0.001 U
Methylene chloride	mg/L	1.5	1.5	0.047	1.6		-	-	-	0.005 U
Styrene	mg/L	0.08	0.16	0.02	4.2		-	-	-	0.001 U
Tetrachloroethene	mg/L	0.06	0.19	0.011	0.32		-	-	-	0.001 U
Toluene	mg/L	0.27	0.27		5.6		-	-	-	0.001 U
trans-1,2-Dichloroethene	mg/L	1.5	1.5		0.47		-	-	-	0.001 U
trans-1,3-Dichloropropene	mg/L		0.009	0.0033	0.93		-	-	-	0.001 U
Trichloroethene	mg/L	0.2	0.2	0.029	0.044		-	-	-	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L						-	-	-	0.001 U
Trifluorotrichloroethane (CFC-113)	mg/L	0.032	0.032		444		-	-	-	0.001 U
Vinyl chloride	mg/L	0.013	0.93	0.00025	0.083		-	-	-	0.001 U
Xylenes (total)	mg/L	0.041	0.049		3.8		-	-	-	0.002 U

SVOAs

2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L			0.006	0.99		0.0048 U	0.0048 U	0.0048 U	0.0052 U
2,4,5-Trichlorophenol	mg/L						0.0048 U	0.0048 U	0.0048 U	0.0052 U
2,4,6-Trichlorophenol	mg/L	0.005	0.005	0.041	1.9		0.0038 U	0.0038 U	0.0038 U	0.0042 U
2,4-Dichlorophenol	mg/L	0.011	0.011		0.22		0.0095 U	0.0095 U	0.0095 U	0.01 U
2,4-Dimethylphenol	mg/L	0.38	0.38		0.45		0.0048 U	0.0048 U	0.0048 U	0.0052 U
2,4-Dinitrophenol	mg/L		0.019		0.055		0.019 U	0.019 U	0.019 U	0.021 U
2,4-Dinitrotoluene	mg/L						0.0048 U	0.0048 U	0.0048 U	0.0052 U
2,6-Dinitrotoluene	mg/L						0.0048 U	0.0048 U	0.0048 U	0.0052 U
2-Chloronaphthalene	mg/L						0.0048 U	0.0048 U	0.0048 U	0.0052 U
2-Chlorophenol	mg/L	0.018	0.018		0.19		0.0048 U	0.0048 U	0.0048 U	0.0052 U
2-Methylnaphthalene	mg/L	0.019	0.019		0.6		0.0048 U	0.0048 U	0.0048 U	0.0052 U

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W-58502-031616-SSH-1618 W-58502-031616-SSH-1619 W-58502-031616-SSH-1620 W-58502-032416-SSH-1635
3/16/2016 3/16/2016 3/16/2016 3/24/2016

Parameters	Units	Res/Non_Res/GW SW Interface	FCV	HCV Drink	HNV Drink	WV				
		a	b	c	d	e				
2-Methylphenol	mg/L	0.03	0.076		1.4		0.0048 U	0.0048 U	0.0048 U	0.0052 U
2-Nitroaniline	mg/L						0.019 U	0.019 U	0.019 U	0.021 U
2-Nitrophenol	mg/L		0.056				0.0048 U	0.0048 U	0.0048 U	0.0052 U
3&4-Methylphenol	mg/L	0.03	0.025		1.4		0.0048 U	0.0048 U	0.0048 U	0.0052 U
3,3'-Dichlorobenzidine	mg/L	0.0003	0.0045	0.00014	0.65		0.00095 U	0.00095 U	0.00095 U	0.001 U
3-Nitroaniline	mg/L						0.019 U	0.019 U	0.019 U	0.021 U
4,6-Dinitro-2-methylphenol	mg/L						0.019 U	0.019 U	0.019 U	0.021 U
4-Bromophenyl phenyl ether	mg/L						0.0048 U	0.0048 U	0.0048 U	0.0052 U
4-Chloro-3-methylphenol	mg/L	0.0074	0.0074		6.9		0.0048 U	0.0048 U	0.0048 U	0.0052 U
4-Chloroaniline	mg/L			0.002	0.039		0.0095 U	0.0095 U	0.0095 U	0.01 U
4-Chlorophenyl phenyl ether	mg/L						0.0048 U	0.0048 U	0.0048 U	0.0052 U
4-Nitroaniline	mg/L						0.019 U	0.019 U	0.019 U	0.021 U
4-Nitrophenol	mg/L		0.2		0.68		0.019 U	0.019 U	0.019 U	0.021 U
Acenaphthene	mg/L	0.038	0.038		0.58		0.0048 U	0.0048 U	0.0048 U	0.0052 U
Acenaphthylene	mg/L						0.0048 U	0.0048 U	0.0048 U	0.0052 U
Acetophenone	mg/L						0.0048 U	0.0048 U	0.0048 U	0.0052 U
Anthracene	mg/L				1.9		0.0048 U	0.0048 U	0.0048 U	0.0052 U
Atrazine	mg/L	0.0073	0.0073		0.88		0.0029 U	0.0029 U	0.0029 U	0.0031 U
Benzaldehyde	mg/L						0.0048 U	0.0048 U	0.0048 U	0.0052 U
Benzo(a)anthracene	mg/L						0.00095 U	0.00095 U	0.00095 U	0.001 U
Benzo(a)pyrene	mg/L						0.00095 U	0.00095 U	0.00095 U	0.001 U
Benzo(b)fluoranthene	mg/L						0.00095 U	0.00095 U	0.00095 U	0.001 U
Benzo(g,h,i)perylene	mg/L						0.00095 U	0.00095 U	0.00095 U	0.001 U
Benzo(k)fluoranthene	mg/L						0.00095 U	0.00095 U	0.00095 U	0.001 U
Biphenyl (1,1-Biphenyl)	mg/L		0.013		0.46		0.0048 U	0.0048 U	0.0048 U	0.0052 U
bis(2-Chloroethoxy)methane	mg/L						0.0048 U	0.0048 U	0.0048 U	0.0052 U
bis(2-Chloroethyl)ether	mg/L	0.001		0.00079			0.00095 U	0.00095 U	0.00095 U	0.001 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.025		0.014	0.12		0.0048 U	0.0048 U	0.0048 U	0.0052 U
Butyl benzylphthalate (BBP)	mg/L	0.067	0.067		0.0069		0.0048 U	0.0048 U	0.0048 U	0.0052 U
Caprolactam	mg/L						0.0095 U	0.0095 U	0.0095 U	0.01 U
Carbazole	mg/L	0.01	0.004	0.019			0.0095 U	0.0095 U	0.0095 U	0.01 U
Chrysene	mg/L						0.00095 U	0.00095 U	0.00095 U	0.001 U
Dibenz(a,h)anthracene	mg/L						0.0019 U	0.0019 U	0.0019 U	0.0021 U
Dibenzofuran	mg/L	0.004	0.004				0.0038 U	0.0038 U	0.0038 U	0.0042 U
Diethyl phthalate	mg/L	0.11	0.11		14		0.0048 U	0.0048 U	0.0048 U	0.0052 U
Dimethyl phthalate	mg/L						0.0048 U	0.0048 U	0.0048 U	0.0052 U
Di-n-butylphthalate (DBP)	mg/L	0.0097	0.0097		0.64		0.0048 U	0.0048 U	0.0048 U	0.0052 U
Di-n-octyl phthalate (DnOP)	mg/L				0.24		0.0048 U	0.0048 U	0.0048 U	0.0052 U
Fluoranthene	mg/L	0.0016	0.0016		0.018		0.00095 U	0.00095 U	0.00095 U	0.001 U*
Fluorene	mg/L	0.012	0.012		0.14		0.0048 U	0.0048 U	0.0048 U	0.0052 U
Hexachlorobenzene	mg/L	0.0002		0.00000045	0.000046	0.0000003	0.00019 U	0.00019 U	0.00019 U	0.00021 U
Hexachlorobutadiene	mg/L	0.000053	0.001	0.00033	0.000093	0.000053	0.00095 U	0.00095 U	0.00095 U	0.001 U
Hexachlorocyclopentadiene	mg/L				0.14		0.0048 U	0.0048 U	0.0048 U	0.0052 U
Hexachloroethane	mg/L	0.0067	0.013	0.0053	0.006		0.0048 U	0.0048 U	0.0048 U	0.0052 U
Indeno(1,2,3-cd)pyrene	mg/L						0.0019 U	0.0019 U	0.0019 U	0.0021 U
Isophorone	mg/L	1.3	1.3	0.31	4.1		0.0048 U	0.0048 U	0.0048 U	0.0052 U
Naphthalene	mg/L	0.011	0.011		1.1		0.0048 U	0.0048 U	0.0048 U	0.0052 U
Nitrobenzene	mg/L	0.18	0.23	0.0047	0.026		0.0029 U	0.0029 U	0.0029 U	0.0031 U
N-Nitrosodi-n-propylamine	mg/L						0.0048 U	0.0048 U	0.0048 U	0.0052 U
N-Nitrosodiphenylamine	mg/L						0.0048 U	0.0048 U	0.0048 U	0.0052 U
Pentachlorophenol	mg/L			0.0018	0.3		0.0048 U	0.0048 U	0.0048 U	0.0052 U
Phenanthrene	mg/L	0.002	0.0017				0.0019 U	0.0019 U	0.0019 U	0.0021 U
Phenol	mg/L	0.45	0.45		1.1		0.0048 U	0.0048 U	0.0048 U	0.0052 U
Pyrene	mg/L				0.015		0.0048 U	0.0048 U	0.0048 U	0.0052 U

Metals

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W-58502-031616-SSH-1618 W-58502-031616-SSH-1619 W-58502-031616-SSH-1620 W-58502-032416-SSH-1635
3/16/2016 3/16/2016 3/16/2016 3/24/2016

Parameters	Units	Res/Non Res/GW Re s/GW SW Interface	FCV	HCV Drink	HNV Drink	WV			
		a	b	c	d	e			
Aluminum	mg/L					0.19	0.1	0.14	0.1
Antimony	mg/L	0.13	0.24		0.0017	0.002 U	0.002 U	0.002 U	0.002 U
Antimony, total recoverable	mg/L	0.13	0.24		0.0017	-	-	-	-
Arsenic	mg/L	0.01	0.15	0.01	0.01	0.005 U	0.005 U	0.005 U	0.005 U
Arsenic, total recoverable	mg/L	0.01	0.15	0.01	0.01	-	-	-	-
Barium	mg/L	0.69 (1)			1.9	0.1 U	0.1 U	0.1 U	0.1 U
Barium, total recoverable	mg/L	0.69 (1)			1.9	-	-	-	-
Beryllium	mg/L	0.0072 (1)			0.16	0.001 U	0.001 U	0.001 U	0.001 U
Beryllium, total recoverable	mg/L	0.0072 (1)			0.16	-	-	-	-
Cadmium	mg/L	0.0031 (1)			0.0025	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium, total recoverable	mg/L	0.0031 (1)			0.0025	-	-	-	-
Calcium	mg/L					55	53	52	62
Calcium, total recoverable	mg/L					-	-	-	-
Chromium	mg/L	0.11 (1)(2)			0.12	0.01 U	0.01 U	0.01 U	0.01 U
Chromium, total recoverable	mg/L	0.11 (1)(2)			0.12	-	-	-	-
Cobalt	mg/L	0.1	0.1			0.02 U	0.02 U	0.02 U	0.02 U
Cobalt, total recoverable	mg/L	0.1	0.1			-	-	-	-
Copper	mg/L	0.013 (1)			0.47	0.004 U	0.004 U	0.004 U	0.004 U
Copper, total recoverable	mg/L	0.013 (1)			0.47	-	-	-	-
Iron	mg/L					0.2 U	0.2 U	0.2 U	0.2 U
Lead	mg/L	0.029 (1)			0.014	0.003 U	0.003 U	0.003 U	0.003 U
Lead, total recoverable	mg/L	0.029 (1)			0.014	-	-	-	-
Magnesium	mg/L					18	18	18	17
Magnesium, total recoverable	mg/L					-	-	-	-
Manganese	mg/L	2.90 (1)			1.3	0.13	0.13	0.13	0.31
Manganese, total recoverable	mg/L	2.90 (1)			1.3	-	-	-	-
Mercury	mg/L	0.0000013			0.0000018	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.075 (1)			2.6	0.02 U	0.02 U	0.02 U	0.02 U
Nickel, total recoverable	mg/L	0.075 (1)			2.6	-	-	-	-
Potassium	mg/L					12	12	12	13
Selenium	mg/L	0.005	0.005		0.12	0.005 U	0.005 U	0.005 U	0.005 U
Selenium, total recoverable	mg/L	0.005	0.005		0.12	-	-	-	-
Silver	mg/L	0.0002	0.00006		0.13	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Silver, total recoverable	mg/L	0.0002	0.00006		0.13	-	-	-	-
Sodium	mg/L					150	150	150	200
Thallium	mg/L	0.0037	0.0072		0.0012	0.002 U	0.002 U	0.002 U	0.002 U
Thallium, total recoverable	mg/L	0.0037	0.0072		0.0012	-	-	-	-
Vanadium	mg/L	0.027	0.027		0.053	0.004 U	0.004 U	0.004 U	0.004 U
Vanadium, total recoverable	mg/L	0.027	0.027		0.053	-	-	-	-
Zinc	mg/L	0.17 (1)			3.3	0.05 U	0.05 U	0.05 U	0.05 U
Zinc, total recoverable	mg/L	0.17 (1)			3.3	-	-	-	-

PCBs

Aroclor-1016 (PCB-1016)	mg/L	0.0002	1 (3)	0.000000026	0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1221 (PCB-1221)	mg/L	0.0002	1 (3)	0.000000026	0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1232 (PCB-1232)	mg/L	0.0002	1 (3)	0.000000026	0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1242 (PCB-1242)	mg/L	0.0002	1 (3)	0.000000026	0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1248 (PCB-1248)	mg/L	0.0002	1 (3)	0.000000026	0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1254 (PCB-1254)	mg/L	0.0002	1 (3)	0.000000026	0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1260 (PCB-1260)	mg/L	0.0002	1 (3)	0.000000026	0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000096 U
Aroclor-1262 (PCB-1262)	mg/L	0.0002	1 (3)	0.000000026	0.00000012	-	-	-	-
Aroclor-1268 (PCB-1268)	mg/L	0.0002	1 (3)	0.000000026	0.00000012	-	-	-	-

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W-58502-031616-SSH-1618 W-58502-031616-SSH-1619 W-58502-031616-SSH-1620 W-58502-032416-SSH-1635
3/16/2016 3/16/2016 3/16/2016 3/24/2016

Parameters	Units	Res/Non_Res/GW SW Interface a	FCV b	HCV Drink c	HNV Drink d	WV e				
Wet										
Ammonia	mg/L		0.029				-	-	-	-
Ammonia-N	mg/L						0.20 U	0.20 U	0.20 U	0.20 U
Biochemical oxygen demand (BOD)	mg/L						-	-	-	-
Biochemical oxygen demand (carbonaceous)	mg/L						2.0 U	2.0 U	2.0 U	5.6
Chemical oxygen demand (COD)	mg/L						-	-	-	-
Cyanide (amenable)	mg/L						-	-	-	-
Cyanide (total)	mg/L	0.0052	0.0052		0.6		-	-	-	-
Formaldehyde	mg/L	0.12	0.18		5		-	-	-	0.050 U
Hardness, carbonate	mg/L						-	-	-	-
Nitrate (as N)	mg/L						-	-	-	-
Oil and grease (HEM), polar	mg/L						-	-	-	-
pH, lab	s.u.						-	-	-	-
Phenolics (total)	mg/L						-	-	-	-
Total organic carbon (TOC)	mg/L						-	-	-	-

Footnotes:

U Not detected at the associated reporting limit.

J Estimated concentration.

UJ Not detected; associated reporting limit is estimated.

(1) Calculated GSI value, based on assumed value of hardness of 154.3 mg/kg (average calcule

(2) Chromium III criteria utilized since speciated data in the RFI indicated that available chromium

(3) PCB TSCA Criteria

SECONDARY POND WATER SAMPLE ANALYTICAL RESULTS SUMMARY
NODULAR INDUSTRIAL LAND
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Sample Location:
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SW-343-16 SW-347-16
W-58502-032416-SSH-1632 W-58502-031716-SSH-1621
3/24/2016 3/17/2016

Parameters	Units	Res/Non_Res/GW SW Interface	FCV	HCV Drink	HNV Drink	WV		
		a	b	c	d	e		
VOAs								
1,1,1-Trichloroethane	mg/L	0.089	0.089		62	-	-	
1,1,2,2-Tetrachloroethane	mg/L	0.078	0.2	0.0032	0.18	-	-	
1,1,2-Trichloroethane	mg/L	0.33	0.73	0.012	0.11	-	-	
1,1-Dichloroethane	mg/L	0.74	0.74		9.8	-	-	
1,1-Dichloroethene	mg/L	0.13	0.13		1.2	-	-	
1,2,4-Trichlorobenzene	mg/L	0.099	0.13		0.08	-	-	
1,2-Dibromo-3-chloropropane (DBCP)	mg/L			0.00024		-	-	
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.0057	0.015	0.00017	0.25	-	-	
1,2-Dichlorobenzene	mg/L	0.013	0.013		2	-	-	
1,2-Dichloroethane	mg/L	0.36	2	0.006	6.9	-	-	
1,2-Dichloropropane	mg/L	0.23	0.23	0.0091	12	-	-	
1,3-Dichlorobenzene	mg/L	0.028	0.028		0.037	-	-	
1,4-Dichlorobenzene	mg/L	0.017	0.017	0.024	1.1	-	-	
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	2.2	2.2		17	-	-	
2-Hexanone	mg/L				9.7	-	-	
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L					-	-	
Acetone	mg/L	1.7	1.7		5.6	-	-	
Benzene	mg/L	0.2	0.2	0.012	0.019	-	-	
Bromodichloromethane	mg/L			0.0068	0.17	-	-	
Bromoform	mg/L			0.052	0.47	-	-	
Bromomethane (Methyl bromide)	mg/L	0.035	0.0042		0.039	-	-	
Carbon disulfide	mg/L				1	-	-	
Carbon tetrachloride	mg/L	0.045	0.077	0.0047	0.018	-	-	
Chlorobenzene	mg/L	0.025	0.025		0.47	-	-	
Chloroethane	mg/L	1.1	1.1	0.17	500	-	-	
Chloroform (Trichloromethane)	mg/L	0.35	0.63		0.35	-	-	
Chloromethane (Methyl chloride)	mg/L			0.11	3.5	-	-	
cis-1,2-Dichloroethene	mg/L	0.62	0.62		0.88	-	-	
cis-1,3-Dichloropropene	mg/L		0.009	0.0033	0.93	-	-	
Cyclohexane	mg/L					-	-	
Dibromochloromethane	mg/L			0.0068	0.57	-	-	
Dichlorodifluoromethane (CFC-12)	mg/L				2.9	-	-	
Ethylbenzene	mg/L	0.018	0.018	0.025	2.1	-	-	
Isopropyl benzene	mg/L	0.028	0.028		1.7	-	-	
Methyl acetate	mg/L					-	-	
Methyl cyclohexane	mg/L					-	-	
Methyl tert butyl ether (MTBE)	mg/L	7.1	32	0.1	0.92	-	-	
Methylene chloride	mg/L	1.5	1.5	0.047	1.6	-	-	
Styrene	mg/L	0.08	0.16	0.02	4.2	-	-	
Tetrachloroethene	mg/L	0.06	0.19	0.011	0.32	-	-	
Toluene	mg/L	0.27	0.27		5.6	-	-	
trans-1,2-Dichloroethene	mg/L	1.5	1.5		0.47	-	-	
trans-1,3-Dichloropropene	mg/L		0.009	0.0033	0.93	-	-	
Trichloroethene	mg/L	0.2	0.2	0.029	0.044	-	-	
Trichlorofluoromethane (CFC-11)	mg/L					-	-	
Trifluorotrchloroethane (CFC-113)	mg/L	0.032	0.032		444	-	-	
Vinyl chloride	mg/L	0.013	0.93	0.00025	0.083	-	-	
Xylenes (total)	mg/L	0.041	0.049		3.8	-	-	
VOAsBTEX								
1,1,1-Trichloroethane	mg/L	0.089	0.089		62	0.001 U	0.001 U	
1,1,2,2-Tetrachloroethane	mg/L	0.078	0.2	0.0032	0.18	0.001 UF1	0.001 U	
1,1,2-Trichloroethane	mg/L	0.33	0.73	0.012	0.11	0.001 U	0.001 U	
1,1-Dichloroethane	mg/L	0.74	0.74		9.8	0.001 U	0.001 U	
1,1-Dichloroethene	mg/L	0.13	0.13		1.2	0.001 U	0.001 U	

SECONDARY POND WATER SAMPLE ANALYTICAL RESULTS SUMMARY
NODULAR INDUSTRIAL LAND
SAGINAW, MICHIGAN

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Sample Location:
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SW-343-16 SW-347-16
W-58502-032416-SSH-1632 W-58502-031716-SSH-1621
3/24/2016 3/17/2016

Parameters	Units	Res/Non_Re s/GW SW Interface a	FCV b	HCV Drink c	HNV Drink d	WV e		
1,2,4-Trichlorobenzene	mg/L	0.099	0.13		0.08		0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L			0.00024			0.001 UF1	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.0057	0.015	0.00017	0.25		0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.013	0.013		2		0.001 U	0.001 U
1,2-Dichloroethane	mg/L	0.36	2	0.006	6.9		0.001 UF1	0.001 U
1,2-Dichloropropane	mg/L	0.23	0.23	0.0091	12		0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.028	0.028		0.037		0.001 UF2	0.001 U
1,4-Dichlorobenzene	mg/L	0.017	0.017	0.024	1.1		0.001 U	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	2.2	2.2		17		0.01 U	0.01 U
2-Hexanone	mg/L				9.7		0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L						0.01 U	0.01 U
Acetone	mg/L	1.7	1.7		5.6		0.01 U	0.01 U
Benzene	mg/L	0.2	0.2	0.012	0.019		0.001 U	0.001 U
Bromodichloromethane	mg/L			0.0068	0.17		0.001 U	0.001 U
Bromoform	mg/L			0.052	0.47		0.001 UF1	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.035	0.0042		0.039		0.001 U	0.001 U
Carbon disulfide	mg/L				1		0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.045	0.077	0.0047	0.018		0.001 U	0.001 U
Chlorobenzene	mg/L	0.025	0.025		0.47		0.001 U	0.001 U
Chloroethane	mg/L	1.1	1.1	0.17	500		0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.35	0.63		0.35		0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L			0.11	3.5		0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.62	0.62		0.88		0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L		0.009	0.0033	0.93		0.001 U	0.001 U
Cyclohexane	mg/L						0.001 U	0.001 U
Dibromochloromethane	mg/L			0.0068	0.57		0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L				2.9		0.001 U	0.001 UF1
Ethylbenzene	mg/L	0.018	0.018	0.025	2.1		0.001 U	0.001 U
Isopropyl benzene	mg/L	0.028	0.028		1.7		0.001 U	0.001 U
Methyl acetate	mg/L						0.01 U	0.01 U
Methyl cyclohexane	mg/L						0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	7.1	32	0.1	0.92		0.001 U	0.001 U
Methylene chloride	mg/L	1.5	1.5	0.047	1.6		0.005 UF1	0.005 U
Styrene	mg/L	0.08	0.16	0.02	4.2		0.001 U	0.001 U
Tetrachloroethene	mg/L	0.06	0.19	0.011	0.32		0.001 U	0.001 U
Toluene	mg/L	0.27	0.27		5.6		0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	1.5	1.5		0.47		0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L		0.009	0.0033	0.93		0.001 U	0.001 U
Trichloroethene	mg/L	0.2	0.2	0.029	0.044		0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L						0.001 U	0.001 U
Trifluorotrichloroethane (CFC-113)	mg/L	0.032	0.032		444		0.001 U	0.001 U
Vinyl chloride	mg/L	0.013	0.93	0.00025	0.083		0.001 U	0.001 U
Xylenes (total)	mg/L	0.041	0.049		3.8		0.002 U	0.002 U
SVOAs								
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L			0.006	0.99		0.0052 U	0.0048 U
2,4,5-Trichlorophenol	mg/L						0.0052 U	0.0048 U
2,4,6-Trichlorophenol	mg/L	0.005	0.005	0.041	1.9		0.0042 U	0.0038 U
2,4-Dichlorophenol	mg/L	0.011	0.011		0.22		0.01 U	0.0095 U
2,4-Dimethylphenol	mg/L	0.38	0.38		0.45		0.0052 U	0.0048 U
2,4-Dinitrophenol	mg/L		0.019		0.055		0.021 U	0.019 U
2,4-Dinitrotoluene	mg/L						0.0052 U	0.0048 U
2,6-Dinitrotoluene	mg/L						0.0052 U	0.0048 U
2-Chloronaphthalene	mg/L						0.0052 U	0.0048 U
2-Chlorophenol	mg/L	0.018	0.018		0.19		0.0052 U	0.0048 U
2-Methylnaphthalene	mg/L	0.019	0.019		0.6		0.0052 U	0.0048 U

SECONDARY POND WATER SAMPLE ANALYTICAL RESULTS SUMMARY
NODULAR INDUSTRIAL LAND
SAGINAW, MICHIGAN

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Sample Location:
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SW-343-16 SW-347-16
W-58502-032416-SSH-1632 W-58502-031716-SSH-1621
3/24/2016 3/17/2016

Parameters	Units	Res/Non_Re s/GW SW Interface a	FCV b	HCV Drink c	HNV Drink d	WV e		
2-Methylphenol	mg/L	0.03	0.076		1.4	0.0052 U	0.0048 U	
2-Nitroaniline	mg/L					0.021 U	0.019 U	
2-Nitrophenol	mg/L		0.056			0.0052 U	0.0048 U	
3&4-Methylphenol	mg/L	0.03	0.025		1.4	0.0052 U	0.0048 U	
3,3'-Dichlorobenzidine	mg/L	0.0003	0.0045	0.00014	0.65	0.001 U	0.00095 U	
3-Nitroaniline	mg/L					0.021 U	0.019 U	
4,6-Dinitro-2-methylphenol	mg/L					0.021 U	0.019 U	
4-Bromophenyl phenyl ether	mg/L					0.0052 U	0.0048 U	
4-Chloro-3-methylphenol	mg/L	0.0074	0.0074		6.9	0.0052 U	0.0048 U	
4-Chloroaniline	mg/L			0.002	0.039	0.01 U	0.0095 U	
4-Chlorophenyl phenyl ether	mg/L					0.0052 U	0.0048 U	
4-Nitroaniline	mg/L					0.021 U	0.019 U	
4-Nitrophenol	mg/L		0.2		0.68	0.021 U	0.019 U	
Acenaphthene	mg/L	0.038	0.038		0.58	0.0052 U	0.0048 U	
Acenaphthylene	mg/L					0.0052 U	0.0048 U	
Acetophenone	mg/L					0.0052 U	0.0048 U	
Anthracene	mg/L				1.9	0.0052 U	0.0048 U	
Atrazine	mg/L	0.0073	0.0073		0.88	0.0031 U	0.0029 U	
Benzaldehyde	mg/L					0.0052 U	0.0048 U	
Benzo(a)anthracene	mg/L					0.001 U	0.00095 U	
Benzo(a)pyrene	mg/L					0.001 U	0.00095 U	
Benzo(b)fluoranthene	mg/L					0.001 U	0.00095 U	
Benzo(g,h,i)perylene	mg/L					0.001 U	0.00095 U	
Benzo(k)fluoranthene	mg/L					0.001 U	0.00095 U	
Biphenyl (1,1-Biphenyl)	mg/L		0.013		0.46	0.0052 U	0.0048 U	
bis(2-Chloroethoxy)methane	mg/L					0.0052 U	0.0048 U	
bis(2-Chloroethyl)ether	mg/L	0.001		0.00079		0.001 U	0.00095 U	
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.025		0.014	0.12	0.0052 U	0.0048 U	
Butyl benzylphthalate (BBP)	mg/L	0.067	0.067		0.0069	0.0052 U	0.0048 U	
Caprolactam	mg/L					0.01 U	0.0095 U	
Carbazole	mg/L	0.01	0.004	0.019		0.01 U	0.0095 U	
Chrysene	mg/L					0.001 U	0.00095 U	
Dibenz(a,h)anthracene	mg/L					0.0021 U	0.0019 U	
Dibenzofuran	mg/L	0.004	0.004			0.0042 U	0.0038 U	
Diethyl phthalate	mg/L	0.11	0.11		14	0.0052 U	0.0048 U	
Dimethyl phthalate	mg/L					0.0052 U	0.0048 U	
Di-n-butylphthalate (DBP)	mg/L	0.0097	0.0097		0.64	0.0052 U	0.0048 U	
Di-n-octyl phthalate (DnOP)	mg/L				0.24	0.0052 U	0.0048 U	
Fluoranthene	mg/L	0.0016	0.0016		0.018	0.001 U*	0.00095 U	
Fluorene	mg/L	0.012	0.012		0.14	0.0052 U	0.0048 U	
Hexachlorobenzene	mg/L	0.0002		0.00000045	0.000046	0.00021 U	0.00019 U	
Hexachlorobutadiene	mg/L	0.000053	0.001	0.00033	0.000093	0.001 U	0.00095 U	
Hexachlorocyclopentadiene	mg/L				0.14	0.0052 U	0.0048 U	
Hexachloroethane	mg/L	0.0067	0.013	0.0053	0.006	0.0052 U	0.0048 U	
Indeno(1,2,3-cd)pyrene	mg/L					0.0021 U	0.0019 U	
Isophorone	mg/L	1.3	1.3	0.31	4.1	0.0052 U	0.0048 U	
Naphthalene	mg/L	0.011	0.011		1.1	0.0052 U	0.0048 U	
Nitrobenzene	mg/L	0.18	0.23	0.0047	0.026	0.0031 U	0.0029 U	
N-Nitrosodi-n-propylamine	mg/L					0.0052 U	0.0048 U	
N-Nitrosodiphenylamine	mg/L					0.0052 U	0.0048 U	
Pentachlorophenol	mg/L			0.0018	0.3	0.0052 U	0.0048 U	
Phenanthrene	mg/L	0.002	0.0017			0.0021 U	0.0019 U	
Phenol	mg/L	0.45	0.45		1.1	0.0052 U	0.0048 U	
Pyrene	mg/L				0.015	0.0052 U	0.0048 U	

Metals

SECONDARY POND WATER SAMPLE ANALYTICAL RESULTS SUMMARY
NODULAR INDUSTRIAL LAND
SAGINAW, MICHIGAN

Sample Location:
Sample ID:
Sample Date:

SW-343-16 SW-347-16
W-58502-032416-SSH-1632 W-58502-031716-SSH-1621
3/24/2016 3/17/2016

Parameters	Units	Res/Non_Re s/GW SW Interface a	FCV b	HCV Drink c	HNV Drink d	WV e		
Aluminum	mg/L						0.1	0.078
Antimony	mg/L	0.13	0.24		0.0017	0.002 U	0.002 U	
Antimony, total recoverable	mg/L	0.13	0.24		0.0017	-	-	
Arsenic	mg/L	0.01	0.15	0.01	0.01	0.005 U	0.005 U	
Arsenic, total recoverable	mg/L	0.01	0.15	0.01	0.01	-	-	
Barium	mg/L	0.69 (1)			1.9	0.1 U	0.1 U	
Barium, total recoverable	mg/L	0.69 (1)			1.9	-	-	
Beryllium	mg/L	0.0072 (1)			0.16	0.001 U	0.001 U	
Beryllium, total recoverable	mg/L	0.0072 (1)			0.16	-	-	
Cadmium	mg/L	0.0031 (1)			0.0025	0.001 U	0.001 U	
Cadmium, total recoverable	mg/L	0.0031 (1)			0.0025	-	-	
Calcium	mg/L					67	54	
Calcium, total recoverable	mg/L					-	-	
Chromium	mg/L	0.11 (1)(2)			0.12	0.01 U	0.01 U	
Chromium, total recoverable	mg/L	0.11 (1)(2)			0.12	-	-	
Cobalt	mg/L	0.1	0.1			0.02 U	0.02 U	
Cobalt, total recoverable	mg/L	0.1	0.1			-	-	
Copper	mg/L	0.013 (1)			0.47	0.004 U	0.004 U	
Copper, total recoverable	mg/L	0.013 (1)			0.47	-	-	
Iron	mg/L					0.2 U	0.2 U	
Lead	mg/L	0.029 (1)			0.014	0.003 U	0.003 U	
Lead, total recoverable	mg/L	0.029 (1)			0.014	-	-	
Magnesium	mg/L					18	18	
Magnesium, total recoverable	mg/L					-	-	
Manganese	mg/L	2.90 (1)			1.3	0.34	0.17	
Manganese, total recoverable	mg/L	2.90 (1)			1.3	-	-	
Mercury	mg/L	0.0000013			0.0000018	0.000013	0.0002 U	0.0002 U
Nickel	mg/L	0.075 (1)			2.6	0.02 U	0.02 U	
Nickel, total recoverable	mg/L	0.075 (1)			2.6	-	-	
Potassium	mg/L					15	12	
Selenium	mg/L	0.005	0.005		0.12	0.005 U	0.005 U	
Selenium, total recoverable	mg/L	0.005	0.005		0.12	-	-	
Silver	mg/L	0.0002	0.00006		0.13	0.0002 U	0.0002 U	
Silver, total recoverable	mg/L	0.0002	0.00006		0.13	-	-	
Sodium	mg/L					220	150	
Thallium	mg/L	0.0037	0.0072		0.0012	0.002 U	0.002 U	
Thallium, total recoverable	mg/L	0.0037	0.0072		0.0012	-	-	
Vanadium	mg/L	0.027	0.027		0.053	0.004 U	0.004 U	
Vanadium, total recoverable	mg/L	0.027	0.027		0.053	-	-	
Zinc	mg/L	0.17 (1)			3.3	0.05 U	0.05 U	
Zinc, total recoverable	mg/L	0.17 (1)			3.3	-	-	
PCBs								
Aroclor-1016 (PCB-1016)	mg/L	0.0002 1 (3)		0.000000026		0.00000012	0.000095 U	0.000095 U
Aroclor-1221 (PCB-1221)	mg/L	0.0002 1 (3)		0.000000026		0.00000012	0.000095 U	0.000095 U
Aroclor-1232 (PCB-1232)	mg/L	0.0002 1 (3)		0.000000026		0.00000012	0.000095 U	0.000095 U
Aroclor-1242 (PCB-1242)	mg/L	0.0002 1 (3)		0.000000026		0.00000012	0.000095 U	0.000095 U
Aroclor-1248 (PCB-1248)	mg/L	0.0002 1 (3)		0.000000026		0.00000012	0.000095 U	0.000095 U
Aroclor-1254 (PCB-1254)	mg/L	0.0002 1 (3)		0.000000026		0.00000012	0.000095 U	0.000095 U
Aroclor-1260 (PCB-1260)	mg/L	0.0002 1 (3)		0.000000026		0.00000012	0.000095 U	0.000095 U
Aroclor-1262 (PCB-1262)	mg/L	0.0002 1 (3)		0.000000026		0.00000012	-	-
Aroclor-1268 (PCB-1268)	mg/L	0.0002 1 (3)		0.000000026		0.00000012	-	-

SECONDARY POND WATER SAMPLE ANALYTICAL RESULTS SUMMARY
NODULAR INDUSTRIAL LAND
SAGINAW, MICHIGAN

Sample Location:
Sample ID:
Sample Date:

SW-343-16 SW-347-16
W-58502-032416-SSH-1632 W-58502-031716-SSH-1621
3/24/2016 3/17/2016

Parameters	Units	Res/Non_Res/GW SW Interface a	FCV b	HCV Drink c	HNV Drink d	WV e		
Wet								
Ammonia	mg/L		0.029				-	-
Ammonia-N	mg/L						0.20 U	-
Biochemical oxygen demand (BOD)	mg/L						-	-
Biochemical oxygen demand (carbonaceous)	mg/L						5.9	-
Chemical oxygen demand (COD)	mg/L						-	-
Cyanide (amenable)	mg/L						-	-
Cyanide (total)	mg/L	0.0052	0.0052		0.6		-	-
Formaldehyde	mg/L	0.12	0.18		5		0.050 U	-
Hardness, carbonate	mg/L						-	-
Nitrate (as N)	mg/L						-	-
Oil and grease (HEM), polar	mg/L						-	-
pH, lab	s.u.						-	-
Phenolics (total)	mg/L						-	-
Total organic carbon (TOC)	mg/L						-	-

Footnotes:

- U Not detected at the associated reporting limit.
J Estimated concentration.
UJ Not detected; associated reporting limit is estimated.
(1) Calculated GSI value, based on assumed value of hardness of 154.3 mg/kg (average calcule
(2) Chromium III criteria utilized since speciated data in the RFI indicated that available chromium
(3) PCB TSCA Criteria