Lauridsen, Keld B - DNR

From: Lauridsen, Keld B - DNR
Sent: Monday, July 1, 2019 2:15 PM
To: 'Brand, Jeff'
Cc: Caine, Lynelle (Lynelle.Caine@stantec.com); 'deslien@ultraplating.com'
Subject: RE: Project Status Update - Ultra Plating Corp.; 345 South Pearl Street, Green Bay; BRRTS Case #02-05-583105

Thanks for the update Jeff.

Based on my brief review of the data, I would recommend the next step to be to come up with a remedy to stop further migration of the groundwater contaminant plume.

Let me know if we need to discuss anything further.

-Keld

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Keld B. Lauridsen
Phone: (920) 662-5420
Keld.Lauridsen@wisconsin.gov

From: Brand, Jeff <Jeff.Brand@stantec.com>
Sent: Friday, June 7, 2019 4:04 PM
To: Lauridsen, Keld B - DNR <Keld.Lauridsen@wisconsin.gov>
Cc: Caine, Lynelle <Lynelle.Caine@stantec.com>; deslien@ultraplating.com
Subject: Project Status Update - Ultra Plating Corp.; 345 South Pearl Street, Green Bay; BRRTS Case #02-05-583105

Keld,

Stantec is providing a project status update for the Ultra Plating Corp. Site (BRRTS# 02-05-583105), 345 South Pearl Street, Green Bay, Wisconsin (the Site). This email presents the results of the additional investigation activities completed at the Site in April 2019.

Sampling Overview

On April 22, 2019 Stantec personnel oversaw the advancement of four boreholes within basement areas of the Ultra Plating Site building by Clean Harbors Environmental Services, Inc. Specifically, two borings were completed within the building basement (SB18, SB19) and two borings were completed within the deep basement (SB20, SB21) as depicted on attached Figure 2. The boreholes were advanced to a depth of seven feet below grade using a hand auger with soil samples collected continuously in one-foot intervals from each borehole. Soil samples collected from the 0-1 foot interval in each boring were analyzed for hexavalent chromium. Each borehole was then converted into a two-inch temporary monitoring well (TW18, TW19, TW20, TW21) which was concreted in place for future sampling. The temporary wells were each developed and sampled the same day for hexavalent chromium with the exception of TW21 which did not recover quickly after the well development.

On April 25, 2019 Stantec personnel oversaw the advancement of three additional boreholes directly adjacent to the Site (SB22, SB23, SB24) by Geiss Soil and Samples, LLC. Borehole locations are also shown on the attached Figure 2. Soil samples were collected continuously from each borehole with soil samples collected

from the 0-2 foot interval in each boring analyzed for hexavalent chromium. Each borehole was then converted into a one-inch temporary monitoring well (TW22, TW23, TW24). The temporary monitoring wells were subsequently developed, surveyed, and location marked by GPS. On the same day, a water sample was collected from the deep basement temporary monitoring well TW21 for hexavalent chromium.

On April 30, 2019 Stantec personnel conducted groundwater sampling of monitoring wells TW4, TW5, TW6, TW7, TW15, TW16, TW17, TW22, TW23, and TW24. Water levels were recorded at each monitoring well prior to sampling. No free product was detected in any of the Site wells. Water level data at the Site indicates groundwater is flowing in a southerly direction. Water level data for the Site is included in Table 4. Each monitoring well was subsequently sampled for hexavalent chromium.

Soil Analytical Results
Hexavalent chromium exceeding the Wisconsin Administrative Code (WAC) Natural Resources (NR720) Residual Contaminant Levels (RCLs) for non-industrial direct contact was detected in SB18, SB19, SB20, SB21, and SB22. Hexavalent chromium in soil from SB18 also exceeded the direct contact RCL for industrial sites in a soil sample collected under the site building. Soil samples collected from SB23 and SB24 did not exhibit detections of hexavalent chromium.

Groundwater Analytical Results
Based on results from the most recent groundwater sampling, hexavalent chromium concentrations are in excess of the WAC NR140 Enforcement Standard (ES) in temporary monitoring wells TW4, TW6, TW7, TW16, TW18, TW19, TW20, TW21. The highest concentrations were found in TW21 installed in the deeper basement areas which water appeared very yellow prior to sampling. Slightly yellowish coloring, indicative of the presence of hexavalent chromium was apparent in temporary wells TW18 and TW4 prior to sampling. All of the other monitoring wells sampled remain free of or have existing concentrations of hexavalent chromium below the NR140 ES and preventive action limit (PAL). Laboratory analytical results for the water samples collected at the Site are summarized in Table 3a.

Conclusion
Soil and groundwater samples collected in April 2019 on or adjacent the Site contain hexavalent chromium above applicable state regulatory thresholds confirming results detected during Stantec's previous Phase II ESA and site investigation activities. The highest concentrations were present in the temporary wells installed in the deep basement area. Based on the additional sampling results, contamination appears to originate beneath the Site building and extends into the Arndt Street right-of-way and the adjacent city of Green Bay owned parcel (PIN 3-551) to the south and east. Additional testing is recommended beneath the site building to further evaluate the extent of the impacts to the north.

If you have any questions please don't hesitate to contact Lynelle or myself.

Thank you,

Jeff Brand
Engineer in Training

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Stantec

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From: Caine, Lynelle <Lynelle.Caine@stantec.com>
Sent: Wednesday, May 22, 2019 11:08 AM
To: Dean Eslien <deslien@ultraplating.com>; Jim Rabideau <jmrabideau@bayenvironmental.com>
Cc: Brand, Jeff <Jeff.Brand@stantec.com>; Weber, Evan <Evan.Weber@stantec.com>
Subject: Project Status Update - Ultra Plating Corp.; 345 South Pearl Street, Green Bay; BRRTS Case #02-05-583105

N

SCALE IN FEET

20 0 20 40

Stantec

1165 Scheuring Road, De Pere, Wisconsin, 54115
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SITE LAYOUT WITH SOIL BORING AND TEMPORARY MONITORING WELL LOCATIONS

ULTRA PLATING CORP PROPERTY
GREEN BAY, WISCONSIN

DATE: 04/30/19	DRAWN BY: JRB	TASK NUMBER: .	PROJECT NUMBER: 193706775	FIGURE 2

Table 2a Soil Sample RCRA Metals Laboratory Results, Ultra Plating Corporation, 345 South Pearl Street, Green Bay, Wisconsin

Boring Number	Sample Number	Date Collected	Depth (fbg)	Soil Description	Estimated Depth to Groundwater (fbg)	Metals & Cyanide Laboratory Result (mg/kg)												
						Metals												
						Arsenic (total)	Barium	Cadmium	Chromium	Lead (total)	Selenium	Silver	Mercury	Nickel	Copper	Zinc	Hexavalent Chromium	Cyanide
WDNR RCL for Protection from Direct Contact Risk					Non-Industrial	8* [0.677]	15,300	71.1	NE	400	391	391	3.13	1,550	3,130	23,500	0.301	27.1
					Industrial	8* [3.00]	100,000	799	NE	800	5,840	5,840	3.13	22,500	46,700	100,000	6.36	195
WDNR RCL for Protection of Groundwater						8* [0.584]	364* [164.8]	1* [0.752]	360,000	52* [27]	0.52	0.8491	0.208	31*[13.06]	91.6	NE	NE	4.04
Background Threshold Value (BTV)						8	364	1	44	52	NE	NE	NE	31	35	150	NE	NE
SB1	SB1 (2-4)	6/1/2018	2-4	Silty Clay to Sandy Clay w/ Coal	6	5.2	142	<0.058	46.6	13.4	<2.0	<0.39	0.025	---	---	---	1.56 J	<0.13
SB2	SB2 (0-2)	6/1/2018	0-2	Concrete to Black Silty Topsoil w/ Slag	6	0.99 J	22.2	<0.052	4.0 J	13.1	<1.8	<0.35	0.02	---	---	---	<0.900	1.3
SB3	SB3 (0-2)	6/1/2018	0-2	Coarse Gravel to Black Medium Gravel	6	3.4	48.2	<0.048	17.2	42.6	<1.7	<0.32	<0.00023	---	---	---	<0.900	0.834
	SB3 (4-6)	6/1/2018	4-6	Coarse Gravel	6	3.2	27.4	<0.051	10.3	20.3	<1.8	<0.34	0.013	---	---	---	<0.900	0.54
SB4	SB4 (0-2)	6/1/2018	0-2	Gravel Fill to Fine Sand w/ Coal and Slag to Silty Clay	6	4.1	75.8	<0.054	346	545	<1.9	<0.36	0.023	31.5	49.3	95.8	11.3	0.539
SB5	SB5 (2-4)	6/1/2018	2-4	Black Silty Sand w/ Coal Dust	6	28.6	49.5	<0.053	49.6	139	2.1 J	0.54 J	0.032	---	---	---	<0.900	0.243 J
SB6	SB6 (0-2)	6/1/2018	0-2	Gravel Fill to Black Coal Dust over Silty Clay	6	2.2 J	90.5	<0.054	26.4	14.5	<1.9	<0.36	0.16	18.4	23.2	46.8	1.93 J	0.475
	SB6 (4-6)	6/1/2018	4-6	Silty Clay w/ Fine Sand Seams	6	1.6 J	36.6	<0.052	23.7	3.4	<1.8	<0.35	<0.00025	---	---	---	---	9.73
SB7	SB7 (0-2)	6/1/2018	0-2	Gravel to Black Fine Sandy Topsoil w/ Coal	6	<0.81	16.6	0.3	13.2	3.8	<2.0	<0.38	0.24	7.2	5.1	14.3	5.03	0.24 J
SB8	SB8 (0-2)	6/1/2018	0-2	Topsoil to Sandy Gravel w/ Coal Dust and Fragments	6	15.8	37.5	0.27	20.2	86.6	2.9 J	<0.36	0.12	---	---	---	---	19.8
	SB8 (4-6)	6/1/2018	4-6	Fine Sand w/ Trace Coal to Silty Clay	6	6.4	57.9	18.6	71.7	35.5	<1.8	<0.36	0.02	---	---	---	2.44 J	9.57
SB9	SB9 (0-2)	6/1/2018	0-2	Gravel Fill to Black Sand w/ Coal and Glass	6	5.3	40.8	<0.051	18.5	56	2.0 J	<0.34	0.17	---	---	---	2.56 J	0.778
SB10	SB10 (2-4)	6/1/2018	2-4	Black Sand w/ Coal to Fine Sand	6	<0.76	15.8	<0.053	6.7	10.8	<1.8	<0.36	0.15	---	---	---	<0.900	0.350 J
SB11	SB11 (0-2)	6/1/2018	0-2	Black Topsoil w/ Coal and Wood	6	2.2 J	52.9	19.4	65.5	52.9	<2.0	11.6	0.22	80.4	381	120	0.999 J	2.94
SB12	SB12 (0-2)	6/1/2018	0-2	Topsoil w/ Coal Dust	6	1.1 J	33.8	<0.046	8	22	<1.6	<0.31	0.59	---	---	---	1.45 J	0.164 J
SB13	SB13 (0-2)	6/1/2018	0-2	Silty Clay and Sand w/ Coal and Brick and Slag	6	---	---	---	---	---	---	---	---	---	---	---	---	0.260 J
SB14	SB14 (2-4)	11/28/2018	2-4	Sand with Coal and Fine Gravel	4	6.2	41.6	1.5	9.9	88.3	<1.7	<0.32	0.033	---	42.1	---	2.18	---
SB15	SB15 (2-4)	11/28/2018	2-4	Sand with Coal and Fine Gravel	4	4.8	18.3	0.82	4.7 J	31.8	<1.7	<0.33	0.039	---	38.6	---	2.03	---
SB16	SB16 (0-2)	11/28/2018	0-2	Silty Clay Topsoil / Sand and Gravel with Coal	4	6.2	42.9	0.82	14.4	51.2	<1.8	<0.34	0.059	---	---	---	2.47	---
SB17	SB17 (0-2)	11/28/2018	0-2	Silty Clay Topsoil / Sand and Gravel Fill	4	0.93	23.5	0.56	11.8	9.4	<1.8	<0.35	0.021	---	---	---	1.35	---
SB18	SB18 (0-1)	4/22/2019	0-1	Silty Clay	2	---	---	---	---	---	---	---	---	---	---	---	47	---
SB19	SB19 (0-1)	4/22/2019	0-1	Silty Clay	2	---	---	---	---	---	---	---	---	---	---	---	1.2 J	---
SB20	SB20 (0-1)	4/22/2019	0-1	Silty Clay	1	---	---	---	---	---	---	---	---	---	---	---	1.7	---
SB21	SB21 (0-1)	4/22/2019	0-1	Silty Clay	1	---	---	---	---	---	---	---	---	---	---	---	3.4	---
SB22	SB22 (0-2)	4/25/2019	0-2	Gravel Fill to Silty Clay	3	---	---	---	---	---	---	---	---	---	---	---	0.46 J	---
SB23	SB23 (0-2)	4/25/2019	0-2	Silty Topsoil to Silty Clay	3	---	---	---	---	---	---	---	---	---	---	---	<0.43	---
SB24	SB24 (0-2)	4/25/2019	0-2	Silty Topsoil to Silty Clay	3	---	---	---	---	---	---	---	---	---	---	---	<0.43	---

Key:

<x = compound not detected to a detection limit of x
--- = not analyzed
XX* [XXX] = standard in bold are background threshold values (BTVs) being utilized for the purpose of evaulation under ch. NR700 WAC. The established WAC RCL is noted in brackets.
XXX = exceeds WDNR RCL for direct contact risk (Non-Industrial)
XXX = exceeds WDNR RCL for direct contact risk (Industrial)
XXX = exceeds WDNR RCL for protection of groundwater and/or BTV
NE = not established by WAC (Wis. Adm. Code) or WDNR Soil RCL Summary Table
* = The WDNR has determined state-wide soil BTVs (February 2013).
Therefore, reported values less than BTVs are not considered a direct contact or groundwater pathway concern with respect to site releases requiring further remediation action.
However, the detection could represent a personal health risk if detected above health based standards.
"J" = analyte detected between the limit of detection and limit of quantification
RCL = residual contaminant level
mg/kg = milligrams per kilogram

Notes: WDNR soil RCL Summary table (June 2018) used to establish RCLs for groundwater protection and direct contact.
For this evaluation under ch. NR 700, background threshold values are being considered as representative of background conditions.
However, constituent concentrations less than background threshold values may represent a potential health risk if concentrations are greater than health-based standards.

Table 3a Groundwater Sample RCRA Metals and Cyanide Laboratory Results, Ultra Plating Corporation, 345 South Pearl Street, Green Bay, Wisconsin

Well Number	Date Collected	Metals Laboratory Results (µg/L)												(µg/L)
		Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	Hexavalent Chromium	Nickel	Copper	Zinc*	Cyanide
NR 140 Preventive Action Limit		1	400	0.5	10	1.5	0.2	10	10	10	20	130	2,500	40
NR 140 Enforcement Standard		10	2,000	5	100	15	2	50	50	100	100	1,300	5,000	200
TW1	6/13/2018	<0.60	*491*	<0.40	<2.0	<1.3	<0.020	<7.0	<2.5	<8.0	*22*	<3.9	3.6 J	<3.0
TW2	6/13/2018	<0.60	93.1	<0.40	*11.9*	<1.3	<0.020	<7.0	<2.5	21 J	<2.0	<3.9	<2.2	<3.0
TW4	6/13/2018	<0.60	37.9	<0.40	*13,400*	<1.3	<0.020	<7.0	<2.5	*11,000*	4.5 J	<3.9	35	3.5 J
	4/30/2019	---	---	---	---	---	---	---	---	*6,100*	---	---	---	---
DUP (TW4)	4/30/2019	---	---	---	---	---	---	---	---	*6,400*	---	---	---	---
TW5	6/13/2018	<0.60	77.7	<0.40	<2.0	<1.3	0.028 J	<7.0	<2.5	<8.0	<2.0	<3.9	<2.2	<3.0
	4/30/2019	---	---	---	---	---	---	---	---	5.9 J	---	---	---	---
TW6	6/13/2018	<0.60	43.5	<0.40	*405*	<1.3	<0.020	<7.0	<2.5	*1,400*	4.7 J	<3.9	<2.2	<3.0
	4/30/2019	---	---	---	---	---	---	---	---	*320*	---	---	---	---
TW7	6/13/2018	<0.60	37.3	<0.40	2,340	<1.3	<0.020	<7.0	<2.5	*420*	2.9 J	<3.9	<2.2	31
	4/30/2019	---	---	---	---	---	---	---	---	*150*	---	---	---	---
TW9	6/13/2018	<0.60	30.6	<0.40	*12.7*	<1.3	<0.020	<7.0	<2.5	---	5.7 J	<3.9	3.4 J	*71*
TW11	6/13/2018	<0.60	31.5	<0.40	*12.5*	<1.3	0.027 J	<7.0	<2.5	20 J	<2.0	<3.9	<2.2	20
TW12	6/13/2018	0.81 J	80.1	<0.40	<2.0	<1.3	<0.020	<7.0	<2.5	<8.0	2.6 J	<3.9	<2.2	*150*
TW13	6/13/2018	<0.60	39.4	<0.40	<2.0	<1.3	<0.020	<7.0	<2.5	<8.0	<2.0	<3.9	<2.2	38
TW14	11/29/2018	---	---	---	---	---	---	---	---	<8.0	---	---	---	---
TW15	11/29/2018	---	---	---	---	---	---	---	---	<8.0	---	---	---	---
	4/30/2019	---	---	---	---	---	---	---	---	8.9 J	---	---	---	---
TW16	11/29/2018	---	---	---	---	---	---	---	---	*13,000*	---	---	---	---
	4/30/2019	---	---	---	---	---	---	---	---	*3,700*	---	---	---	---
TW17	11/29/2018	---	---	---	---	---	---	---	---	<8.0	---	---	---	---
	4/30/2019	---	---	---	---	---	---	---	---	3.2 J	---	---	---	---
TW18	4/22/2019	---	---	---	---	---	---	---	---	*6,600 B*	---	---	---	---
TW19	4/22/2019	---	---	---	---	---	---	---	---	*3,600 B*	---	---	---	---
TW20	4/22/2019	---	---	---	---	---	---	---	---	*320 B*	---	---	---	---
TW21	4/30/2019	---	---	---	---	---	---	---	---	*32,000 H*	---	---	---	---
TW22	4/30/2019	---	---	---	---	---	---	---	---	3.2 J	---	---	---	---
TW23	4/30/2019	---	---	---	---	---	---	---	---	<3.2	---	---	---	---
TW24	4/30/2019	---	---	---	---	---	---	---	---	<3.2	---	---	---	---

Key:

RCRA	= Resource Conservation and Recovery Act
<X	= analyte not detected above method detection limit
"J"	= analyte detected between limit of detection and limit of quantitation
"H"	= sample prepared or analyzed beyond the specified holding time
"B"	= compound was found in the blank and sample
X	= concentration detected above Chapter NR 140, Wisconsin Administrative Code(NR 140, Wis. Adm. Code) preventive action limit (PAL)
X	= concentration detected above NR 140, Wis. Adm. Code enforcement standard (ES)
NE	= not established
---	= not analyzed
*	= no WDNR NR 140.10 "Public Health Groundwater Quality Standard" listed for the compound. Sample results compared to the NR 140.12 "Public Welfare Related Groundwater Quality Standards."
µg/L	= micrograms per liter

Table 4 - Water Level Elevations, Ultra Plating, 345 South Pearl Street, Green Bay, WI

Well I.D.	Ground Surface Elevation (site datum)	Reference Point Elevation (site datum)	Top / Bottom Well Screen Elevation (fbg)	Date	Depth to Water		Water Table Elevation (Feet)
					Feet Below Riser	Feet Below Grade	
TW1	98.21	98.07	3-16 fbg	06/13/18	4.22	4.36	93.85
TW2	98.36	98.13	3-16 fbg	06/13/18	6.92	7.15	91.21
TW4	96.77	96.45	3-16 fbg	06/13/18	4.77	5.09	91.68
				04/30/19	4.07	4.39	92.38
TW5	96.53	96.2	3-16 fbg	06/13/18	4.52	4.85	91.68
				04/30/19	3.81	4.14	92.39
TW6	96.52	96.21	3-16 fbg	06/13/18	3.48	3.79	92.73
				04/30/19	2.41	2.72	93.80
TW7	97.64	97.15	3-16 fbg	06/13/18	3.52	4.01	93.63
				04/30/19	1.41	1.90	95.74
TW9	98.54	98.19	3-16 fbg	06/13/18	4.32	4.67	93.87
TW11	97.95	97.55	3-16 fbg	06/13/18	3.69	4.09	93.86
TW12	98.92	98.62	3-16 fbg	06/13/18	5.28	5.58	93.34
TW13	96.07	95.75	3-16 fbg	06/13/18	3.03	3.35	92.72
TW14	96.63	96.3	2-12 fbg	11/29/18	4.98	5.31	91.32
				04/30/19	3.76	4.09	92.54
TW15	95.88	95.61	2-12 fbg	11/29/18	4.17	4.44	91.44
				04/30/19	3.10	3.37	92.51
TW16	95.95	95.62	2-12 fbg	11/29/18	4.04	4.37	91.58
				04/30/19	2.82	3.15	92.80
TW17	96.11	95.75	2-12 fbg	11/29/18	3.91	4.27	91.84
				04/30/19	2.37	2.73	93.38
TW22	96.19	95.94	2-12 fbg	04/30/19	3.40	3.65	92.54
TW23	96.03	98.63	2-12 fbg	04/30/19	5.81	3.21	92.82
TW24	95.94	98.48	2-12 fbg	04/30/19	5.26	2.72	93.22

Key:

fbg = Feet Below Grade

--- = Not Collected