



DRAKE Consulting Group, LLC

April 15, 2019

Margaret Brunette, Hydrogeologist
Wisconsin Department of Natural Resources
2300 N. Martin Luther King Jr. Drive
Milwaukee, WI 53212

RE: Groundwater Sample Results Notification for the Former Meta Mold/Amcast North, Amcast Central & Amcast South Brownfield Redevelopment Sites - City of Cedarburg, Ozaukee County, Wisconsin. U.S. EPA Superfund Site ID: WIN 000510210 (Amcast Industrial Site) DNR BRRTS Numbers: 02-46-000795, 04-46-243223, 04-46-243336 & 07-46-581557

Dear Ms. Brunette:

This letter is being submitted to the Wisconsin Department of Natural Resources (WDNR) on behalf of our client, Oliver Fiontar, LLC to provide notification of the groundwater sample results that were collected from the monitoring wells at the Amcast Industrial and Amcast Automotive brownfield redevelopment site in Cedarburg, Wisconsin.

The Amcast redevelopment site is separated into three parcels located north and south of Hamilton Road. The northern parcel (designated "Amcast North") is located at N37W5684 Hamilton Road and is situated northeast of Hamilton Road. The southern parcel is comprised of two parcels (designated "Amcast Central" and "Amcast South") situated south of the intersection of Hamilton Road and Johnson Avenue. Amcast Central is located at N39W5789 Hamilton Road while Amcast South is generally referred to as being located on Johnson Avenue. Figure 1A in Attachment A depicts the parcel outlines on the subject property.

On September 21, 2018, Drake Consulting Group, LLC (Drake) notified the WDNR that effective September 17, 2018, Oliver Fiontar, LLC had acquired title to the three parcels of real estate that comprise a portion of the Amcast Industrial Corp. Superfund (SF) National Priorities List (NPL) Site being addressed by the EPA. It is Drake's understanding that prior to the transfer of the property to Oliver Fiontar, LLC, groundwater monitoring activities had not been conducted at the site since September 21, 2011.

On November 19, 2018 Drake personnel was on site to develop and sample the existing monitoring wells at the Amcast redevelopment property. Four monitoring wells (AMN-MW01, FVMW-26, FVMW-27, FVMW-28) were located on the Amcast North property and nine (9) monitoring wells (AMS-MW01, GMMW-1, GMMW-2, GMMW-3, GMMW-4, GMMW-5, GMMW-6, GMMW-7 and FVMW-20) were located on the Amcast Central and Amcast South properties. Groundwater samples were collected from each well and submitted to a WDNR-certified laboratory analysis for the following parameters:

Analytical Parameter	Analytical Method
Volatile Organic Compounds (VOCs)	EPA Method 8021B
Poly-cyclic Aromatic Hydrocarbons (PAHs)	EPA Method 8270C
Resource Conservation and Recovery Act (RCRA) Metals	EPA Method 6010B/7471A
Polychlorinated Biphenyls (PCBs)	EPA Method 8082

According to the laboratory analytical results, each of the parameters listed above exhibited concentrations above the Wis. Ad. Code Ch. NR 140 Preventive Action Limit (PAL) and/or Enforcement Standard (ES) in one or more of the monitoring wells sampled at the site. Tables 1 through 4 in Attachment B provide a summary of the groundwater sample results collected during the November 2018 sampling event at the Amcast North property and Amcast Central/Amcast South properties.

Amcast North

Monitoring well AMNW-01 exhibited a concentration of trichloroethylene [2.1 micrograms per liter (ug/l)] above the Ch. NR 140 PAL of 0.5 ug/l. Elevated concentrations of four (4) RCRA metals (arsenic, cadmium, chromium and lead) were also detected above NR 140 standards in the sample collected from AMNW-01. No concentrations of PAHs or PCBs were detected above NR 140 Standards.

Bis-(2-Ethylhexyl)-phthalate, a PAH, was detected above the NR 140 PAL (0.6 ug/l) in the samples collected from FVMW-26 and FVMW-27 (1.4 J and 1.3 J, respectively). Both samples were noted with a “J” flag qualifier by the laboratory. The J flag means that the estimated contaminant concentration is above the adjusted laboratory method detection limit (MDL) and below the adjusted reporting limit. As the concentration is below the adjusted reporting limit, the concentration is estimated only. No other parameters tested were detected above NR 140 Standards for the groundwater samples collected at FVMW-26.

FVMW-27 exhibited a concentration of total PCBs at 0.37 J ug/l which is above the NR 140 ES of 0.03 ug/l. Although total PCBs were not detected in the September 21, 2011 groundwater

sample collected from FVMW-27, NR 140 ES exceedances were observed in the samples collected from the prior events on April 10, 2007 (0.82 ug/l) and January 12, 2004 (0.3 ug/l). The concentration detected during the November 2018 sampling event is consistent with historical concentrations of total PCBs observed at monitoring well FVMW-27. Figure 1-2 (prepared by CH2M) in Attachment A depicts the monitoring well locations on the Amcast North property.

Amcast Central/Amcast South

Each of the nine (9) monitoring wells sampled in November 2018 demonstrated an exceedance of one or more parameters tested above NR 140 standards. Concentrations of VOCs were detected at GMMW-1 (bromodichloromethane), GMMW-3 (benzene, naphthalene, 1,2,4-trimethylbenzene) and FVMW-20 (trichloroethylene) above their respective NR 140 standards. Concentrations of total chromium were detected above NR 140 standards in seven (7) of the nine (9) wells analyzed (AMSMW-01, GMMW-2, GMMW-4, GMMW-5, GMMW-6, GMMW-7 and FVMW-20). In addition, elevated concentrations of several RCRA metals were detected in the samples collected from AMSMW-01 (arsenic, barium, lead and mercury), GMMW-3 (arsenic), GMMW-4 (arsenic, cadmium, lead and mercury), GMMW-5 (arsenic, lead and mercury) above NR 140 standards.

Monitoring wells AMSMW-01 and FVMW-20 exhibited concentrations of pentachlorophenol (3.6 J ug/l and 3.9 J, respectively) above NR 140 ES value of 1 ug/l and GMMW-6 exhibited a concentration of pentachlorophenol (0.18 J) above the NR 140 PAL (0.1 ug/l). Bis-(2-Ethylhexyl)-phthalate was detected above the NR 140 ES (6 ug/l) in the samples collected from GMMW-1 and GMMW-3 (12.6 ug/l and 15 J ug/l, respectively) and above the PAL (0.6 ug/l) in the samples collected from GMMW-6 and FVMW-20 (0.71 J and 2.1 J, respectively). Monitoring well GMMW-4 exhibited concentrations of benzo(a)pyrene, benzo(b)fluoranthene, chrysene, fluoranthene, and pyrene above their respective NR 140 ES values.

Total PCBs were detected above the NR 140 ES (0.03 ug/l) in the groundwater samples collected from monitoring wells AMSMW-01 (2.8 ug/l) and GMMW-3 (8.81 ug/l). Historical observations of PCBs are consistent with what was observed in the samples collected from monitoring wells AMSMW-01 and GMMW-3. Figure 1-3 (prepared by CH2M) in Attachment A depicts the monitoring well locations on the Amcast North property.

Additional annual groundwater monitoring is being recommended for the Amcast redevelopment site in the forthcoming work plan. The site is currently vacant and contains several buildings and asphalt covered parking areas. The existing asphalt pavement serves to limit potential surface

water and/or precipitation infiltration and limits potential contact with any impacted soil and/or groundwater at the site.

If you have any questions regarding this monthly update, please contact D.J. Burns, President/Project Director of Drake. His office telephone number is (262) 241-0005 and his cell phone number is (414) 881-0003.

Sincerely,

Drake Consulting Group, LLC

A handwritten signature in black ink, appearing to read 'C. Corson', with a long horizontal flourish extending to the right.

Chelsea Corson
Senior Project Manager

Attachments

cc: Oliver Fiontar, LLC



Ozaukee County GIS
Amcast Industrial & Amcast Automotive

DISCLAIMER: Ozaukee County does not guarantee the accuracy of the material contained here in and is not responsible for any misuse or misrepresentation of this information or its derivatives.



FIGURE 1A



Ozaukee County
121 W Main St
P.O. Box 994
Port Washington WI 53074
262-284-9411

Print Date: 4/10/2019

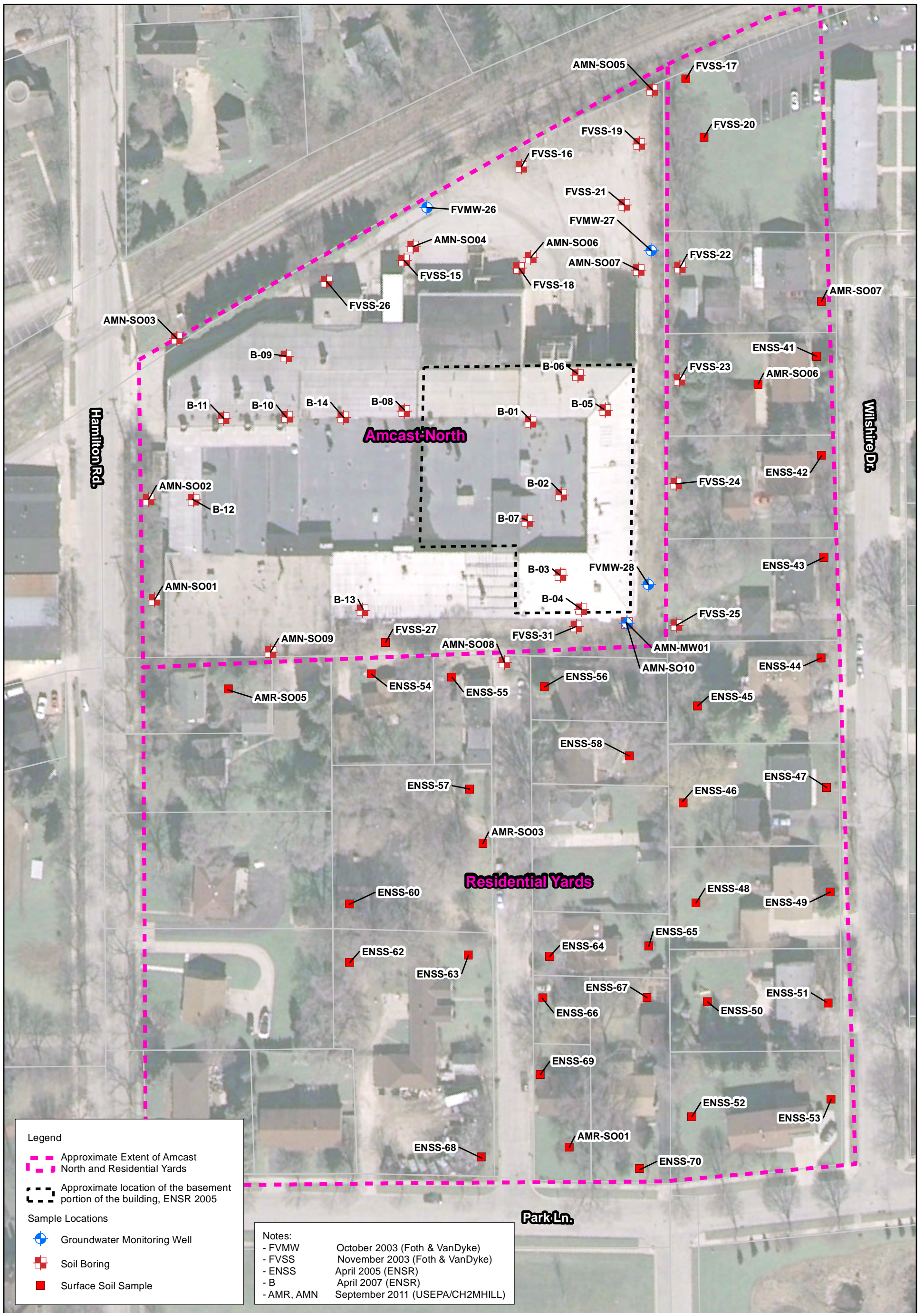
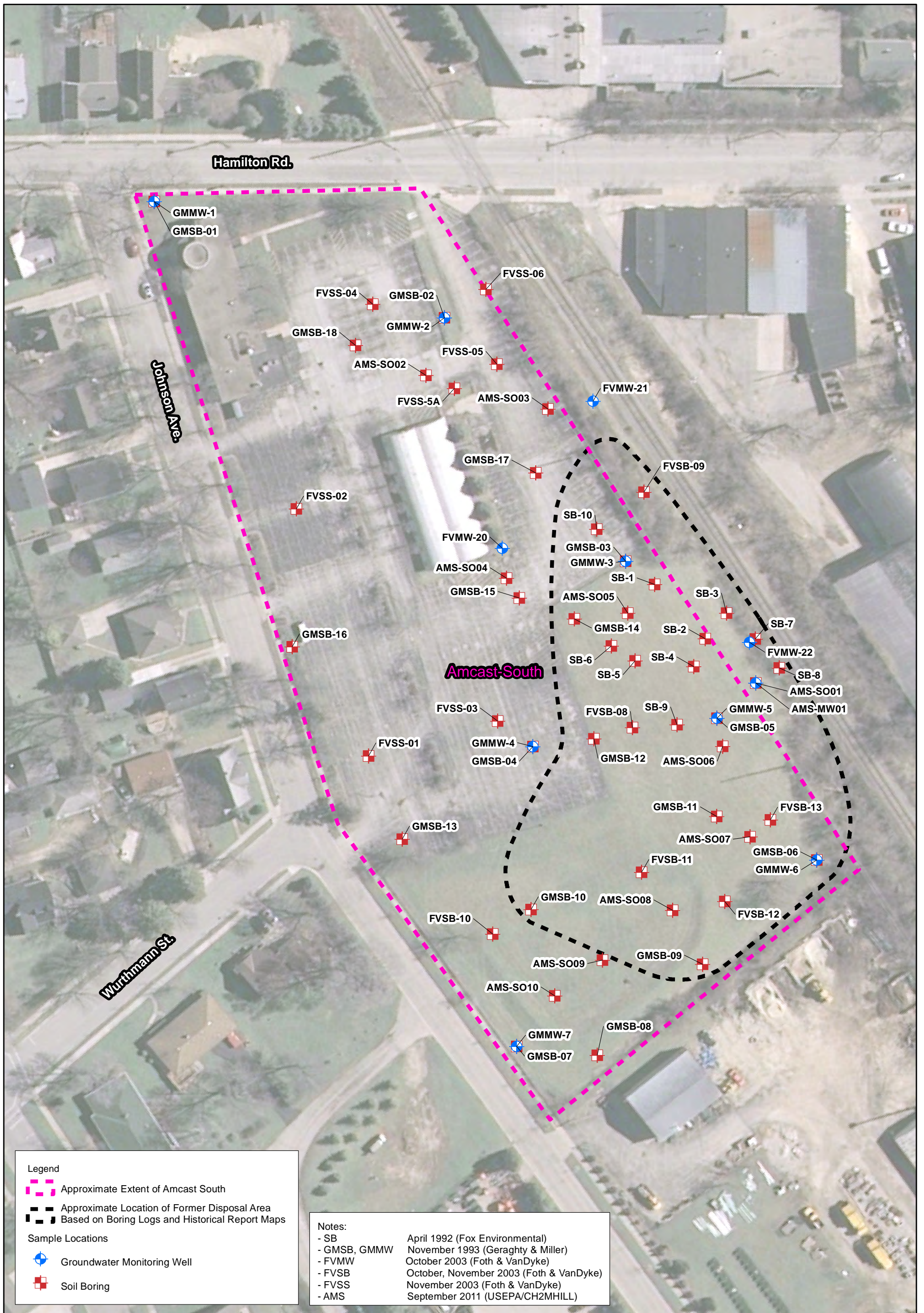


Figure 1-2
 Amcast North Property and Residential Yards - Features
 and Investigation Locations
 Data Evaluation Report
 Amcast Industrial Site Cedarburg, WI



Legend

- - - Approximate Extent of Amcast South
- Approximate Location of Former Disposal Area
Based on Boring Logs and Historical Report Maps
- Sample Locations**
- Groundwater Monitoring Well
- Soil Boring

Notes:

- SB April 1992 (Fox Environmental)
- GMSB, GMMW November 1993 (Geraghty & Miller)
- FVMW October 2003 (Foth & VanDyke)
- FVSB October, November 2003 (Foth & VanDyke)
- FVSS November 2003 (Foth & VanDyke)
- AMS September 2011 (USEPA/CH2MHILL)

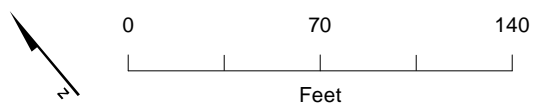


Figure 1-3
 Amcast South Property - Features and Investigation Locations
Data Evaluation Report
 Amcast Industrial Site Cedarburg, WI

TABLE 1
VOC - Groundwater Analytical Table
AMCAST NORTH - J16001
N39 W5789 Hamilton Road, Cedarburg WI

Monitoring Well ID	AMN-MW01	FVMW-26	FVMW-27	FVMW-28	NR 140 Preventive Action Limit (PAL)	NR 140 Enforcement Standard (ES)
Sample Collection Date	11/19/18	11/19/18	11/19/18	11/19/18		
Volatile Organic Compounds (ug/L)						
1,1,1,2-Tetrachloroethane	<0.27	<0.27	<0.27	-	7	70
1,1,1-Trichloroethane	<0.24	<0.24	<0.24	-	40	200
1,1,2,2-Tetrachloroethane	<0.28	<0.28	<0.28	-	0.02	0.2
1,1,2-Trichloroethane	<0.55	<0.55	<0.55	-	0.5	5
1,1-Dichloroethane	<0.27	<0.27	<0.27	-	85	850
1,1-Dichloroethene	<0.24	<0.24	<0.24	-	0.7	7
1,1-Dichloropropene	<0.54	<0.54	<0.54	-	NS	NS
1,2,3-Trichlorobenzene	<0.63	<0.63	<0.63	-	NS	NS
1,2,3-Trichloropropane	<0.59	<0.59	<0.59	-	12	60
1,2,4-Trichlorobenzene	<0.95	<0.95	<0.95	-	14	70
1,2,4-Trimethylbenzene	<0.84	<0.84	<0.84	-	96	480
1,2-Dibromo-3-chloropropane	<1.8	<1.8	<1.8	-	0.02	0.2
1,2-Dibromoethane (EDB)	<0.83	<0.83	<0.83	-	0.005	0.05
1,2-Dichlorobenzene	<0.71	<0.71	<0.71	-	60	600
1,2-Dichloroethane	<0.28	<0.28	<0.28	-	0.5	5
1,2-Dichloropropane	<0.28	<0.28	<0.28	-	0.5	5
1,3,5-Trimethylbenzene	<0.87	<0.87	<0.87	-	96	480
1,3-Dichlorobenzene	<0.63	<0.63	<0.63	-	120	600
1,3-Dichloropropane	<0.83	<0.83	<0.83	-	NS	NS
1,4-Dichlorobenzene	<0.94	<0.94	<0.94	-	15	75
2,2-Dichloropropane	<2.3	<2.3	<2.3	-	NS	NS
2-Chlorotoluene	<0.93	<0.93	<0.93	-	NS	NS
4-Chlorotoluene	<0.76	<0.76	<0.76	-	NS	NS
Benzene	<0.25	<0.25	<0.25	-	0.5	5
Bromobenzene	<0.24	<0.24	<0.24	-	NS	NS
Bromochloromethane	<0.36	<0.36	<0.36	-	NS	NS
Bromodichloromethane	<0.36	<0.36	<0.36	-	0.06	0.6
Bromoform	<4.0	<4.0	<4.0	-	0.44	4.4
Bromomethane	<0.97	<0.97	<0.97	-	1	10
Carbon tetrachloride	<0.17	<0.17	<0.17	-	0.5	5
Chlorobenzene	<0.71	<0.71	<0.71	-	20	100
Chloroethane	<1.3	<1.3	<1.3	-	80	400
Chloroform	<1.3	<1.3	<1.3	-	0.6	6
Chloromethane	<2.2	<2.2	<2.2	-	3	30
Dibromochloromethane	<2.6	<2.6	<2.6	-	6	60
Dibromomethane	<0.94	<0.94	<0.94	-	NS	NS
Dichlorodifluoromethane	<0.50	<0.50	<0.50	-	200	1,000
Diisopropyl ether	<1.9	<1.9	<1.9	-	NS	NS
Ethylbenzene	<0.22	<0.22	<0.22	-	140	700
Hexachloro-1,3-butadiene	<1.2	<1.2	<1.2	-	NS	NS
Isopropylbenzene (Cumene)	<0.39	<0.39	<0.39	-	NS	NS
Methyl-tert-butyl ether	<1.2	<1.2	<1.2	-	12	60
Methylene Chloride	<0.58	<0.58	<0.58	-	0.5	5
Naphthalene	<1.2	<1.2	<1.2	-	10	100
Styrene	<0.47	<0.47	<0.47	-	10	100
Tetrachloroethene	<0.33	<0.33	<0.33	-	0.5	5
Toluene	0.32 J	<0.17	<0.17	-	160	800
Trichloroethene	<u>2.1</u>	<0.26	<0.26	-	0.5	5
Trichlorofluoromethane	<0.21	<0.21	<0.21	-	698	3,490
Vinyl chloride	<0.17	<0.17	<0.17	-	0.02	0.2
cis-1,2-Dichloroethene	<0.27	<0.27	<0.27	-	7	70
cis-1,3-Dichloropropene	<3.6	<3.6	<3.6	-	0.04	0.4
Total Xylenes	<0.73	<0.73	<0.73	-	400	2,000
n-Butylbenzene	<0.71	<0.71	<0.71	-	NS	NS
n-Propylbenzene	<0.81	<0.81	<0.81	-	NS	NS
p-Isopropyltoluene	<0.80	<0.80	<0.80	-	NS	NS
sec-Butylbenzene	<0.85	<0.85	<0.85	-	NS	NS
tert-Butylbenzene	<0.30	<0.30	<0.30	-	NS	NS
trans-1,2-Dichloroethene	<1.1	<1.1	<1.1	-	20	100
trans-1,3-Dichloropropene	<4.4	<4.4	<4.4	-	0.04	0.4

Note:

ug/L - micrograms per liter (equivalent to parts per billion)

VOCs - Volatile Organic Compounds

ES - enforcement standard, as established in Wisconsin Administrative Code Chapter NR 140

PAL - preventive action limit, as established in Wisconsin Administrative Code Chapter NR 140

Bold - concentration exceeds NR 140 ES

Italics and underlined - concentration exceeds NR 140 PAL

(J) - estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

NS - no established standard

NA - not analyzed for indicated parameter

< less than the specified detection limit

- = Dry well. Sample collected attempted at FMNMW-28 but the well was dry

TABLE 2
SVOC - Groundwater Analytical Table
AMCAST NORTH - J16001
N39 W5789 Hamilton Road, Cedarburg WI

Monitoring Well ID	AMN-MW01	FVMW-26	FVMW-27	FVMW-28	NR 140 Preventive Action Limit (PAL)	NR 140 Enforcement Standard (ES)
Sample Collection Date	11/19/18	11/19/18	11/19/18	11/19/18		
Semi-volatile Organic Compounds (SVOCs)						
1,2,4-Trichlorobenzene	<1.9	<1.9	<1.9	-	14	70
1,2-Dichlorobenzene	<1.8	<1.8	<1.8	-	60	600
1,3-Dichlorobenzene	<1.8	<1.8	<1.8	-	120	600
1,4-Dichlorobenzene	<1.8	<1.8	<1.8	-	15	75
2,2'-Oxybis(1-chloropropane)	<1.5	<1.5	<1.4	-	NS	NS
2,4,5-Trichlorophenol	<0.80	<0.80	<0.79	-	NS	NS
2,4,6-Trichlorophenol	<2.0	<2.0	<2.0	-	NS	NS
2,4-Dichlorophenol	<1.3	<1.3	<1.3	-	NS	NS
2,4-Dimethylphenol	<1.2	<1.2	<1.2	-	NS	NS
2,4-Dinitrophenol	<0.68	<0.68	<0.67	-	NS	NS
2,4-Dinitrotoluene	<0.75	<0.75	<0.75	-	0.005	0.05
2,6-Dinitrotoluene	<0.57	<0.57	<0.57	-	0.005	0.05
2-Chloronaphthalene	<1.6	<1.6	<1.6	-	NS	NS
2-Chlorophenol	<1.1	<1.1	<1.1	-	NS	NS
2-Methylnaphthalene	<1.4	<1.4	<1.4	-	NS	NS
2-Methylphenol(o-Cresol)	<0.83	<0.83	<0.82	-	NS	NS
2-Nitroaniline	<0.74	<0.74	<0.73	-	NS	NS
2-Nitrophenol	<1.1	<1.1	<1.1	-	NS	NS
3&4-Methylphenol(m&p Cresol)	<1.5	<1.5	<1.5	-	NS	NS
3,3-Dichlorobenzidine	<0.86	<0.86	<0.85	-	NS	NS
3-Nitroaniline	<0.92	<0.92	<0.91	-	NS	NS
4,6-Dinitro-2-methylphenol	<0.62	<0.62	<0.62	-	NS	NS
4-Bromophenylphenyl ether	<1.9	<1.9	<1.9	-	NS	NS
4-Chloro-3-methylphenol	<1.6	<1.6	<1.6	-	NS	NS
4-Chloroaniline	<1.0	<1.0	<1.0	-	NS	NS
4-Chlorophenylphenyl ether	<0.78	<0.78	<0.77	-	NS	NS
4-Nitroaniline	<1.7	<1.7	<1.7	-	NS	NS
4-Nitrophenol	<1.0	<1.0	<0.99	-	NS	NS
Acenaphthene	<1.3	<1.3	<1.3	-	NS	NS
Acenaphthylene	<1.0	<1.0	<1.0	-	NS	NS
Anthracene	<1.7	<1.7	<1.7	-	600	3,000
Benzo(a)anthracene	<0.51	<0.51	<0.50	-	NS	NS
Benzo(a)pyrene	<1.8	<1.8	<1.8	-	0.02	0.2
Benzo(b)fluoranthene	<0.62	<0.62	<0.62	-	0.02	0.2
Benzo(g,h,i)perylene	<0.77	<0.77	<0.76	-	NS	NS
Benzo(k)fluoranthene	<0.95	<0.95	<0.95	-	NS	NS
Butylbenzylphthalate	<0.74	<0.74	<0.73	-	NS	NS
Carbazole	<0.71	<0.71	<0.71	-	NS	NS
Chrysene	<1.7	<1.7	<1.6	-	0.02	0.2
Di-n-butylphthalate	<2.4	<2.4	<2.4	-	NS	NS
Di-n-octylphthalate	<1.8	<1.8	<1.8	-	NS	NS
Dibenz(a,h)anthracene	<1.3	<1.3	<1.2	-	NS	NS
Dibenzofuran	<0.73	<0.73	<0.72	-	NS	NS
Diethylphthalate	<1.0	<1.0	<1.0	-	NS	NS
Dimethylphthalate	<1.8	<1.8	<1.8	-	NS	NS
Fluoranthene	<0.54	<0.54	<0.53	-	80	400
Fluorene	<0.71	<0.71	<0.71	-	80	400
Hexachloro-1,3-butadiene	<2.3	<2.3	<2.3	-	NS	NS
Hexachlorobenzene	<1.6	<1.6	<1.6	-	0.1	1
Hexachlorocyclopentadiene	<0.65	<0.65	<0.64	-	NS	NS
Hexachloroethane	<2.5	<2.5	<2.5	-	NS	NS
Indeno(1,2,3-cd)pyrene	<1.4	<1.4	<1.4	-	NS	NS
Isophorone	<0.70	<0.70	<0.69	-	NS	NS
N-Nitroso-di-n-propylamine	<0.92	<0.92	<0.92	-	NS	NS
N-Nitrosodiphenylamine	<3.4	<3.4	<3.3	-	0.7	7
Naphthalene	<1.8	<1.8	<1.8	-	10	100
Nitrobenzene	<1.4	<1.4	<1.4	-	NS	NS
Pentachlorophenol	<1.4	<1.4	<1.4	-	0.1	1
Phenanthrene	<1.7	<1.7	<1.7	-	NS	NS
Phenol	<0.57	<0.57	<0.57	-	400	2,000
Pyrene	<1.3	<1.3	<1.3	-	50	250
bis(2-Chloroethoxy)methane	<0.95	<0.95	<0.94	-	NS	NS
bis(2-Chloroethyl) ether	<1.5	<1.5	<1.5	-	NS	NS
bis(2-Ethylhexyl)phthalate	<0.66	<i>1.4J</i>	<i>1.3J</i>	-	0.6	6

Note:

ug/L - micrograms per liter (equivalent to parts per billion)

PAHs - Polycyclic Aromatic Hydrocarbons

ES - enforcement standard, as established in Wisconsin Administrative Code Chapter NR 140

PAL - preventive action limit, as established in Wisconsin Administrative Code Chapter NR 140

Bold - concentration exceeds NR 140 ES

Italics - concentration exceeds NR 140 PAL

(J) - estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

NS - no established standard

NA - not analyzed for indicated parameter

< less than the specified detection limit

- = Dry well. Sample collected attempted at FMNMW-28 but the well was dry

TABLE 3

RCRA Metals - Groundwater Analytical Table
 AMCAST NORTH - J16001
 N39 W5789 Hamilton Road, Cedarburg WI

Monitoring Well ID	AMN-MW01	FVMW-26	FVMW-27	FVMW-28	NR 140 Preventive Action Limit (PAL)	NR 140 Enforcement Standard (ES)
Sample Collection Date	11/19/18	11/19/18	11/19/18	11/19/18		
Total RCRA Metals (ug/L)						
Arsenic, Total	14.9 J	<8.3	<8.3	-	1	10
Barium, Total	358	130	116	-	400	2,000
Cadmium, Total	<u>1.8 J</u>	<1.3	<1.3	-	0.5	5
Chromium, Total	471	<2.5	<2.5	-	10	100
Lead, Total	35.5	<5.9	<5.9	-	1.5	15
Selenium, Total	<12.2	<12.2	<12.2	-	10	50
Silver, Total	<3.3	<3.3	<3.3	-	10	50
Mercury, Total	<0.084	<0.084	<0.084	-	0.2	2

Monitoring Well ID	AMN-MW01	FVMW-26	FVMW-27	FVMW-28	NR 140 Preventive Action Limit (PAL)	NR 140 Enforcement Standard (ES)
Sample Collection Date	11/19/18	11/19/18	11/19/18	11/19/18		
Dissolved RCRA Metals (ug/L)						
Arsenic, Dissolved	<8.3	<8.3	<8.3	-	1	10
Barium, Dissolved	83.1	94.9	112	-	400	2,000
Cadmium, Dissolved	<1.3	<1.3	<1.3	-	0.5	5
Chromium, Dissolved	385	<2.5	<2.5	-	10	100
Lead, Dissolved	<5.9	<5.9	<5.9	-	1.5	15
Selenium, Dissolved	<12.2	<12.2	<12.2	-	10	50
Silver, Dissolved	<3.3	<3.3	<3.3	-	10	50
Mercury, Dissolved	<u>0.098 J</u>	<0.084	<0.084	-	0.2	2

Note:

ug/L - micrograms per liter (equivalent to parts per billion)

RCRA - Resource Conservation and Recovery Act

ES - enforcement standard, as established in Wisconsin Administrative Code Chapter NR 140

PAL - preventive action limit, as established in Wisconsin Administrative Code Chapter NR 140

Bold - concentration exceeds NR 140 ES

Italics and underlined - concentration exceeds NR 140 PAL

(J) - estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

NS - no established standard

NA - not analyzed for indicated parameter

< less than the specified detection limit

- = Dry well. Sample collected attempted at FMNMW-28 but the well was dry

Table 4
 PCBs - Groundwater Analytical Table
 AMCAST NORTH - J16001
 N39 W5789 Hamilton Road, Cedarburg WI

Monitoring Well ID	AMN-MW01	FVMW-26	FVMW-27	FVMW-28	NR 140 Preventive Action Limit (PAL)	NR 140 Enforcement Standard (ES)	USEPA Tapwater RSL
Sample Collection Date	11/19/18	11/19/18	11/19/18	11/19/18			
Polychlorinated biphenyls (ug/L)							
PCB-1016 (Aroclor 1016)	<0.24	<0.24	<0.24	-	NS	NS	0.96
PCB-1221 (Aroclor 1221)	<0.24	<0.24	<0.24	-	NS	NS	0.0043
PCB-1232 (Aroclor 1232)	<0.24	<0.24	<0.24	-	NS	NS	0.0043
PCB-1242 (Aroclor 1242)	<0.24	<0.24	<0.24	-	NS	NS	0.034
PCB-1248 (Aroclor 1248)	<0.24	<0.24	0.37 J	-	NS	NS	0.034
PCB-1254 (Aroclor 1254)	<0.24	<0.24	<0.24	-	NS	NS	0.034
PCB-1260 (Aroclor 1260)	<0.24	<0.24	<0.24	-	NS	NS	0.034
PCB, Total	<0.24	<0.24	0.37 J	-	<i>0.003</i>	0.03	NS

Note:

ug/L - micrograms per liter (equivalent to parts per billion)

ES - enforcement standard, as established in Wisconsin Administrative Code Chapter NR 140

PAL - preventive action limit, as established in Wisconsin Administrative Code Chapter NR 140

Bold - concentration exceeds NR 140 ES

Italics and underlined - concentration exceeds NR 140 PAL

(J) - estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

NS - no established standard

NA - not analyzed for indicated parameter

< less than the specified detection limit

- = Dry well. Sample collected attempted at FMNMW-28 but the well was dry

USEPA Tapwater Regional Screening Level (RSL)

Table 3

RCRA Metals - Groundwater Analytical Table
 AMCAST CENTRAL & AMCAST SOUTH- J16001
 N39 W5789 Hamilton Road, Cedarburg WI

Well ID	AMS-MW01	GMMW-1	GMMW-2	GMMW-3	GMMW-4	GMMW-5	GMMW-6	GMMW-7	FVMW-20	NR 140 Preventive Action Limit (PAL)	NR 140 Enforcement Standard (ES)
Sample Collection Date	11/19/2018	11/19/2018	11/19/2018	11/19/2018	11/19/2018	11/19/2018	11/19/2018	11/19/2018	11/19/2018		
Total RCRA Metals (ug/L)											
Arsenic, Total	221	<8.3	<8.3	9.3 J	14.2 J	173	<8.3	<8.3	<8.3	1	10
Barium, Total	<u>530</u>	121	75.8	113	219	300	178	214	131	400	2,000
Cadmium, Total	<1.3	<1.3	<1.3	<1.3	1.4 J	<1.3	<1.3	<1.3	<1.3	0.5	5
Chromium, Total	123	7.1 J	<u>17.8</u>	3.5 J	<u>64.3</u>	<u>81.9</u>	<u>14.6</u>	<u>20.7</u>	<u>17.1</u>	10	100
Lead, Total	42.4	<5.9	<5.9	<5.9	90.2	25.6	<5.9	<5.9	<5.9	1.5	15
Selenium, Total	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	10	50
Silver, Total	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	10	50
Mercury, Total	<u>1.3</u>	<0.084	<0.084	<0.084	0.093 J	0.084 J	<0.084	<0.084	<0.084	0.2	2

Well ID	AMS-MW01	GMMW-1	GMMW-2	GMMW-3	GMMW-4	GMMW-5	GMMW-6	GMMW-7	FVMW-20	NR 140 Preventive Action Limit (PAL)	NR 140 Enforcement Standard (ES)
Sample Collection Date	11/19/2018	11/19/2018	11/19/2018	11/19/2018	11/19/2018	11/19/2018	11/19/2018	11/19/2018	11/19/2018		
Dissolved RCRA Metals (ug/L)											
Arsenic, Dissolved	<8.3	<8.3	<8.3	8.7 J	<8.3	<8.3	<8.3	<8.3	<8.3	1	10
Barium, Dissolved	183	99.2	65.9	79.3	83.1	108	115	143	60.7	400	2,000
Cadmium, Dissolved	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	0.5	5
Chromium, Dissolved	<2.5	3.1 J	4.3 J	<2.5	<2.5	<2.5	<2.5	<2.5	2.9 J	10	100
Lead, Dissolved	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	1.5	15
Selenium, Dissolved	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2	10	50
Silver, Dissolved	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	10	50
Mercury, Dissolved	<u>0.94</u>	<0.084	<0.084	<0.084	<u>0.3</u>	<u>0.26 J</u>	<0.084	<0.084	<0.084	0.2	2

Note:

ug/L - micrograms per liter (equivalent to parts per billion)

ES - enforcement standard, as established in Wisconsin Administrative Code Chapter NR 140

PAL - preventive action limit, as established in Wisconsin Administrative Code Chapter NR 140

Bold - concentration exceeds NR 140 ES

Italics and underlined - concentration exceeds NR 140 PAL

(J) - estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

NA - not analyzed for indicated parameter

< less than the specified detection limit

Table 4
 Polychlorinated biphenyls (PCBs) - Groundwater Analytical Table
 AMCAST CENTRAL & AMCAST SOUTH- J16001
 N39 W5789 Hamilton Road, Cedarburg WI

Well ID	AMS-MW01	GMMW-1	GMMW-2	GMMW-3	GMMW-4	GMMW-5	GMMW-6	GMMW-7	FVMW-20	NR 140 Preventive Action Limit (PAL)	NR 140 Enforcement Standard (ES)
Sample Collection Date	11/19/18	11/19/18	11/19/18	11/19/18	11/19/18	11/19/18	11/19/18	11/19/18	11/19/18		
PCBs (ug/L)											
PCB-1016 (Aroclor 1016)	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	NS	NS
PCB-1221 (Aroclor 1221)	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	NS	NS
PCB-1232 (Aroclor 1232)	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	NS	NS
PCB-1242 (Aroclor 1242)	2.8	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	NS	NS
PCB-1248 (Aroclor 1248)	<0.24	<0.24	<0.24	5.5	<0.24	<0.24	<0.24	<0.24	<0.24	NS	NS
PCB-1254 (Aroclor 1254)	<0.24	<0.24	<0.24	2.7	<0.24	<0.24	<0.24	<0.24	<0.24	NS	NS
PCB-1260 (Aroclor 1260)	<0.24	<0.24	<0.24	0.61	<0.24	<0.24	<0.24	<0.24	<0.24	NS	NS
PCB, Total	2.8	<0.24	<0.24	8.81	<0.24	<0.24	<0.24	<0.24	<0.24	<i>0.003</i>	0.03

Note:

ug/L - micrograms per liter (equivalent to parts per billion)

PCBs - Polychlorinated Biphenyls

ES - enforcement standard, as established in Wisconsin Administrative Code Chapter NR 140

PAL - preventive action limit, as established in Wisconsin Administrative Code Chapter NR 140

Bold - concentration exceeds NR 140 ES

Italics - concentration exceeds NR 140 PAL

(J) - estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

(U) - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

NS - no established standard

< less than the specified detection limit

- sample either not analyzed for specific parameter or not reported for specific parameter