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Oshkosh, WI, 54901
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September 5, 2018

WDNR BRRTS No.
02-45-578324
02-45-580768

AECOM Project No.
60521680

Ms. Jennifer Borski
Hydrogeologist – Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
625 East County Road Y, STE 700
Oshkosh, Wisconsin 54901

Subsurface Confirmation Sampling Summary Letter for Neenah Paper, Inc. Appleton Mill, located at 430 South Island Street, Appleton, Wisconsin

Dear Ms. Borski,

AECOM Technical Services, Inc. (AECOM) has performed a Subsurface Confirmation Sampling at the Neenah Paper, Inc. (NP), Appleton Mill, located at 430 South Island Street, Appleton, Wisconsin (Figure 1), to address the requirements of the Responsible Party (RP) letters issued for the Bureau of Remediation and Remediation and Redevelopment Tracking System (BRRTS) Cases 02-45-578324 and 02-45-580768. The sampling was implemented to confirm previous sample results that exceeded Wisconsin Administrative Code (WAC) Chapter NR 140 Public Health Groundwater Quality Standards, and WAC NR 720 Soil Cleanup Standards Residual Contaminant Levels. This Summary Letter provides information required under Chapter NR 716 of the WAC to further assess both releases.

Site Investigation

BRRTS No. 02-45-578324

In response to the Wisconsin Department of Natural Resources (WDNR) Site Investigation Required Letter (March 9, 2018), AECOM submitted a Work Plan on May 7, 2018, to collect samples to confirm the WAC NR 140 Enforcement Standard (ES) exceedances observed in the water sample collected from the excavation in October 2016. With WDNR approval, on June 28, 2018, the sample location was identified in the basement of the NP facility, and the concrete floor was cored so that a groundwater and soil sample could be collected. The sample location is depicted on the attached Figure 2.

Soil and groundwater samples were collected utilizing a hand auger and a low-flow pump to collect a grab sample and decant into the sample containers. The samples were submitted to Pace Analytical, Inc. (Pace) for laboratory analysis for volatile organic compounds (VOCs) and metals (aluminum, lead, and zinc) (dissolved for groundwater sample).

Samples were placed on ice after collection and cooled to four degrees Celsius. Following sample collection, each sample container was labeled with the sample location, date of collection, and intended analysis. The sample was then placed into an insulted container with the ice and the completed chain-of-custody form. The samples were transported to Pace via courier.

BRRTS No. 02-45-580768

In response to the WDNR RP Letter (December 22, 2017), AECOM collected samples to confirm the VOC and metals contamination in accordance with AECOM Work Plan submitted on May 7, 2018. The June 28, 2018 investigation included identification of the former trench (u-drain) excavation area, coring through the concrete slab in the basement of the Mill, and collecting a soil and groundwater sample for laboratory analysis for VOCs and metals (dissolved for groundwater sample). The samples were collected at the depth of the bottom of the trench (u-drain) utilizing a hand auger to create a bore hole

within the soil below the basement slab. A low-flow pump was used to collect water beneath the basement slab and was decanted into the sample containers. The groundwater sample for metals was filtered in the field. The sample location is depicted on the attached Figure 2.

The samples were placed on ice after collected and cooled to four degrees Celsius. Following sample collection, each sample container was labeled with the sample location, date of collection, and intended analysis. The sample was then placed into an insulted container with the ice and a completed chain-of-custody form accompanied the container of samples to the laboratory. The samples were transported to Pace via courier.

Analytical Results Summary

AECOM compared the soil sample analytical data from this investigation at the site to the soil standard values for RCLs given by the WDNR, WAC NR 720 Soil Cleanup Standards (updated March 2017). Analytical results were compared to NR 720 RCL values based on the protection of human health from the soil-to-groundwater contact pathway, the non-industrial land use direct contact pathway, and the industrial land use direct contact pathway. A summary of the soil analytical results and the NR 720 soil standard values are presented in Table 1.

Analytical results from groundwater samples collected in this investigation were compared to the ES and Preventative Action Limit (PAL) values for groundwater quality given by the WDNR, WAC NR 140 Water Quality standard (January 2012). A summary of the groundwater sample analytical results and the NR 140 groundwater standard values are presented in Table 2.

A summary of the confirmation sampling for each BRRTS site is provided below.

BRRTS No. 02-45-578324

The groundwater sample collected October 3, 2016, exhibited WAC NR 140 ES exceedances for aluminum, bromodichloromethane, bromoform, and chloroform. The October 3, 2016 sample also exhibited WAC NR 140 PAL exceedances for lead and dibromochloromethane. The groundwater sample collected on June 28, 2018, exhibited an ES exceedance for aluminum. No other WAC NR 140 Water Quality Standards were exceeded. Laboratory analytical results are included in Table 1.

The soil sample collected on October 3, 2016, did not have any VOC or semi-volatile organic compounds (SVOCs) detected, and metals were not analyzed. The soil sample collected on June 28, 2018, exhibited aluminum and lead above the WAC NR 720 Groundwater Pathway RCL, but below the Background Threshold Level. There were no NR 720 RCL exceedances for any VOCs. Methylene chloride was estimated above the limit-of-detection and below the limit-of-quantification (115 micrograms per kilogram [µg/kg]). The trip-blank sample also exhibited a detection for methylene chloride, a common lab cleaning constituent. Laboratory analytical results are included in Table 2.

BRRTS No. 02-45-580768

The groundwater sample collected on March 31, 2017, exhibited WAC NR 140 ES exceedances for lead and tetrachloroethene. The March 31, 2017 sample also exhibited WAC NR 140 PAL exceedances for nickel, mercury, bromoform, chloroform, and methylene chloride. The groundwater sample collected on June 28, 2018, exhibited ES exceedance for aluminum. The groundwater result for vinyl chloride was quantified at the same value as the ES. The June 28, 2018 groundwater sample also exhibited WAC NR 140 PAL exceedances for metals: arsenic, cadmium, and lead; and VOC: tetrachloroethene. Laboratory analytical results are included in Table 1.

Soil samples collected from March 2017 exhibited WAC NR 720 Industrial Direct Contact RCL exceedances for arsenic, lead, and mercury. The March 2017 samples also exhibited WAC NR 720 Groundwater Pathway RCL exceedances for metals: antimony, cadmium, copper, nickel, selenium, and silver; and VOCs: 1,1,1, trichloroethane, cis-1,2-dichloroethene, tetrachloroethene, and trichloroethene.

The soil sample collected on June 28, 2018 exhibited WAC NR 720 Industrial Direct Contact RCL exceedances for arsenic, lead, and mercury. The June 28, 2018 sample also exhibited WAC NR 720 Groundwater Pathway RCL exceedance for aluminum, cadmium, copper, nickel, selenium, silver, and tetrachloroethene. Laboratory analytical results are included in Table 2.

Adjacent BRRTS Site Data Review

AECOM reviewed the adjacent property's (Woolen Mills Lofts-Appleton LLC, BRRTS No. 02-45-576289) soil and groundwater data tables through the WDNR BRRTS Online Database. The information reviewed indicated that VOC exceedances reported in the Woolen Mills tables are notably higher (two orders of magnitude) in concentration for the same compounds detected on the NP site. Additionally, Sanborn Fire Insurance maps from 1886 through 1924 indicate that the eastern portion of the Woolen Mills site was previously used as a foundry (Valley Iron Works), which included an oil and paint shop, coke and sand storage, pattern shop, and machine shop.

Summary and Conclusions

BRRTS No. 02-45-578324

- Visual observations of the soil sample collected were: fine, dark brown silty sand, PID = 1.0 ppm, no odors, and possible foundry sand. Red clay was noted below 2.0 feet below ground surface (bgs).
- The soil sample collected on June 28, 2018 did not detect any constituents exceeding the WAC NR720 Industrial Direct Contact Pathway RCL. Aluminum and lead results were above the WAC NR 720 Groundwater Pathway RCL, but below the background threshold levels.
- The groundwater sample collected on June 28, 2018 confirmed the October 2016 ES exceedance for aluminum.

BRRTS No. 02-45-580768

- Visual observations of the soil sample collected were: fine, dark brown silty sand, PID = 5.4 ppm, no odors, and possible foundry sand. Red clay was noted below 2.0 feet bgs.
- The soil sample collected on June 28, 2018 confirmed the WAC NR 720 Industrial Direct Contact RCL exceedances for arsenic, lead, and mercury. The June 28, 2018 sample also confirmed the WAC NR 720 Groundwater Pathway RCL exceedance for tetrachloroethene.
- The groundwater sample collected on June 28, 2018 confirmed the dissolved lead and tetrachloroethene exceedances. The June 28, 2018 sample also exhibited WAC NR 140 exceedances for aluminum, arsenic, cadmium, and vinyl chloride.

The results of the confirmation sampling outlined above indicate the presence of soil and groundwater contamination at the Site exceeding WDNR NR 720 and NR 140 standards. Exceedances related to metals are associated with historical fill material, likely from foundry materials, and has been documented throughout the NP site and neighboring properties. Further delineation is not necessary.

Based on the WDNR BRRTS Online Database findings (similar compounds and parent chlorinated VOCs, higher concentrations, and groundwater flow direction) from the adjacent property, the Site's VOC contamination is not related to the historical uses of the NP site.

Therefore, further investigation of the NP associated BRRTS Sites (BRRTS No. 02-45-578324 and BRRTS No. 02-45-580768) is not warranted.

AECOM

Please call Michelle Freimund (920-236-6712) with questions concerning this Summary Letter.

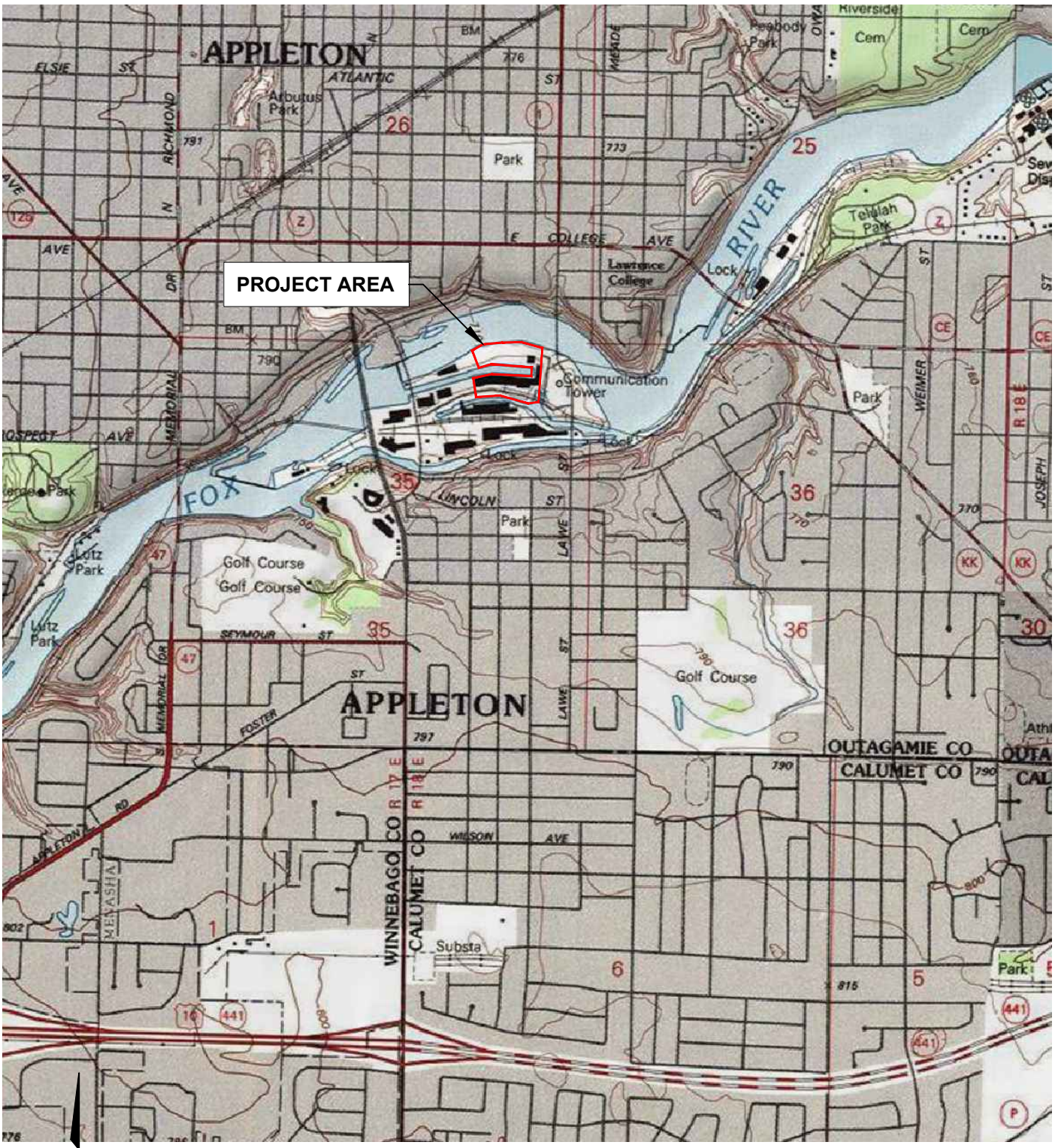
Yours sincerely,

Dan O'Connell, P.G.
Project Geologist

Michelle L. Freimund, P.G.
Senior Project Manager/Program Manager

Cc: Dong-Son Pham, Neenah, Inc. – Appleton Mill

Attachments: Figure 1 – Site Location
Figure 2 – Groundwater Concentration Map
Table 1 – Groundwater Analytical Data Table
Table 2 – Soil Analytical Data Table



LEGEND:

PROJECT AREA

NOT TO SCALE

MAP SOURCE: MODIFIED FROM 2013 NATIONAL GEOGRAPHIC SOCIETY, I-CUBED

NEENAH PAPER, INC. - APPLETON MILL
430 SOUTH ISLAND STREET, APPLETON, WI
NEENAH PAPER, INC.
Project No.: 60521680 2017-05-02

SITE LOCATION MAP

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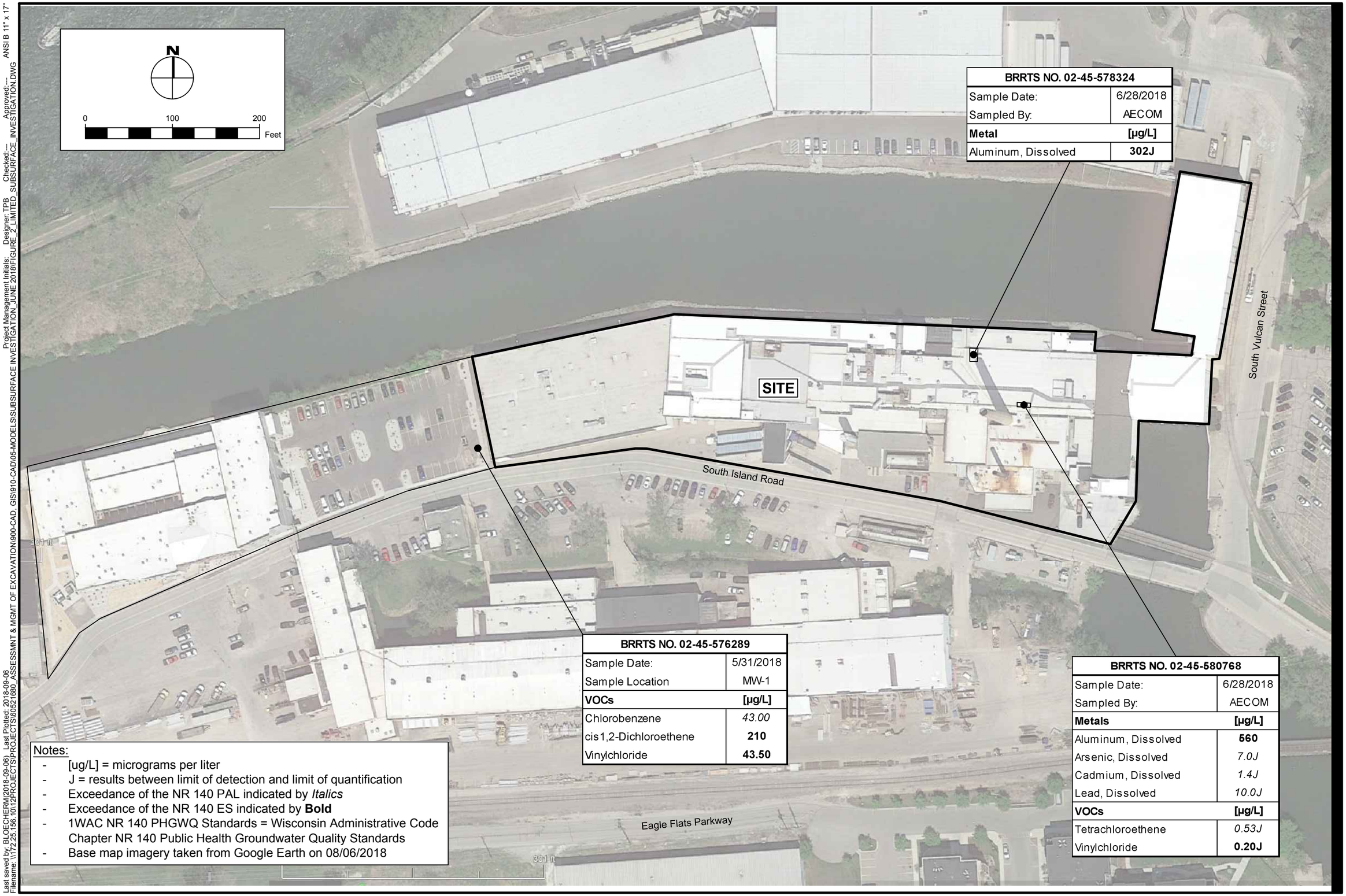
FIGURE 1

ANSI A 8.5" x 11"
Approved:---
Checked:---
Designer: ---
Project Management Initials:
Last Plotted: 2017-05-02
Last saved by: BRANDT(2017-05-02)
Filename: K:\PROJECTS\60521680_ASSESSMNT & MGMT OF EXCAVATION\900-CAD, GIS\910-CAD\05-MODELS\FIGURE 1.DWG



Notes:
- [ug/L] = micrograms per liter
- J = results between limit of detection and limit of quantification
- Exceedance of the NR 140 PAL indicated by *Italics*
- Exceedance of the NR 140 ES indicated by **Bold**
- 1WAC NR 140 PHGWQ Standards = Wisconsin Administrative Code Chapter NR 140 Public Health Groundwater Quality Standards
- Base map imagery taken from Google Earth on 08/06/2018

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FIGURE 2

NEENAH PAPER, INC.
GROUNDWATER CONCENTRATION MAP

NEENAH PAPER INC.
APPLETON, WI
NEENAH PAPER INC.
Project No.: 60521680 2018-08-27

Last saved by: BLOECHERM(2018-09-06) Last Plotted: 2018-09-06
Filename: \\172.25.156.10\12PROJECTS\PROJECTS\60521680_ASSESSMNT & MGMT OF EXCAVATION\900-CAD, GIS\910-CAD\05-MODELS\SUBSURFACE INVESTIGATION_JUNE 2018\FIGURE_2_LIMITED_SUBSURFACE_INVESTIGATION.DWG
Project Management Initials: Designer: TPB Checked: --- Approved: ---
ANSI B 11" x 17"

Table 1

Groundwater Analytical Table
Neenah Paper
Appleton, Wisconsin

BRRTS ID	WAC NR 140 Public Health Groundwater Quality Standards[1]		BRRTS 02-45-578324		BRRTS 02-45-580768	
Sample			Basement Pit	578324-W	WS-1	580763 (U-Drain)-W
Date	Enforcement Standard (ES)	Preventive Action Limit (PAL)	10/3/16	6/28/18	3/31/17	6/28/18
Sampled By			AECOM	AECOM	AECOM	AECOM
Metals (ug/L)						
Aluminum	200	40	**959**	NA	NA	NA
Aluminum, Dissolved	200	40	NA	**302 J**	NA	**560**
Antimony	6	1.2	NA	NA	<7.6	NA
Arsenic	10	1	<2.5	NA	<8.3	NA
Arsenic, Dissolved	10	1	NA	NA	NA	**7.0 J**
Barium	2000	400	NA	NA	NA	NA
Barium, Dissolved	2000	400	NA	NA	NA	66.5
Beryllium	4	0.4	NA	NA	<1.2	NA
Cadmium	5	0.5	0.34 J	NA	<1.3	NA
Cadmium, Dissolved	5	0.5	NA	NA	NA	**1.4 J**
Chromium	100	10	2.4 J	NA	9.9 J	NA
Chromium, Dissolved	100	10	NA	NA	NA	9.3 J
Copper	1300	130	26.3	NA	80.4	NA
Copper, Dissolved	1300	130	NA	NA	NA	7.7 J
Lead	15	1.5	**6.0 J**	NA	**52.0**	NA
Lead, Dissolved	15	1.5	NA	<4.3	NA	**10.0 J**
Nickel	100	20	<1.6	NA	**44.6**	NA
Nickel, Dissolved	100	20	NA	NA	NA	6.4 J
Selenium	50	10	NA	NA	<16.6	NA
Selenium, Dissolved	50	10	NA	NA	NA	<5.6
Silver	50	10	NA	NA	<3.3	NA
Silver, Dissolved	50	10	NA	NA	NA	<3.2
Thallium	2	0.4	NA	NA	<7.4	NA
Zinc	5000	2500	12.3 J	NA	61.8	NA
Zinc, Dissolved	5000	2500	NA	<9.3	NA	47.5
Mercury	2	0.2	0.050 J	NA	**1.3**	NA
Mercury, Dissolved	2	0.2	NA	NA	NA	<0.13
VOCs (ug/L						
1,1,1,2-Tetrachloroethane	70	7	<0.18	<0.18	<0.18	<0.18
1,1,1-Trichloroethane	200	40	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	0.2	0.02	<0.25	<0.25	<0.25	<0.25
1,1,2-Trichloroethane	5	0.5	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	850	85	<0.24	0.39 J	<0.24	1.2
1,1-Dichloroethene	7	0.7	<0.41	<0.41	<0.41	<0.41
1,1-Dichloropropene	NL	NL	<0.44	<0.44	<0.44	<0.44
1,2,3-Trichlorobenzene	NL	NL	<2.1	<2.1	<2.1	<2.1
1,2,3-Trichloropropane	60	12	<0.50	<0.50	<0.50	<0.50
1,2,4-Trichlorobenzene	70	14	<2.2	<2.2	<2.2	<2.2
1,2,4-Trimethylbenzene	480	96	<0.50	<0.50	<0.50	<0.50
1,2-Dibromo-3-chloropropane	0.2	0.02	<2.2	<2.2	<2.2	<2.2
1,2-Dibromoethane (EDB)	0.05	0.005	<0.18	<0.18	<0.18	<0.18
1,2-Dichlorobenzene	600	60	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane	5	0.5	<0.17	<0.17	<0.17	<0.17
1,2-Dichloropropane	5	0.5	<0.23	<0.23	<0.23	<0.23
1,3,5-Trimethylbenzene	480	96	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	600	120	<0.50	<0.50	<0.50	<0.50
1,3-Dichloropropane	NL	NL	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	75	15	<0.50	<0.50	<0.50	<0.50
2,2-Dichloropropane	NL	NL	<0.48	<0.48	<0.48	<0.48
2-Chlorotoluene	NL	NL	<0.50	<0.50	<0.50	<0.50
4-Chlorotoluene	NL	NL	<0.21	<0.21	<0.21	<0.21
Benzene	5	0.5	<0.50	<0.50	<0.50	<0.50
Bromobenzene	NL	NL	<0.23	<0.23	<0.23	<0.23
Bromochloromethane	NL	NL	0.53 J	<0.34	0.39 J	<0.34
Bromodichloromethane	0.6	0.06	**5.3**	<0.50	<0.50	<0.50
Bromoform	4.4	0.44	**46.5**	<0.50	**4.1**	<0.50
Bromomethane	10	1	<2.4	<2.4	<2.4	<2.4
Carbon tetrachloride	5	0.5	<0.50	<0.50	<0.50	<0.50
Chlorobenzene	100	20	<0.50	<0.50	<0.50	<0.50
Chloroethane	400	80	<0.37	<0.37	<0.37	<0.37
Chloroform	6	0.6	**9.3**	<2.5	**4.6 J**	<2.5
Chloromethane	30	3	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethene	70	7	<0.26	0.46 J	0.61 J	1.1
cis-1,3-Dichloropropene	0.4	0.04	<0.50	<0.50	<0.50	<0.50
Dibromochloromethane	60	6	**13.4**	<0.50	<0.50	<0.50
Dibromomethane	NL	NL	2.0	<0.43	2.5	<0.43
Dichlorodifluoromethane	1,000	200	<0.22	<0.22	<0.22	<0.22
Diisopropyl ether	NL	NL	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	700	140	<0.50	<0.50	<0.50	<0.50
Hexachloro-1,3-butadiene	NL	NL	<2.1	<2.1	<2.1	<2.1
Isopropylbenzene (Cumene)	NL	NL	<0.14	<0.14	<0.14	<0.14
m&p-Xylene	NL	NL	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	5	0.5	<0.23	<0.23	**1.9**	<0.23
Methyl-tert-butyl ether	60	12	<0.17	<0.17	<0.17	<0.17
Naphthalene	100	10	<2.5	<2.5	<2.5	<2.5
n-Butylbenzene	NL	NL	<0.50	<0.50	<0.50	<0.50
n-Propylbenzene	NL	NL	<0.50	<0.50	<0.50	<0.50
o-Xylene	NL	NL	<0.50	<0.50	<0.50	<0.50
p-Isopropyltoluene	NL	NL	<0.50	<0.50	1.1	<0.50
sec-Butylbenzene	NL	NL	<2.2	<2.2	<2.2	<2.2
Styrene	100	10	<0.50	<0.50	<0.50	<0.50
tert-Butylbenzene	NL	NL	<0.18	<0.18	<0.18	<0.18
Tetrachloroethene	5	0.5	<0.50	<0.50	**5.6**	**0.53 J**
Toluene	800	160	<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethene	100	20	<0.26	<0.26	<0.26	<0.26
trans-1,3-Dichloropropene	0.4	0.04	<0.23	<0.23	<0.23	<0.23
Trichloroethene	5	0.5	<0.33	0.39 J	<0.33	0.47 J
Trichlorofluoromethane	3,490	698	<0.18	<0.18	<0.18	<0.18
Vinyl chloride	0.2	0.02	<0.18	<0.18	<0.18	**0.20 J**
Other						
Oil and Grease (mg/L)	NL	NL	NA	NA	5.4	NA
Cyanide	200	40	6.5	NA	NA	NA

Notes:
(ug/L) = micrograms per liter
(mg/L) = milligrams per liter
< = analyte not detected above method detection limit
J = analyte detected at concentration between limit of detection and limit of quantification
NA = Not analyzed
NL = No Generic Limit Specified by WDNR
Exceedance of the NR 140 PAL indicated by: **100**
Exceedance of the NR 140 ES indicated by: **100**
[1]WAC NR 140 PHGWQ Standards = Wisconsin Administrative Code Chapter NR 140 Public Health Groundwater Quality Standards

Table 2

Soil Analytical Results Table
Neenah Paper
Appleton, Wisconsin

BRRTS ID	NR 720 RCL[1]				BRRTS 02-45-578324		BRRTS 02-45-580768									
Sample	Background Threshold Level	Groundwater Pathway[2]	Non-Industrial Direct Contact Pathway	Industrial Direct Contact Pathway	Basement Pit	578324-S	NP-GRAB-1	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	WC-52T	58076333 (U-Drain)-S
Date					10/3/16	6/28/18	3/21/2017	3/31/17	3/31/17	3/31/17	3/31/17	3/31/17	3/28/17	3/28/17	3/28/17	6/28/18
Sampled By					AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM
Metals (mg/kg)																
Antimony	NL	0.54	31.3	467	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	*1.9 J*	NA
Aluminum	28,721	600	77,500	100,000	NA	*21400*	NA	NA	NA	NA	NA	NA	NA	NA	NA	*40,100*
Arsenic	8	0.58	0.677	3	NA	NA	**7.9 J**	**2.6 J**	**3.1 J**	**2.4 J**	**3.7 J**	**1.5 J**	**11.5**	**12.1 J**	**7.2**	**301**
Barium	364	164.8	15,300	100,000	NA	NA	86.5	39.8	53.5	73.2	84.3	86.8	109	59.7	NA	149
Beryllium	NL	6.32	156	2,300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.2	NA
Cadmium	1	0.75	71.1	985	NA	NA	*1.0*	0.27 J	0.28 J	0.41 J	0.57 J	0.61 J	0.45 J	*0.75 J*	<0.15	*3.3*
Chromium	44	NL	NL	NL	NA	NA	152	13.7	23.6	49.6	87.7	99.7	416	167	34.7	500
Copper	35	91.6	3,130	46,700	NA	NA	*694*	NA	NA	NA	NA	NA	NA	NA	*163*	*652*
Lead	52	27	400	800	NA	*27.2*	**1,270**	*39.5*	20.5	18.6	20.5	10.1	**676**	**508**	*146*	**2,020**
Nickel	NL	13.06	1,550	19,800	NA	NA	*69.8*	NA	NA	NA	NA	NA	NA	NA	*20.3*	*20.4*
Selenium	NL	0.52	391	5,840	NA	NA	<2.0	<1.4	<1.3	<1.2	<1.3	<1.5	<1.6	<2.8	*1.4 J*	*3.8 J*
Silver	NL	0.85	391	5,840	NA	NA	*9.3*	<0.42	<0.40	<0.37	0.48 J	0.50 J	<0.50	<0.86	<0.39	*5.2*
Thallium	NL	0.28	0.782	11.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.87	NA
Zinc	150	NL	23500	100,000	NA	165	336	NA	NA	NA	NA	NA	NA	NA	71.9	704
Mercury	NL	0.21	3.13	3.13	NA	NA	**5.3**	*1.1*	*0.28*	*0.41*	*0.69*	*2.3*	**5.6**	*2.3*	*0.40*	**11.7**
VOCs (ug/kg)																
1,1,1,2-Tetrachloroethane	NL	53.4	2,780	12,300	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
1,1,1-Trichloroethane	NL	140.2	640,000	4,810,000	<25.0	<25.0	97.5 J	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	*896*	<25.0	<25.0
1,1,2,2-Tetrachloroethane	NL	0.2	810	3,600	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
1,1,2-Trichloroethane	NL	3.2	1,590	7,010	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
1,1-Dichloroethane	NL	483.4	5,060	22,200	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
1,1-Dichloroethene	NL	5	320,000	1,190,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
1,1-Dichloropropene	NL	NL	NL	NL	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
1,2,3-Trichlorobenzene	NL	NL	62,600	934,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
1,2,3-Trichloropropane	NL	NL	5	109	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
1,2,4-Trichlorobenzene	NL	408	24,000	113,000	<47.6	<47.6	<47.6	<47.6	<47.6	<47.6	<47.6	<47.6	<47.6	<190	<47.6	<47.6
1,2,4-Trimethylbenzene	NL	1,382.1	219,000	219,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	34.2 J	<25.0
1,2-Dibromo-3-chloropropane	NL	0.2	8	92	<91.2	<91.2	<91.2	<91.2	<91.2	<91.2	<91.2	<91.2	<91.2	<365	<91.2	<91.2
1,2-Dibromoethane (EDB)	NL	0.0282	50	221	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
1,2-Dichlorobenzene	NL	1,168	376,000	376,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
1,2-Dichloroethane	NL	2.8	652	2,870	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
1,2-Dichloropropane	NL	3.3	406	1,780	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
1,3,5-Trimethylbenzene	NL	1,382.1	182,000	182,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
1,3-Dichlorobenzene	NL	1,153	297,000	297,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
1,3-Dichloropropane	NL	NL	1,490,000	1,490,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
1,4-Dichlorobenzene	NL	144	3,740	16,400	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
2,2-Dichloropropane	NL	NL	191,000	191,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
2-Chlorotoluene	NL	NL	NL	NL	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
4-Chlorotoluene	NL	NL	NL	NL	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Benzene	NL	5.1	1,600	7,070	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Bromobenzene	NL	NL	342,000	697,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Bromochloromethane	NL	NL	216,000	906,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Bromodichloromethane	NL	NL	418	1,830	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Bromoform	NL	2.3	25,400	113,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Bromomethane	NL	5.1	9,600	43,000	<69.9	<69.9	<69.9	<69.9	<69.9	<69.9	<69.9	<69.9	<69.9	<280	<69.9	<69.9
Carbon tetrachloride	NL	3.9	916	4,030	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Chlorobenzene	NL	NL	370,000	761,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Chloroethane	NL	226.6	NL	NL	<67.0	<67.0	<67.0	<67.0	<67.0	<67.0	<67.0	<67.0	<67.0	<268	<67.0	<67.0
Chloroform	NL	3.3	454	1,980	<46.4	<46.4	<46.4	<46.4	<46.4	<46.4	<46.4	<46.4	<46.4	<186	<46.4	<46.4
Chloromethane	NL	15.5	159,000	669,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
cis-1,2-Dichloroethene	NL	41.2	156,000	2,340,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	*380*	<25.0	<25.0
cis-1,3-dichloropropene	NL	0.3	1,210,000	1,210,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Dibromomethane	NL	NL	34,000	143,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Dibromochloromethane	NL	32	8,280	38,900	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Dichlorodifluoromethane	NL	3,086	126,000	530,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Diisopropyl ether	NL	NL	2,260,000	2,260,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Ethylbenzene	NL	1,570	8,020	35,400	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	51.7 J	<25.0
Hexachloro-1,3-butadiene	NL	NL	1,630	7,190	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Isopropylbenzene (Cumene)	NL	NL	268,000	268,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Methylene chloride	NL	NL	61,800	1,150,000	<25.0	115 J	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	95.9 J
Methyl-tert-butyl ether	NL	27	63,800	282,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Naphthalene	NL	658.2	5,520	24,100	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<160	79.0 J	<40.0
n-Butylbenzene	NL	NL	108,000	108,000	<25.0	<25.0	158	<25.0	<25.0	<25.0	<25.0	<25.0	75.2 J	<100	<25.0	<25.0
n-Propylbenzene	NL	NL	NL	NL	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
p-Isopropyltoluene	NL	NL	162,000	162,000	<25.0	<25.0	237	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
sec-Butylbenzene	NL	NL	145,000	145,000	<25.0	<25.0	82.6 J	<25.0	<25.0	<25.0	<25.0	<25.0	71.2 J	<100	<25.0	<25.0
Styrene	NL	220	867,000	867,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
tert-Butylbenzene	NL	NL	183,000	183,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Tetrachloroethene	NL	4.5	33,000	145,000	<25.0	<25.0	*527*	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	*18100*	*80.5*	*75.0 J*
Toluene	NL	1,107	818,000	818,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	52.9 J	<25.0
trans-1,2-Dichloroethene	NL	62.6	1,560,000	1,850,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
trans-1,3-dichloropropene	NL	0.3	1,510,000	1,510,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Trichloroethene	NL	3.6	1,300	8,410	<25.0	<25.0	<25.0	*61.1 J*	<25.0	<25.0	<25.0	<25.0	<25.0	*649*	*154*	<25.0
Trichlorofluoromethane	NL	4477.5	1,230,000	1,230,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
Vinyl chloride	NL	0.1	67	2,080	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	<25.0	<25.0
m&p-Xylene	NL	3,960	388,000	388,000	<50.0	<50.0	<50.0	68.2 J	<50.0	<50.0	<50.0	<50.0	<50.0	<200	206	<50.0
o-Xylene	NL	3,960	434,000	434,000	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<100	81.5	<25.0

Table 2

Soil Analytical Results Table
Neenah Paper
Appleton, Wisconsin

BRRTS ID	NR 720 RCL[1]				BRRTS 02-45-578324		BRRTS 02-45-580768									
Sample	Background Threshold Level	Groundwater Pathway[2]	Non-Industrial Direct Contact Pathway	Industrial Direct Contact Pathway	Basement Pit	578324-S	NP-GRAB-1	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	WC-52T	58076333 (U-Drain)-S
Date					10/3/16	6/28/18	3/21/2017	3/31/17	3/31/17	3/31/17	3/31/17	3/31/17	3/28/17	3/28/17	3/28/17	6/28/18
Sampled By					AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM
SVOCs (ug/kg)																
Acenaphthene	NL	NL	45,200,000	3,590,000	NA	NA	<4340	<77.5	<74.4	<75.6	<79.3	<90.8	<877	<771	<375	NA
Acenaphthylene	NL	NL	NL	NL	NA	NA	<4370	<78.0	<74.8	<76.1	<79.8	<91.4	<883	<775	<377	NA
Anthracene	NL	196949.2	100,000,000	17,900,000	NA	NA	<1960	<34.9	<33.5	<34.1	<35.8	<40.9	<395	<347	<169	NA
Benzo(a)anthracene	NL	NL	20,800	1,140	NA	NA	<1900	<33.9	<32.5	<33.0	<34.6	<39.7	<383	<337	<164	NA
Benzo(a)pyrene	NL	470	2,110	115	NA	NA	<1840	<32.9	<31.6	<32.1	<33.7	<38.5	<372	<327	<159	NA
Benzo(b)fluoranthene	NL	478.1	21,100	1,150	NA	NA	<2100	<37.6	<36.0	<36.6	<38.4	<44.0	<425	<373	<182	NA
Benzo(g,h,i)perylene	NL	NL	NL	NL	NA	NA	<3200	<57.2	<54.9	<55.8	<58.5	<67.0	<647	<569	<276	NA
Benzo(k)fluoranthene	NL	NL	211,000	11,500	NA	NA	<2930	<52.3	<50.2	<51.1	<53.6	<61.3	<592	<520	<253	NA
4-Bromophenylphenyl ether	NL	NL	NL	NL	NA	NA	<2560	<45.8	<43.9	<44.7	<46.9	<53.6	<518	<455	<221	NA
Butylbenzylphthalate	NL	NL	NL	NL	NA	NA	<1960	<35.1	<33.6	<34.2	<35.9	<41.1	<397	<349	<169	NA
Carbazole	NL	NL	NL	NL	NA	NA	<1920	<34.2	<32.8	<33.4	<35.0	<40.1	<387	<340	<165	NA
Indeno(1,2,3-cd)pyrene	NL	NL	21,100	1,150	NA	NA	<2650	<47.3	<45.4	<46.1	<48.4	<55.4	<535	<470	<229	NA
4-Chloro-3-methylphenol	NL	NL	NL	NL	NA	NA	<3810	<68.0	<65.3	<66.4	<69.6	<79.7	<770	<676	<329	NA
4-Chloroaniline	NL	NL	NL	NL	NA	NA	<2010	<35.9	<34.5	<35.0	<36.8	<42.1	<407	<357	<174	NA
bis(2-Chloroethoxy)methane	NL	NL	2,460,000	190,000	NA	NA	<3300	<58.9	<56.5	<57.4	<60.3	<69.0	<666	<585	<285	NA
bis(2-Chloroethyl) ether	NL	NL	1,290	286	NA	NA	<3820	<68.2	<65.5	<66.6	<69.8	<80.0	<772	<679	<330	NA
2-Chloronaphthalene	NL	NL	NL	NL	NA	NA	<1570	<28.1	<26.9	<27.4	<28.7	<32.9	<318	<279	<136	NA
2-Chlorophenol	NL	NL	23,400,000	391,000	NA	NA	<3060	<54.6	<52.4	<53.2	<55.8	<63.9	<617	<542	<264	NA
4-Chlorophenylphenyl ether	NL	NL	NL	NL	NA	NA	<2280	<40.7	<39.1	<39.7	<41.7	<47.7	<461	<405	<197	NA
Chrysene	NL	144.2	2,110,000	115,000	NA	NA	<1830	<32.7	<31.4	<31.9	<33.5	<38.3	<370	<325	<158	NA
Dibenz(a,h)anthracene	NL	NL	2,110	115	NA	NA	<3330	<59.4	<57.0	<57.9	<60.8	<69.6	<672	<590	<287	NA
Dibenzofuran	NL	NL	1,040,000	73,000	NA	NA	<1480	<26.5	<25.4	<25.8	<27.1	<31.0	<299	<263	190 J	NA
1,3-Dichlorobenzene	NL	NL	297,000	297,000	NA	NA	<1700	<30.3	<29.1	<29.5	<31.0	<35.5	<343	<301	<146	NA
1,4-Dichlorobenzene	NL	NL	17,500	3,740	NA	NA	<1710	<30.5	<29.2	<29.7	<31.2	<35.7	<345	<303	<147	NA
1,2-Dichlorobenzene	NL	NL	376,000	376,000	NA	NA	<3850	<68.7	<66.0	<67.1	<70.3	<80.5	<778	<683	<332	NA
3,3'-Dichlorobenzidine	NL	NL	5,110	1,210	NA	NA	<3320	<59.3	<56.9	<57.9	<60.7	<69.5	<671	<590	<287	NA
2,4-Dichlorophenol	NL	NL	2,460,000	190,000	NA	NA	<3270	<58.4	<56.1	<57.0	<59.8	<68.4	<661	<581	<282	NA
Diethylphthalate	NL	NL	100,000,000	50,600,000	NA	NA	<2030	<36.2	<34.8	<35.4	<37.1	<42.5	<410	<360	<175	NA
2,4-Dimethylphenol	NL	NL	16,400,000	1,260,000	NA	NA	<2420	<43.2	<41.5	<42.2	<44.2	<50.7	<489	<430	<209	NA
Dimethylphthalate	NL	NL	7,390,000	569,000	NA	NA	<1590	<28.4	<27.3	<27.7	<29.1	<33.3	<322	<283	<137	NA
4,6-Dinitro-2-methylphenol	NL	NL	NL	NL	NA	NA	<3770	<67.4	<64.7	<65.7	<69.0	<78.9	<762	<670	<326	NA
2,4-Dinitrophenol	NL	NL	1,640,000	126,000	NA	NA	<3730	<66.6	<63.9	<65.0	<68.2	<78.0	<754	<662	<322	NA
2,4-Dinitrotoluene	NL	NL	7,370	1,740	NA	NA	<1750	<31.3	<30.0	<30.5	<32.0	<36.6	<354	<311	<151	NA
2,6-Dinitrotoluene	NL	NL	1,540	363	NA	NA	<2320	<41.5	<39.8	<40.5	<42.5	<48.6	<470	<413	<201	NA
Di-n-butylphthalate	NL	NL	NL	NL	NA	NA	<1830	<32.7	<31.4	<31.9	<33.4	<38.3	<370	<325	839	NA
Di-n-octylphthalate	NL	NL	NL	NL	NA	NA	<2750	<49.1	<47.2	<47.9	<50.3	<57.6	<556	<489	<238	NA
bis(2-Ethylhexyl)phthalate	NL	NL	164,000	38,800	NA	NA	<2040	<36.3	<34.9	<35.5	<37.2	<42.6	<411	<361	<176	NA
Fluoranthene	NL	88,878	30,100,000	2,390,000	NA	NA	<1730	<30.9	<29.7	<30.2	<31.7	<36.2	<350	<308	<150	NA
Fluorene	NL	14830	30,100,000	2,390,000	NA	NA	<1430	<25.5	<24.5	<24.9	<26.2	<29.9	<289	<254	<124	NA
Hexachlorobenzene	NL	25	1,150	252	NA	NA	<2060	<36.8	<35.3	<35.9	<37.6	<43.1	<416	<366	<178	NA
Hexachloro-1,3-butadiene	NL	NL	7,190	1,630	NA	NA	<3120	<55.7	<53.4	<54.3	<57.0	<65.3	<630	<554	<269	NA
Hexachlorocyclopentadiene	NL	NL	10,800	2,550	NA	NA	<2900	<51.7	<49.6	<50.5	<52.9	<60.6	<585	<514	<250	NA
Hexachloroethane	NL	NL	11,100	2,520	NA	NA	<1960	<35.0	<33.6	<34.1	<35.8	<41.0	<396	<348	<169	NA
Isophorone	NL	NL	2,420,000	511,000	NA	NA	<1880	<33.6	<32.3	<32.8	<34.4	<39.4	<380	<334	<162	NA
2-Methylnaphthalene	NL	NL	3,010,000	239,000	NA	NA	<3180	<56.8	<54.5	<55.4	<58.1	<66.5	<642	<564	618 J	NA
2-Methylphenol(o-Cresol)	NL	NL	NL	NL	NA	NA	<2220	<39.7	<38.1	<38.7	<40.6	<46.5	<449	<395	<192	NA
3&4-Methylphenol(m&p Cresol)	NL	NL	NL	NL	NA	NA	<2240	<40.1	<38.4	<39.1	<41.0	<46.9	<453	<398	<194	NA
Naphthalene	NL	658.2	24,100	5,520	NA	NA	<4280	<76.4	<73.4	<74.6	<78.2	<89.6	<865	<760	412 J	NA
2-Nitroaniline	NL	NL	8,010,000	627,000	NA	NA	<3490	<62.3	<59.8	<60.8	<63.8	<73.0	<705	<619	<301	NA
4-Nitroaniline	NL	NL	115,000	27,100	NA	NA	<5080	<90.7	<87.1	<88.5	<92.9	<106	<1030	<902	<439	NA
3-Nitroaniline	NL	NL	NL	NL	NA	NA	<2080	<37.2	<35.7	<36.3	<38.0	<43.6	<421	<370	<180	NA
Nitrobenzene	NL	NL	32,400	7,420	NA	NA	<2480	<44.3	<42.5	<43.2	<45.4	<51.9	<502	<441	<214	NA
4-Nitrophenol	NL	NL	NL	NL	NA	NA	<3080	<55.0	<52.8	<53.7	<56.3	<64.5	<623	<547	<266	NA
2-Nitrophenol	NL	NL	NL	NL	NA	NA	<3860	<69.0	<66.2	<67.3	<70.6	<80.8	<781	<686	<333	NA
N-Nitroso-di-n-propylamine	NL	NL	328	78	NA	NA	<1940	<34.7	<33.3	<33.8	<35.5	<40.6	<392	<345	<168	NA
N-Nitrosodiphenylamine	NL	NL	469,000	111,000	NA	NA	<16600	<297	<285	<289	<304	<348	<3360	<2950	<1430	NA
2,2'-oxybis(1-Chloropropane)	NL	NL	NL	NL	NA	NA	<3160	<56.4	<54.1	<55.0	<57.7	<66.1	<638	<560	<272	NA
Pentachlorophenol	NL	20.2	3,970	1,020	NA	NA	<2700	<48.1	<46.2	<47.0	<49.3	<56.4	<545	<479	<233	NA
Phenanthrene	NL	NL	NL	NL	NA	NA	<1570	<28.0	<26.9	<27.4	<28.7	<32.9	<317	<279	335 J	NA
Phenol	NL	2,295	100,000,000	19,000,000	NA	NA	<2910	<51.9	<49.8	<50.6	<53.1	<60.8	<587	<516	<251	NA
Pyrene	NL	54546	22,600,000	1,790,000	NA	NA	<2710	<48.5	<46.5	<47.3	<49.6	<56.8	<548	<482	<234	NA
1,2,4-Trichlorobenzene	NL	408	113,000	24,000	NA	NA	<1380	<24.7	<23.7	<24.1	<25.3	<29.0	<280	<246	<119	NA
2,4,6-Trichlorophenol	NL	NL	209,000	49,300	NA	NA	<1870	<33.3	<32.0	<32.5	<34.1	<39.1	<377	<331	<161	NA
2,4,5-Trichlorophenol	NL	NL	82,100,000	6,320,000	NA	NA	<2160	<38.6	<37.1	<37.7	<39.5	<45.2	<437	<384	<187	NA
Other (mg/kg)																
Diesel Range Organics	NL	NL	NL	NL	<0.79	NA	516	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline Range Organics	NL	NL	NL	NL	<3.4	NA	58.3	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
(mg/kg) = milligrams per kilogram
(ug/kg) = micrograms per kilogram
< = analyte not detected above method detection limit
J = analyte detected at concentration between limit of detection and limit of quantification
NA = Not Analyzed
[1]NR 720 RCL = Wisconsin Administrative Code Chapter NR 720 Soil Cleanup Standards Residual Contaminant Levels
[2]WDNR NR 720 value for Dilution Factor = 2
RCL = Residual Contaminant Level; NL = No Generic Limit Specified by WDNR

Exceedance of the NR 720 RCL for Soil to Groundwater Pathway indicated by:	*100*
Exceedance of the NR 720 RCL for Non-Industrial Direct Contact indicated by:	**100**
Exceedance of the NR 720 RCL for Industrial Direct Contact indicated by:	100