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January 21, 2021

Mr. Kevin McKnight
Northeast Region
Wisconsin Department of Natural Resources
625 East County Road Y, Suite 700
Oshkosh, WI 54901

Subject: 2020 Groundwater Monitoring Report
Former Tecumseh Products, Former Plating Line Area
New Holstein, Wisconsin
BRRTS# 02-08-363333

Dear Mr. McKnight:

TRC continues groundwater monitoring specific to the former plating line area at the former Tecumseh Products facility in New Holstein, Wisconsin (BRRTS #: 02-08-363333). On November 5, 2020, TRC completed groundwater sampling at monitoring wells specific to the former plating line area to verify a stable residual chromium plume and confirm that the chromium plume is naturally attenuating. This letter presents the results of the data collected during the groundwater monitoring event, in accordance with the 2017 *Long Term Groundwater Monitoring Plan*. A technical review and response from the Wisconsin Department of Natural Resources (WDNR) is not requested, and this report is being submitted to the State's file for long-term monitoring plans.

BACKGROUND

Evaluation of the groundwater data through June 2017 indicated that 1) the contaminant plume remains stable and has not shown any migration from previous sampling events, 2) the groundwater impacts do not pose a threat to human health or the environment, and 3) that natural attenuation continues to control the migration of chromium impacts and is still a viable remedy for the site.

Since the groundwater contaminant trends in source area wells (TEC-3, TEC-4, and NH-26) di not allow for case closure after the 2019 sampling event, TRC submitted the October 2019 *Remedial Action Options Report* (RAOR) to address residual hexavalent chromium sources in groundwater. The selected remedy is soil mixing and in-situ chemical reduction (ISCR) within the unconsolidated soils once demolition of the facility has taken place. The timing/sequencing of the demolition is incorporated into the selected remedy to make best use of the accessibility and enhanced safety benefits of conducting the remediation after the Site structures are demolished. Monitored natural attenuation (MNA) will be utilized after the initial goals of the active remedial actions are achieved. The Wisconsin Department of Natural Resources (WDNR) conditionally approved the RAOR in a letter dated December 3, 2019, including that

annual groundwater sampling as approved in the 2017 *Long Term Groundwater Monitoring Plan* be continued until the RAOR is implemented.

Demolition activities have not taken place, and therefore, the RAOR has not been implemented in 2020. Hence, TRC completed an annual groundwater sampling event in 2020.

SUMMARY OF GROUNDWATER MONITORING

Groundwater Monitoring Program

On November 5, 2020, TRC completed a groundwater gauging and sampling event at the former Tecumseh chromium line remediation area. Prior to groundwater sampling, water levels were measured at each monitoring well with an oil-water interface probe.

Groundwater sampling was completed at monitoring wells MW-E, TEC-3, TEC-4, MW-8, NH-7, NH-26, MW-A, and MW-B. In addition, TRC also sampled MW-5, TEC-1 and MW-F to evaluate for submittal of case closure. As noted in previous reports, monitoring well MW-24 was destroyed.

Groundwater samples were collected using low-flow sampling techniques with an Alexis peristaltic pump and YSI Pro Dss Sonde M4 multi-parameter meter and flow cell. During well purging, field parameters (temperature, conductivity, turbidity, dissolved oxygen, pH and oxidation/reduction potential [ORP]) were measured and allowed to stabilize prior to sampling. Low-flow sampling stabilization forms are provided in **Attachment A**. Groundwater samples were field filtered with a 0.52 micron filter and submitted for laboratory analysis of total dissolved chromium using method EPA 6010. All samples were packaged in a cooler and shipped to Pace Analytical Services, LLC in Green Bay, Wisconsin (Pace) under standard chain of custody procedures.

Purge water was drummed.

Groundwater Elevations

Table 1 presents a summary of water level measurements collected during events between 2009 and 2020 and **Figure 1** presents the groundwater elevation contours for the November 2020 sampling event. The groundwater gradient is oriented from the east/southeast portion of the facility, towards the west. Groundwater elevations were similar to previous groundwater monitoring events. Groundwater continues to exhibit an overall westerly flow direction as illustrated on **Figure 1**.

Groundwater Quality Assurance/Quality Control Results

TRC performed a Quality Assurance/Quality Control (QA/QC) review of the laboratory report, in regards to analyses, procedures, and protocols performed by Pace. Samples were received by Pace within the mandated timeframe and maintained at the proper temperature. Based on the results, there were no major insufficiencies regarding surrogate recoveries, analyte detections or sample duplicate recoveries. Based on an internal review by TRC, all data were considered acceptable. QC data indicate that measurement data are sufficient to meet method

quality objectives, data are defensible, and QC mechanisms were effective in ensuring measurement data reliability.

RESULTS AND DISCUSSION

The groundwater analytical results are summarized in **Table 2**, which contains total dissolved chromium results from the November 2020 groundwater event, as well as previous analytical results. The low-flow stabilization geochemical results indicate that the dissolved oxygen is ranging between 1 and 6 milligrams per liter (mg/L) and an ORP is generally greater than 200 millivolts (mV). The pH of the groundwater is basically neutral, ranging between 7 and 8 S.U. There is no obvious difference between the geochemistry of the source area as compared to down-gradient. The distribution of total dissolved chromium in groundwater is shown on **Figure 2**. The monitoring wells with total dissolved chromium exceeding the ES are shown on **Figure 2**. The laboratory analytical results are provided in **Attachment B**.

Total dissolved chromium concentrations exceeded the ES in 8 of the 11 monitoring wells in November 2020 (MW-5, MW-A, MW-E, TEC-1, TEC-3, TEC-4, NH-7 and NH-26). Monitoring well MW-B exceeded the Preventative Action Limit (PAL) in November 2020, but not the ES. The remaining two monitoring wells MW-F and MW-8 were below the ES and PAL.

In order to assess the current subsurface conditions of the Site, an evaluation of the dissolved chromium concentration trends has been completed. The historic distribution of total dissolved chromium in groundwater is shown on **Figure 2**. The extent of the total dissolved chromium has receded over time. The northern extent of dissolved chromium is likely not related to migration; dissolved chromium was likely there beforehand, which is supported by the more recent data points. The trend analysis charts were completed on monitoring wells which exceeded the ES. The trend analysis charts are provided in **Attachment C**. Based on these charts, the below significant points can be made.

Source area monitoring wells NH-26, TEC-3, and TEC-4 increased over concentrations from the previous groundwater sampling event; however, these concentrations appear to fluctuate and have not exceeded the historically highest concentrations at each of these monitoring wells. The high chromium concentration received during the April 22, 2016 groundwater sampling event at TEC-4 appears to be an anomaly.

Total dissolved chromium concentrations in down-gradient monitoring wells MW-E and MW-A increased. While these concentrations have increased, they have not increased beyond historically high concentrations in such a way that would be indicative of an expanding plume. In addition, total dissolved chromium concentrations have continued to decrease at west periphery monitoring well TEC-1 and have remained below detection levels at southwest periphery monitoring well MW-F which provides additional support for a stable chromium plume.

The total dissolved chromium concentration in down-gradient monitoring well NH-7 also increased during the 2020 groundwater sampling event; however, these concentrations are still relatively low. Monitoring well NH-7 is near to and upgradient of MW-24 and NH-10, both of which have historical chromium results below the PAL and ES.

CONCLUSIONS AND RECOMMENDATIONS

Based on the evaluation of recent groundwater data, the overall extent of the dissolved contaminant plume remains relatively stable. Additionally, monitoring wells MW-B and MW-8 now lie outside of the impacted area above the ES indicating that the dissolved chromium has receded over time. Monitoring well MW-5 appears to fluctuate between the ES and PAL. These results confirm that MNA continues to be effective in controlling and mitigating the migration of residual chromium impacts to groundwater and remains a viable remedy for the site.

The groundwater impacts do not pose a threat to human health or the environment. Moreover, there is a deed restriction recorded to the property limiting certain activities and uses that further acts to protect human health and the environment.

TRC will continue to conduct annual groundwater monitoring and sampling with the next round scheduled for fall/winter 2021 to further assess contaminant trends and confirm the effectiveness of MNA. Samples will be collected and analyzed for total dissolved chromium from monitoring wells MW-E, TEC-3, TEC-4, MW-8, NH-7, NH-26, MW-A, and MW-B..

If you have any questions, please contact me at (312) 578-0870, extension 11910.

Sincerely,

Chris Harvey, PE
Program Manager

TABLES
Table 1. Groundwater Elevations 2009 - 2020
Table 2. Summary of Groundwater Analytical Data

FIGURES
Figure 1. Groundwater Contour Map – November 2020
Figure 2. Total Dissolved Chromium Isoconcentration Map by Year

ATTACHMENTS
Attachment A. Low-Flow Sampling Logs
Attachment B. Laboratory Analytical Report (November 5, 2020)
Attachment C. Trend Analysis Charts

cc: Mr. Jason Smith/Tecumseh Products Co. – Paris, TN
Mr. Curtis Toll/Greenberg Traurig, LLP – Philadelphia
Mr. Ron Bock/TRC – Irvine, CA

TABLES

Table 1. Groundwater Level Elevations 2009-2020

Location	Top of Casing (TOC) Elevation (ft MSL)	June 8, 2009		September 23, 2009		December 28 & 29, 2009		March 29 & 30, 2010		March 18 & 19, 2011		May 15, 2012	
		Depth To Water Below TOC	Water Level Elevation	Depth To Water Below TOC	Water Level Elevation	Depth To Water Below TOC	Water Level Elevation	Depth To Water Below TOC	Water Level Elevation	Depth To Water Below TOC	Water Level Elevation	Depth To Water Below TOC	Water Level Elevation
MW-1	932.60	6.13	926.47	8.80	923.80	3.71	928.89	4.98	927.62	4.92	927.68	2.77	929.83
NH-2	935.34	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	932.24	4.32	927.92	7.55	924.69	2.56	929.68	3.77	928.47	3.56	928.68	2.67	929.57
MW-5	931.81	4.30	927.51	7.24	924.57	3.10	928.71	3.27	928.54	2.99	928.82	2.39	929.42
MW-6	931.90	5.23	926.67	8.45	923.45	3.17	928.73	3.72	928.18	3.46	928.44	2.85	929.05
NH-7	935.42	Well installed in 2012		Well installed in 2012		Well installed in 2012		Well installed in 2012		Well installed in 2012		Well installed in 2012	
MW-8	931.89	4.07	927.82	6.73	925.16	2.99	928.90	3.33	928.56	3.11	928.78	2.63	929.26
MW-9	931.54	7.04	924.50	10.65	920.89	4.71	926.83	4.58	926.96	--	--	--	--
NH-10	935.37	--	--	--	--	--	--	--	--	--	--	--	--
NH-25	934.65	Well installed in 2012		Well installed in 2012		Well installed in 2012		Well installed in 2012		Well installed in 2012		Well installed in 2012	
MW-24	931.07	--	--	--	--	--	--	--	--	--	--	--	--
NH-26	934.76	Well installed in 2012		Well installed in 2012		Well installed in 2012		Well installed in 2012		Well installed in 2012		Well installed in 2012	
MW-A	932.83	6.78	926.05	9.38	923.45	4.79	928.04	5.62	927.21	5.57	927.26	4.47	928.36
MW-B	932.58	5.69	926.89	8.60	923.98	3.00	929.58	4.40	928.18	4.22	928.36	3.11	929.47
MW-C	931.89	5.88	926.01	9.24	922.65	3.29	928.60	3.86	928.03	3.64	928.25	2.59	929.30
MW-D	941.90	5.81	936.09	9.96	931.94	5.18	936.72	4.04	937.86	--	--	--	--
MW-E	933.31	7.28	926.03	9.81	923.50	6.20	927.11	6.43	926.88	6.33	926.98	5.32	927.99
MW-F	933.83	8.52	925.31	10.93	922.90	7.31	926.52	7.53	926.30	7.52	926.31	6.71	927.12
MW-G	934.37	7.52	926.85	10.66	923.71	7.02	927.35	7.28	927.09	7.21	927.16	5.98	928.39
MW-H	933.63	8.81	924.82	12.40	921.23	9.06	924.57	8.45	925.18	--	--	--	--
TEC-1	932.51	4.20	928.31	6.67	925.84	3.69	928.82	3.89	928.62	3.46	929.05	3.14	929.37
TEC-1A	932.02	14.29	917.73	18.37	913.65	14.66	917.36	13.58	918.44	13.42	918.60	13.17	918.85
TEC-2	931.90	4.67	927.23	7.47	924.43	3.55	928.35	3.68	928.22	3.40	928.50	2.90	929.00
TEC-3	934.62	6.94	927.68	9.07	925.55	6.51	928.11	6.20	928.42	5.94	928.68	5.38	929.24
TEC-4	934.50	7.15	927.35	9.64	924.86	6.12	928.38	6.33	928.17	5.98	928.52	5.35	929.15

MSL - Mean Sea Level

NA* Well underwater and could not be measured

Table 1. Groundwater Level Elevations 2009-2020

Location	Top of Casing (TOC) Elevation (ft MSL)	June 20 & 21, 2013		August 18, 2014		April 22, 2016		September 7, 2016		April 26, 2017		March 21, 2019		November 5, 2020	
		Depth To Water Below TOC	Water Level Elevation	Depth To Water Below TOC	Water Level Elevation	Depth To Water Below TOC	Water Level Elevation	Depth To Water Below TOC	Water Level Elevation	Depth To Water Below TOC	Water Level Elevation	Depth To Water Below TOC	Water Level Elevation	Depth To Water Below TOC	Water Level Elevation
MW-1	932.60	5.13	927.47	6.80	925.80	4.53	928.07	2.97	929.63	--	--	4.12	928.48	--	--
NH-2	935.34	--	--	3.68	931.66	4.01	931.33	3.65	931.69	3.82	931.52	3.63	931.71	--	--
MW-4	932.24	4.08	928.16	5.62	926.62	3.36	928.88	3.03	929.21	--	--	--	--	--	--
MW-5	931.81	3.70	928.11	4.89	926.92	2.87	928.94	3.35	928.46	--	--	2.81	929.00	3.08	928.73
MW-6	931.90	4.28	927.62	5.91	925.99	3.19	928.71	3.69	928.21	--	--	--	--	--	--
NH-7	935.42	8.64	926.78	9.14	926.28	7.77	927.65	8.13	927.29	--	--	7.22	928.20	7.83	927.59
MW-8	931.89	3.63	928.26	4.74	927.15	2.91	928.98	2.42	929.47	2.33	929.56	1.54	930.35	3.03	928.86
MW-9	931.54	--	--	--	--	3.96	927.58	4.99	926.55	--		--	--	--	--
NH-10	935.37	--	--	9.24	926.13	8.23	927.14	8.59	926.78	--	--	7.80	927.57	--	--
NH-25	934.65	6.34	928.31	6.73	927.92	5.83	928.82	5.49	929.16	--	--	4.97	929.68	--	--
MW-24	931.07	--	--	7.58	923.49	4.94	926.13	6.21	924.86	--	--	Destroyed		Destroyed	
NH-26	934.76	6.76	928.00	6.99	927.77	6.24	928.52	NA*	934.76	5.73	929.03	6.04	928.72	6.28	928.48
MW-A	932.83	5.72	927.11	7.33	925.50	5.23	927.60	4.56	928.27	3.92	928.91	5.34	927.49	5.33	927.50
MW-B	932.58	4.58	928.00	6.31	926.27	3.95	928.63	3.57	929.01	2.69	929.89	3.88	928.70	4.32	928.26
MW-C	931.89	4.57	927.32	6.35	925.54	3.26	928.63	3.63	928.26	--	--	4.19	927.70	--	--
MW-D	941.90	--	--	--	--	3.86	938.04	6.59	935.31	--	--	3.58	938.32	--	--
MW-E	933.31	6.44	926.87	7.98	925.33	6.01	927.30	5.60	927.71	4.92	928.39	6.16	927.15	6.09	927.22
MW-F	933.83	7.76	926.07	9.02	924.81	7.21	926.62	7.41	926.42	--	--	7.38	926.45	7.27	926.56
MW-G	934.37	7.68	926.69	9.29	925.08	7.11	927.26	5.89	928.48	--	--	8.25	926.12	--	--
MW-H	933.63	--	--	--	--	7.88	925.75	7.19	926.44	--	--	8.61	925.02	--	--
TEC-1	932.51	4.08	928.43	4.95	927.56	3.54	928.97	4.29	928.22	3.29	929.22	3.34	929.17	3.78	928.73
TEC-1A	932.02	14.18	917.84	15.76	916.26	13.60	918.42	15.17	916.85	--	--	13.90	918.12	--	--
TEC-2	931.90	3.97	927.93	4.86	927.04	3.30	928.60	NA*	931.90	--	--	2.98	928.92	--	--
TEC-3	934.62	6.23	928.39	6.88	927.74	5.90	928.72	5.78	928.84	5.31	929.31	5.74	928.88	5.95	928.67
TEC-4	934.50	6.40	928.10	7.43	927.07	5.76	928.74	5.23	929.27	4.88	929.62	5.79	928.71	5.94	928.56

MSL - Mean Sea Level

NA* Well underwater and could

Table 2

Groundwater Analytical Results - Dissolved Chromium and Lead

Tecumseh Products Co. (Former)-Chromium Line

New Holstein, Wisconsin

WELL ID	Date Sampled	DISSOLVED METALS				UNDISSOLVED METALS	
		Hexavalent Chromium (CrVI)	Total Chromium[1]	Trivalent Chromium[2] (CrIII)	Lead	Ferrous Iron	Total Organic Carbon
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
NR 140 STANDARD	PAL	--	10	--	1.5	150	--
	ES	--	100	--	15	300	--
TW-1	8/13/2002	5.0	3.6	NM	--	--	--
TW-2	8/13/2002	24	*33*	8.7	--	--	--
TW-3	8/13/2002	130	**110**	NM	--	--	--
TW-4	8/13/2002	7,900	**8,200**	NM	--	--	--
TW-5	8/13/2002	700	**640**	NM	--	--	--
TW-6	8/13/2002	5	1 U	NM	--	--	--
TW-7	8/13/2002	6.3	1 U	NM	--	--	--
TW-8	8/13/2002	6.3	1.9	NM	--	--	--
TW-9	8/13/2002	8.9	0.44 U	NM	--	--	--
TW-10	8/13/2002	3.6 U	1.3 U	NM	--	--	--
MW-1	8/13/2002	1,900	**1,700**	NM	--	--	--
	11/16/2005	4,600	**4,900**	300	--	--	--
	5/24/2007	2,800	**2,800**	NM	*0.24*	--	--
	6/9/2009	680	**738**	58 J	*1.7* J	--	--
	9/24/2009	1,700	**1,660**	200 U	3.3 J	--	--
	12/28/2009	3.90 U	9.2	9.2 J	*2.2* J	--	--
	3/29/2010	5.3	*57.6*	52.3	*2.2* J	--	--
	5/18/2011	50	*54.1*	4.1	--	--	--
	5/15/2012	4.4 J	*16.1*	11.7 J	--	--	--
	6/21/2013	33	*54.9*	NM	*2.3* J	--	--
	8/19/2014	--	4.1 J	--	*3* U	--	--
MW-2	8/13/2002	3.6 U	2.3	3.6 U	--	--	--
	11/16/2005	5.0 U	2.8	NM	--	--	--
NH-2	4/24/2012	--	<2.4	--	<1.4	--	--
	8/19/2014	--	2.1 J	--	*3* J	--	--
	4/26/2017	<3.9	3.7 J	NM	NM	<28	3,400
MW-3	8/13/2002	1,900	**1,700**	NM	--	--	--
MW-4	8/13/2002	3.7	0.44 U	NM	--	--	--
	11/15/2005	5.0 U	2.0	NM	--	--	--
	5/24/2007	3.4 U	0.63	NM	0.26	--	--
	6/9/2009	3.9 U	1.3 J	NM	*2.2* J	--	--
	9/24/2009	3.9 U	0.39 U	3.9 U	1.3	--	--
	12/28/2009	3.9 U	1.2 J	3.9 U	1.3	--	--
	3/29/2010	3.9 U	0.82 J	3.9 U	1.4 J	--	--
	5/18/2011	3.9 U	1.6 J	3.9 U	--	--	--
	5/15/2012	3.9 U	2.4 U	3.9 U	--	--	--
	6/20/2013	3.4 U	1.2 U	3.9 U	1.2 U	--	--
	8/19/2014	--	2.1 U	NM	*3* U	--	--

Notes:

ES = NR140 Enforcement Standard

PAL = NR140 Preventative Action Limi

ITALICIZE = Detection over NR140 PAL Limit

BOLD = Detection over NR140 ES Limit

U = Analyte not detected at or above reporting limi

J = Estimated value. Analyte detected at a level less than the reporting limit and greater than or equal to the detection limit.

"--" = Analyte was not sampled during sampling roun

NM Not measured/calculated, due to Cr(VI) result greater than total Cr result.

1 = PAL and ES values are for total chromium. As such, these values are not applicable for hexavalent chromium.

2 = Trivalent chromium is the difference between total chromium and hexavalent chromium concentrations.

Table 2
Groundwater Analytical Results - Dissolved Chromium and Lead
Tecumseh Products Co. (Former)-Chromium Line
New Holstein, Wisconsin

WELL ID	DATE SAMPLED	DISSOLVED METALS				UNDISSOLVED METALS	
		HEXAVALENT CHROMIUM (CrVI)	TOTAL CHROMIUM[1]	TRIVALENT CHROMIUM[2] (CrIII)	Lead	Ferrous Iron	Total Organic Carbon
	UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
NR 140 STANDARD	PAL	--	10	--	1.5	--	-
	ES	--	100	--	15	--	-
MW-5	8/13/2002	380	**390**	180 U	NM	--	--
	11/16/2005	330	**270**	NM	NM	--	--
	5/24/2007	1,100	**910**	NM	0.19	--	--
	6/9/2009	950	**938**	9.8 U	*3.2* J	--	--
	9/24/2009	3400	**3,510**	110	*2.6* J	--	--
	12/29/2009	240	**240**	3.9 U	*1.5* J	--	--
	3/30/2010	210	**202**	3.9 U	*2* J	--	--
	5/19/2011	140	**134**	NM	NM	--	--
	5/15/2012	350	**339**	NM	NM	--	--
	6/20/2013	290	**313**	NM	1.2 U	--	--
	8/18/2014	NM	**318**	--	*3* U	--	--
	3/21/2019	--	*81.6*	--	--	--	--
	11/5/2020	--	**102**	--	--	--	--
MW-6	8/13/2002	8.9	0.56 U	NM	NM	--	--
	11/15/2005	45	*65*	20	NM	--	--
	5/24/2007	3.4 U	2.6	NM	0.07	--	--
	6/9/2009	3.9 U	0.39 U	3.9	*2.6* J	--	--
	9/24/2009	3.9 U	5.0	5.0	*2* J	--	--
	12/28/2009	3.9 U	0.48 J	3.9	1.3 U	--	--
	3/29/2010	3.9 U	0.39 U	3.9	*2.3* J	--	--
	5/18/2011	3.9 U	1.2 J	3.9	NM	--	--
	5/15/2012	3.9 U	2.4 U	3.9	NM	--	--
	6/20/2013	3.4 U	1.2 U	NM	1.2 U	--	--
	8/19/2014	NM	2.1 U	NM	*3* U	--	--
NH-7	4/24/2012	NM	**261**	NM	*1.7* J	--	--
	6/20/2013	110	**111**	NM	1.2 U	--	--
	8/19/2014	NM	**114**	NM	*3* U	--	--
	3/21/2019	--	**279**	--	--	--	--
	11/5/2020	--	**311**	--	--	--	--
MW-8	8/13/2002	3,100	**3,200**	720 U	NM	--	--
	11/16/2005	3,000	**2,900**	NM	NM	--	--
	5/24/2007	1,900	**1,600**	NM	0.09	--	--
	6/9/2009	7,300	**8,730**	1400	*2.9* J	--	--
	9/24/2009	8,200	**8,470**	270	*2.6* J	--	--
	12/29/2009	5100	**5,150**	50 J	*1.9* J	--	--
	3/29/2010	1,900	**1,720**	180	*2.3* J	--	--
	5/19/2011	320	**330**	10	NM	--	--
	5/15/2012	3,100	**2,940**	NM	NM	--	--
	6/20/2013	860	**844**	NM	*1.8* J	--	--
	8/18/2014	NM	**1,320**	NM	*3* U	--	--
	4/22/2016	NM	*46.7*	NM	NM	--	--
	9/7/2016	NM	**725**	NM	NM	--	--
	4/26/2017	<3.9	<2.5	NM	NM	<28	4,500
	3/21/2019	--	5.2 J	--	--	--	--
	11/5/2020	--	5.0 J	--	--	--	--

Notes:

ES = NR140 Enforcement Standard

PAL = NR140 Preventative Action Limi

ITALICIZE = Detection over NR140 PAL Limit

BOLD = Detection over NR140 ES Limit

U = Analyte not detected at or above reporting limi

J = Estimated value. Analyte detected at a level less than the reporting limit and greater than or equal to the detection limit.

"--" = Analyte was not sampled during sampling roun

NM Not measured/calculated, due to Cr(VI) result greater than total Cr result.

1 = PAL and ES values are for total chromium. As such, these values are not applicable for hexavalent chromium.

2 = Trivalent chromium is the difference between total chromium and hexavalent chromium concentrations.

Table 2
Groundwater Analytical Results - Dissolved Chromium and Lead
Tecumseh Products Co. (Former)-Chromium Line
New Holstein, Wisconsin

WELL ID	DATE SAMPLED	DISSOLVED METALS				UNDISSOLVED METALS	
		HEXAVALENT CHROMIUM (CrVI)	TOTAL CHROMIUM[1]	TRIVALENT CHROMIUM[2] (CrIII)	Lead	Ferrous Iron	Total Organic Carbon
	UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
NR 140	PAL	--	10	--	1.5	--	-
STANDARD	ES	--	100	--	15	--	-
MW-9	8/13/2002	3.6 U	0.44 U	3.6	NM	--	--
	11/15/2005	5.0 U	1.7	NM	*1.8*	--	--
	5/24/2007	5.4	0.44	NM	0.06	--	--
	6/9/2009	3.9 U	0.39 U	3.9 U	*2.2* J	--	--
	9/24/2009	3.9 U	0.39 U	3.9 U	*2.1* J	--	--
	12/28/2009	3.9 U	0.39 U	3.9 U	*1.7* J	--	--
	3/29/2010	3.9 U	4.9 J	4.9 J	*2.4* J	--	--
NH-10	4/23/2012	NM	4.1 J	NM	*1.9* J	--	--
	8/19/2014	NM	2.1 U	NM	*3* U	--	--
MW-24	8/19/2014	NM	3.7 J	NM	*3* U	--	--
NH-25	4/23/2012	NM	**1,220**	NM	*1.6* J	--	--
	6/20/2013	3,100	**3,330**	NM	*2.8* J	--	--
	8/19/2014	NM	**895**	--	3 U	--	--
NH-26	4/23/2012	--	**470**	--	<1.4	--	--
	6/20/2013	480	**510**	NM	1.2 U	--	--
	8/19/2014	--	**284**	--	3 U	--	--
	4/26/2017	1,500	**1,400**	NM	NM	<28	7,400
	3/21/2019	--	**763**	--	--	--	--
	11/5/2020	--	**1,080**	--	--	--	--
MW-A	5/24/2007	4,000	**4,100**	100	***27.0***	--	--
	6/8/2009	1,500	**1,510**	20 U	*2.1* J	--	--
	9/24/2009	3,600	**3,710**	110	*1.5* J	--	--
	12/28/2009	1,900	**1,870**	20 U	*2.1* J	--	--
	3/29/2010	1,500	**1,390**	110	*2.3* J	--	--
	5/18/2011	590	**594**	4	--	--	--
	5/15/2012	440	**417**	NM	--	--	--
	6/21/2013	520	**484**	NM	*2.3* J	--	--
	8/19/2014	--	18.1	--	*3*	--	--
	4/22/2016	--	**307**	--	--	--	--
	9/7/2016	NM	*60.1*	NM	NM	--	--
	4/26/2017	330	**295**	NM	NM	<28	5,800
	3/21/2019	--	**458**	--	--	--	--
	11/5/2020	--	**779**	--	--	--	--
MW-B	5/24/2007	910	**780**	NM	0.044 U	--	--
	6/9/2009	570	**533**	20 U	*2.2* J	--	--
	9/24/2009	1,300	**1,200**	100 U	*1.6* J	--	--
	12/28/2009	740	**649**	20 U	*2.4* J	--	--
	3/29/2010	270	**263**	20 U	*2.2* J	--	--
	5/18/2011	68	*64*	NM	--	--	--
	5/15/2012	5.5 J	*10.2*	4.7 J	--	--	--
	6/20/2013	74	*73.8*	NM	1.2 U	--	--
	8/19/2014	--	*47.1*	--	*3* U	--	--
	4/22/2016	NM	*20.1*	NM	NM	--	--
	9/7/2016	NM	**585**	NM	NM	--	--
	4/26/2017	<3.9	4.7 J	NM	NM	<28	910
	3/21/2019	--	*79.6*	--	--	--	--
	11/5/2020	--	*73.3*	--	--	--	--

Notes:
ES = NR140 Enforcement Standard
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BOLD = Detection over NR140 ES Limit
U = Analyte not detected at or above reporting limi
J = Estimated value. Analyte detected at a level less than the reporting limit and greater than or equal to the detection limit.
"--" = Analyte was not sampled during sampling roun
NM Not measured/calculated, due to Cr(VI) result greater than total Cr result.
1 = PAL and ES values are for total chromium. As such, these values are not applicable for hexavalent chromium.
2 = Trivalent chromium is the difference between total chromium and hexavalent chromium concentrations.

Table 2
Groundwater Analytical Results - Dissolved Chromium and Lead
Tecumseh Products Co. (Former)-Chromium Line
New Holstein, Wisconsin

WELL ID	DATE SAMPLED	DISSOLVED METALS				UNDISSOLVED METALS	
		HEXAVALENT CHROMIUM (CrVI)	TOTAL CHROMIUM[1]	TRIVALENT CHROMIUM[2] (CrIII)	Lead	Ferrous Iron	Total Organic Carbon
	UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
NR 140	PAL	--	10	--	1.5	--	
STANDARD	ES	--	100	--	15		
MW-C	5/24/2007	3.4 U	1.3	NM	0.07	--	--
	6/9/2009	3.9 U	1.1 J	3.9 U	*2.4* J	--	--
	9/24/2009	3.9 U	0.39 U	3.9 U	*4.1* J	--	--
	12/28/2009	3.9 U	4.5 J	4.5 J	*1.9* J	--	--
	3/29/2010	3.9 U	4.2 J	4.2 J	1.4 J	--	--
	5/18/2011	3.9 U	2.3 J	3.9 U	--	--	--
	5/15/2012	3.9 U	2.4 U	3.9 U	--	--	--
	6/20/2013	3.4 U	1.2 U	NM	1.2 U	--	--
	8/19/2014	--	2.1 U	--	*3* U	--	--
MW-D	5/25/2007	3.4 U	1.9	NM	0.1	--	--
	6/9/2009	3.9 U	2.4 J	3.9 U	*1.7* J	--	--
	9/24/2009	3.9 U	0.42 J	3.9 U	*3* J	--	--
	12/29/2009	3.9 U	1.9 J	3.9 U	*2.5* J	--	--
	3/29/2010	3.9 U	1.0 J	3.9 U	1.4 J	--	--
MW-E	6/9/2009	290	**268**	3.9 U	*2* J	--	--
	9/24/2009	340	**353**	20 U	*2* J	--	--
	12/29/2009	870	**814**	39 U	*3.9* J	--	--
	3/30/2010	890	**808**	39 U	*1.9* J	--	--
	5/19/2011	1,000	**963**	NM	--	--	--
	5/15/2012	1,000	**920**	NM	--	--	--
	6/20/2013	1,200	**1,150**	NM	*2.9* J	--	--
	8/19/2014	--	**1,290**	--	*3* U	--	--
	4/22/2016	NM	**594**	NM	NM	--	--
	9/7/2016	NM	**507**	NM	NM	--	--
	4/26/2017	550	**533**	NM	NM	<28	6,200
	3/21/2019	--	**628**	--	--	--	--
	11/5/2020	--	**1,420**	--	--	--	--
MW-F	6/8/2009	3.9 U	0.46 J	3.9 U	*2.2* J	--	--
	9/23/2009	3.9 U	0.39 U	3.9 U	*2.4* J	--	--
	12/28/2009	3.9 U	1.8 J	3.9 U	*1.6* J	--	--
	3/29/2010	3.9 U	1.4 J	3.9 U	*2.2* J	--	--
	5/18/2011	3.9 U	1.7 J	3.9 U	--	--	--
	5/15/2012	3.9 U	2.4 U	3.9 U	--	--	--
	6/21/2013	3.9 U	1.2 U	NM	1.2 U	--	--
	8/19/2014	3.9 U	2.1 U	--	3 U	--	--
	3/21/2019	--	2.5 U	--	--	--	--
	11/5/2020	--	2.5 U	--	--	--	--
MW-G	6/8/2009	3.9 U	0.7 J	3.9 U	1.3	--	--
	9/23/2009	3.9 U	0.39 U	3.9 U	*4.9* J	--	--
	12/28/2009	3.9 U	0.39 J	3.9 U	*1.9* J	--	--
	3/29/2010	3.9 U	0.39 U	3.9 U	*3* J	--	--
	5/18/2011	3.9 U	1.1 J	3.9 U	--	--	--
	5/15/2012	3.9 U	2.4 U	3.9 U	--	--	--
	6/21/2013	3.4 U	1.2 U	NM	*3.1* J	--	--
	8/19/2014	--	2.1 U	--	3 U	--	--

Notes:

ES = NR140 Enforcement Standard
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ITALICIZE = Detection over NR140 PAL Limit
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U = Analyte not detected at or above reporting limi
J = Estimated value. Analyte detected at a level less than the reporting limit and greater than or equal to the detection limit.
"--" = Analyte was not sampled during sampling roun
NM Not measured/calculated, due to Cr(VI) result greater than total Cr result.
1 = PAL and ES values are for total chromium. As such, these values are not applicable for hexavalent chromium.
2 = Trivalent chormium is the difference between total chromium and hexavalent chromium concentrations.

Table 2
Groundwater Analytical Results - Dissolved Chromium and Lead
Tecumseh Products Co. (Former)-Chromium Line
New Holstein, Wisconsin

WELL ID	DATE SAMPLED	DISSOLVED METALS				UNDISSOLVED METALS	
		HEXAVALENT CHROMIUM (CrVI)	TOTAL CHROMIUM[1]	TRIVALENT CHROMIUM[2] (CrIII)	Lead	Ferrous Iron	Total Organic Carbon
	UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
NR 140	PAL	--	10	--	1.5	--	-
STANDARD	ES	--	100	--	15	--	-
MW-H	6/8/2009	3.9 U	0.89 J	3.9 U	1.3	--	--
	9/23/2009	3.9 U	3.9 U	3.9 U	*2.1* J	--	--
	12/28/2009	3.9 U	3.9 U	3.9 U	*2.7* J	--	--
	3/29/2010	3.9 U	3.9 U	3.9 U	*1.6* J	--	--
TEC-1	8/13/2002	500	**490**	NM	--	--	--
	11/16/2005	4,300	**3,800**	NM	*1.9*	--	--
	5/23/2007	790	**670**	NM	***20***	--	--
	6/10/2009	11,400	**12,000**	600 J	*3.5* J	--	--
	9/24/2009	3,000	**3,120**	120	*3.8* J	--	--
	12/29/2009	7,900	**7,430**	200 U	*3.3* J	--	--
	3/30/2010	6,700	**6,710**	200 U	*3.3* J	--	--
	5/19/2011	2,400	**2,620**	220	--	--	--
	5/15/2012	2,300	**2,190**	NM	--	--	--
	6/20/2013	2,300	**2,250**	NM	*4.3* J	--	--
	8/18/2014	--	**1,250**	--	*3* U	--	--
	4/26/2017	650	**598**	NM	NM	<28	2,100
	3/21/2019	--	**315**	--	--	--	--
	11/5/2020	--	**318**	--	--	--	--
TEC-1A	8/13/2002	14	0.52 U	NM	--	--	--
	3/6/2006	5.0 U	2.8	NM	--	--	--
	5/23/2007	3.4 U	0.43 U	NM	0.07	--	--
	6/9/2009	14 J	*22.6*	9 J	*2.2* J	--	--
	9/24/2009	3.9 U	1.1 J	3.9 U	*2.1* J	--	--
	12/29/2009	3.9 U	4.3 J	4.3 J	*2* J	--	--
	3/29/2010	3.9 U	5.1	5.1	*1.5* J	--	--
	5/19/2011	32	38.7	6.7	--	--	--
	5/15/2012	3.9 U	8.2	8.2	--	--	--
	6/20/2013	3.4 U	1.2 U	NM	1.2 U	--	--
	8/18/2014	--	2.1 U	--	*3* U	--	--
TEC-2	8/13/2002	16	0.44 U	NM	--	--	--
	11/16/2005	5.0 U	0.78	NM	--	--	--
	5/24/2007	3.4 U	0.94	--	0.13	--	--
	6/9/2009	3.9 U	1.2 J	3.9 U	*2.5* J	--	--
	9/24/2009	3.9 U	0.68 J	3.9 U	*3.1* J	--	--
	12/29/2009	3.9 U	1.1 J	3.9 U	*3.2* J	--	--
	3/30/2010	3.9 U	2.7 J	3.9 U	*2.3* J	--	--
	5/19/2011	3.9 U	1.3 J	3.9 U	--	--	--
	5/15/2012	3.9 U	2.4 U	3.9 U	--	--	--
	6/20/2013	3.4 U	1.2 U	NM	*2.8* J	--	--
	8/18/2014	--	2.1 U	--	*3.0* U	--	--

Notes:
ES = NR140 Enforcement Standard
PAL = NR140 Preventative Action Limit
ITALICIZE = Detection over NR140 PAL Limit
BOLD = Detection over NR140 ES Limit
U = Analyte not detected at or above reporting limit
J = Estimated value. Analyte detected at a level less than the reporting limit and greater than or equal to the detection limit.
"--" = Analyte was not sampled during sampling round
NM Not measured/calculated, due to Cr(VI) result greater than total Cr result.
1 = PAL and ES values are for total chromium. As such, these values are not applicable for hexavalent chromium.
2 = Trivalent chromium is the difference between total chromium and hexavalent chromium concentrations.

Table 2

Groundwater Analytical Results - Dissolved Chromium and Lead

Tecumseh Products Co. (Former)-Chromium Line

New Holstein, Wisconsin

WELL ID	DATE SAMPLED	DISSOLVED METALS				UNDISSOLVED METALS	
		HEXAVALENT	TOTAL	TRIVALENT	Lead	Ferrous Iron	Total Organic
	UNITS	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
NR 140	PAL	--	10	--	1.5	--	-
STANDARD	ES	--	100	--	15	--	-
TEC-3	9/23/2003	270	**310**	40	--	--	--
	11/16/2005	540	**490**	NM	--	--	--
	5/24/2007	1,000	**910**	NM	0.17	--	--
	6/10/2009	400	**789**	390	*3.5* J	--	--
	9/24/2009	99	*99*	20 U	*1.8* J	--	--
	12/29/2009	190	**201**	11 J	*2.2* J	--	--
	3/30/2010	470	**445**	20 U	1.3 J	--	--
	5/19/2011	580	**585**	5	--	--	--
	5/15/2012	250	**227**	NM	--	--	--
	6/20/2013	1,200	**1,260**	NM	1.2 U	--	--
	8/19/2014	--	**2,100**	--	*3* U	--	--
	4/22/2016	NM	**5,650**	NM	NM	--	--
	9/7/2016	NM	**2,820**	NM	NM	--	--
	4/26/2017	5,300	**5,040**	NM	NM	<28	5,800
	3/21/2019	--	**1,080**	--	--	--	--
	11/5/2020	--	**4,560**	--	--	--	--
TEC-4	9/23/2003	1,200	**1,300**	100	--	--	--
	11/16/2005	2,800	**2,700**	NM	0.40 U	--	--
	5/24/2007	4,800	**4,000**	NM	0.06	--	--
	6/10/2009	13,300	**12,500**	200 U	*2.3* J	--	--
	9/24/2009	5,500	**5,220**	500 U	*2.3* J	--	--
	12/29/2009	5,200	**5,360**	160 J	*3* J	--	--
	3/30/2010	14,300	**12,900**	390 U	*2.5* J	--	--
	5/19/2011	29,000	**29,200**	200	--	--	--
	5/15/2012	21,300	**20,300**	NM	--	--	--
	6/20/2013	33,600	**32,200**	NM	*14* U	--	--
	8/19/2014	--	**6,880**	--	*3* U	--	--
	4/22/2016	NM	**65,100**	NM	NM	--	--
	9/7/2016	NM	**33,100**	NM	NM	--	--
	4/26/2017	16,200	**15,400**	NM	NM	<28	13,400
	3/21/2019	--	**16,900**	--	--	--	--
	11/5/2020	--	**26,100**	--	--	--	--

Notes:

ES = NR140 Enforcement Standard

PAL = NR140 Preventative Action Limi

ITALICIZE = Detection over NR140 PAL Limit

BOLD = Detection over NR140 ES Limit

U = Analyte not detected at or above reporting limi

J = Estimated value. Analyte detected at a level less than the reporting limit and greater than or equal to the detection limit.

"--" = Analyte was not sampled during sampling roun

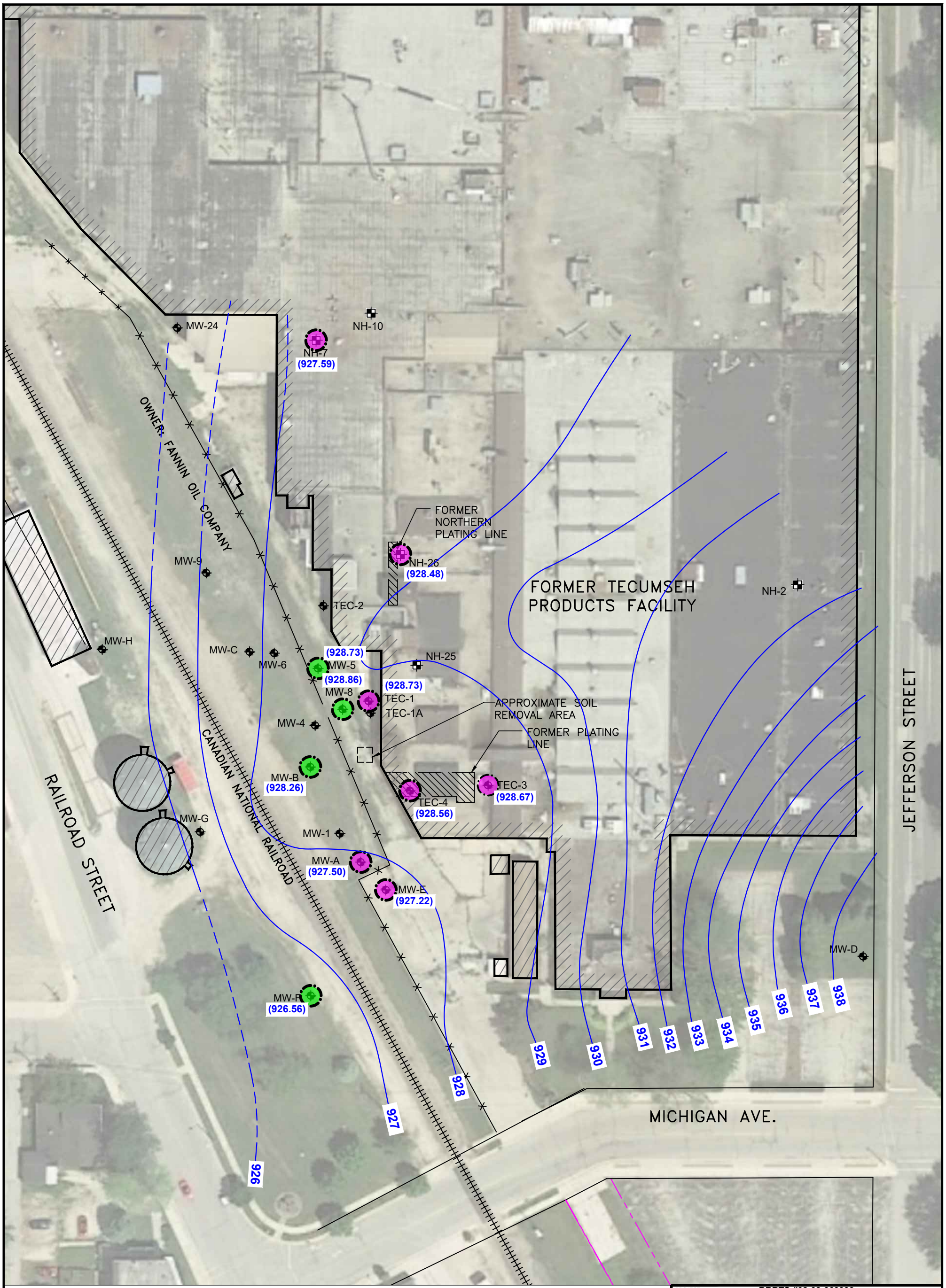
NM Not measured/calculated, due to Cr(VI) result greater than total Cr result.

1 = PAL and ES values are for total chromium. As such, these values are not applicable for hexavalent chromium.

2 = Trivalent chromium is the difference between total chromium and hexavalent chromium concentrations.

FIGURES

PLOT DATA
Drawing Name: S:\PROJECTS\Tecumseh\Chromium Line Project - 107927\107927-17(CR LINE).dwg
Operator Name: ALBERTS, SCOTT
Drawing Size: 11x17
Layout: FIGURE 1
File Size: 0.63 Mb
Plot Date: December 11, 2020
Plot Time: 1:23 PM
Attached Xref's:
Attached Images: Tecumseh aerials;



LEGEND:

- MONITORING WELL LOCATION
- MONITORING WELL INSTALLED BY ROBERT E. LEE & ASSOCIATES IN 2012
- RAILROAD TRACKS
- FENCE
- (926.45) GROUNDWATER ELEVATION - NOVEMBER 13, 2020
- GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER ELEVATION CONTOUR - ESTIMATED
- TOTAL CHROMIUM BELOW ENFORCEMENT STANDARD
- TOTAL CHROMIUM ABOVE ENFORCEMENT STANDARD
- WELLS SAMPLED IN 2019.

NOTE: MW-24 WAS FOUND TO BE DESTROYED DURING THE NOVEMBER 13, 2020 GROUNDWATER EVENT

0 60 120
SCALE IN FEET

PROJECT: BRRTS #02-08-363333
TECUMSEH PRODUCTS CO. (FORMER) - CHROMIUM LINE
NEW HOLSTEIN, WISCONSIN

TITLE: GROUNDWATER CONTOUR MAP - NOVEMBER 2020

DRAWN BY: S.ALBERTS	SCALE: AS SHOWN	PROJ. NO. 107927	
CHECKED BY: T.GOMOLL		FILE NO. 107927-17(CR LINE).dwg	
APPROVED BY: C.HARVEY	DATE PRINTED:	FIGURE 1	
DATE: DECEMBER 2020			

TRC
230 West Monroe St.
Suite 630
Chicago, IL 60606
Phone: 312.578.0870

PLOT DATA
Drawing Name: S:\PROJECTS\Tecumseh\Chromium Line Project - 107927\107927-18(CR LINE).dwg
Operator Name: ALBERTS, SCOTT
Drawing Size: 11x17
Layout: FIGURE 2
File Size: 0.91 Mb
Plot Date: December 17, 2020
Plot Time: 5:41 PM
Attached Xref's:
Attached Images: Tecumseh aerials;

MW-24 (NS)
NH-10 (NS)
NH-7 (311)
OWNER: FANNIN OIL COMPANY
FORMER NORTHERN PLATING LINE
NH-26 (1080)
FORMER TECUMSEH PRODUCTS FACILITY
NH-2 (NS)
(NS) MW-9
(NS) TEC-2
(NS) MW-H
MW-C (NS)
MW-6 (NS)
(105) MW-5
(NS) NH-25
(5.0 J) MW-3
(318) TEC-1
TEC-1A (NS)
APPROXIMATE SOIL REMOVAL AREA
FORMER PLATING LINE
(NS) MW-4
(73.3) MW-B
TEC-3 (4,560)
TEC-4 (26,100)
CANADIAN NATIONAL RAILROAD
RAILROAD STREET
(NS) MW-G
(NS) MW-1
MW-A (779)
(1420) MW-E
JEFFERSON STREET
(NS) MW-D
MW-F (ND)
MICHIGAN AVE.

LEGEND:

- MONITORING WELL LOCATION
- MONITORING WELL INSTALLED BY ROBERT E. LEE & ASSOCIATES IN 2012
- RAILROAD TRACKS
- FENCE
- (65) TOTAL DISSOLVED CHROMIUM (ug/L) - NOVEMBER 13, 2020
- (NS) NOT SAMPLED
- (ND) CHROMIUM NOT DETECTED
- TOTAL CHROMIUM BELOW ENFORCEMENT STANDARD
- TOTAL CHROMIUM ABOVE ENFORCEMENT STANDARD

ENFORCEMENT STANDARD POINT-OF-COMPLIANCE FOR TOTAL DISSOLVED CHROMIUM (100 ug/L) BY YEAR
DASHED WHERE INFERRED

- 2020
- 2019
- 2017
- 2014
- 2009
- 2005
- 2003/2002

NOTES:

1. SAMPLES COLLECTED NOVEMBER 13, 2020.
2. TEC-1A IS A DEEP WELL.

0 60 120
SCALE IN FEET

PROJECT: BRRTS #02-08-363333
TECUMSEH PRODUCTS CO. (FORMER) - CHROMIUM LINE
NEW HOLSTEIN, WISCONSIN

TITLE: TOTAL DISSOLVED CHROMIUM ISOCONCENTRATION MAP BY YEAR

DRAWN BY: S.ALBERTS	SCALE: AS SHOWN	PROJ. NO. 107927	
CHECKED BY: T.GOMOLL		FILE NO. 107927-18(CR LINE).dwg	
APPROVED BY: C.HARVEY	DATE PRINTED:	FIGURE 2	
DATE: DECEMBER 2020			

TRC
230 West Monroe St.
Suite 630
Chicago, IL 60606
Phone: 312.578.0870

ATTACHMENT A

Sample Location	TEC-3
Date	11/5/2020
Client	
Site	Tecumseh - HARP

Static Depth to Water (ft)	5.95	Sample Collection Time	1015
Total Purge Volume (gal)		Purge Method	Low Flow using Peristaltic Pump and Poly Tubing
Total Depth (ft)		Sample Method	Low Flow using Peristaltic Pump and Poly Tubing
Screen Depth Interval (ft)		Water Description	HC Odor: Y (N) HC Sheen: Y / (N) Description: Clear
Pump Intake Depth (ft)		Sampling Personnel	AJ / TG

Condition of Manhole or Protective Cover	☒ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Compression Plug	☒ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Padlock	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Well Label	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft)	Drawdown (ft) < 0.3 ft	pH (SU) ± 0.1	Temp (F) ± 3%	Conductivity (u-mhos/cm) ± 3%	TDS (mg/L) ± 3%	ORP (mV) ± 10 mV	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) ± 10%
0953		0.012	6.00		7.39	54.9	730	621	173	1.03	2.92
0957			6.04		~~7.28~~ ~~6.00~~ TG	54.8	730	621	172	0.87	2.42
1001			6.07		7.28	54.7	728	619	172	0.65	1.36
1005			6.11		7.24	54.7	726	618	172	0.61	1.42
1009			6.13		7.23	54.7	726	618	172	0.69	1.36

Record measurements in units listed on form
microSiemens/cm = micromhos/cm
All depth measurements are feet below top of casing

Sample Location	TEC-4
Date	11/5/2020
Client	
Site	Tecumseh - HARP

Static Depth to Water (ft)	5.94	Sample Collection Time	1045
Total Purge Volume (gal)		Purge Method	Low Flow using Peristaltic Pump and Poly Tubing
Total Depth (ft)		Sample Method	Low Flow using Peristaltic Pump and Poly Tubing
Screen Depth Interval (ft)		Water Description	HC Odor: Y / (N) HC Sheen: Y / (N) Description: yellowish, slight
Pump Intake Depth (ft)		Sampling Personnel	AJ / TG

Condition of Manhole or Protective Cover	☒ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Compression Plug	☒ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Padlock	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Well Label	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft)	Drawdown (ft) < 0.3 ft	pH (SU) ± 0.1	Temp (F) ± 3%	Conductivity (u-mhos/cm) ± 3%	TDS (mg/L) ± 3%	ORP (mV) ± 10 mV	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) ± 10%
1024		0.12	5.99		7.16	54.4	723	618	184	~~185~~ TG	4.02
1028			6.03		7.02	54.5	723	617	190	~~190~~ TG	3.47
1032			6.03		6.97	54.6	723	616	195	5.76	2.20
1036			6.04		6.95	54.7	723	616	199	5.72	2.62
1040			6.05		6.94	54.7	723	616	203	5.66	2.53

Record measurements in units listed on form
microSiemens/cm = micromhos/cm
All depth measurements are feet below top of casing

Sample Location	MH-26
Date	11/5/2020
Client	
Site	Tecumseh - HARP

Static Depth to Water (ft)	6.28	Sample Collection Time	
Total Purge Volume (gal)		Purge Method	Low Flow using Peristaltic Pump and Poly Tubing
Total Depth (ft)		Sample Method	Low Flow using Peristaltic Pump and Poly Tubing
Screen Depth Interval (ft)		Water Description	HC Odor: **Y / N** HC Sheen: **Y / N** Description:
Pump Intake Depth (ft)		Sampling Personnel	

Condition of Manhole or Protective Cover	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Compression Plug	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Padlock	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Well Label	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft)	Drawdown (ft) < 0.3 ft	pH (SU) ± 0.1	Temp (F) ± 3%	Conductivity (u-mhos/cm) ± 3%	TDS (mg/L) ± 3%	ORP (mV) ± 10 mV	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) ± 10%
1104		0.12	6.37		7.07	52.5	626	550	209	3.07	7.50
1108			6.39		7.05	52.5	624	548	210	2.48	3.08
1112			6.39		7.04	52.5	622	547	211	2.43	3.01
1116			6.39		7.04	52.4	621	546	211	2.33	3.38
1120			6.39		7.04	52.4	620	546	211	2.26	2.71

Record measurements in units listed on form
microSiemens/cm = micromhos/cm
All depth measurements are feet below top of casing

Sample Location	MW-7
Date	11/5/2020
Client	
Site	Tecumseh - HARP

Static Depth to Water (ft)	7.83	Sample Collection Time	1205
Total Purge Volume (gal)		Purge Method	Low Flow using Peristaltic Pump and Poly Tubing
Total Depth (ft)		Sample Method	Low Flow using Peristaltic Pump and Poly Tubing
Screen Depth Interval (ft)		Water Description	HC Odor: Y /(N) HC Sheen: Y /(N) Description: Clear
Pump Intake Depth (ft)		Sampling Personnel	AJ / TG

Condition of Manhole or Protective Cover	☒ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Compression Plug	☒ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Padlock	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Well Label	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft)	Drawdown (ft) < 0.3 ft	pH (SU) ± 0.1	Temp (F) ± 3%	Conductivity (u-mhos/cm) ± 3%	TDS (mg/L) ± 3%	ORP (mV) ± 10 mV	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) ± 10%
1142		0.12	7.88		6.96	53.8	642	553	214	3.32	11.52
1146			7.90		6.90	53.9	643	553	216	3.08	8.14
1150			7.92		6.88	53.9	643	553	217	2.97	5.64
1154			7.92		6.87	54.0	643	553	218	2.96	6.77
1158			7.92		6.87	54.0	643	553	219	2.93	2.01

Record measurements in units listed on form
microSiemens/cm = micromhos/cm
All depth measurements are feet below top of casing

Sample Location	MW-E	MS / MSD
Date	11/5/2020	
Client		
Site	Tecumseh - HARP	

Static Depth to Water (ft)	6.09	Sample Collection Time	1330
Total Purge Volume (gal)		Purge Method	Low Flow using Peristaltic Pump and Poly Tubing
Total Depth (ft)		Sample Method	Low Flow using Peristaltic Pump and Poly Tubing
Screen Depth Interval (ft)		Water Description	HC Odor: Y / N HC Sheen: Y / N Description:
Pump Intake Depth (ft)		Sampling Personnel	AS / TG

Condition of Manhole or Protective Cover	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Compression Plug	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Padlock	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Well Label	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft)	Drawdown (ft) < 0.3 ft	pH (SU) ± 0.1	Temp (F) ± 3%	Conductivity (u-mhos/cm) ± 3%	TDS (mg/L) ± 3%	ORP (mV) ± 10 mV	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) ± 10%
1308		0.12	6.15		6.94	59.9	663	527	219	2.90	4.45
1312			6.18		6.88	60.0	664	527	220	1.74	6.15
1316			6.19		6.86	60.1	665	527	219	1.66	3.14
1320			6.20		6.86	60.2	666	527	218	1.49	2.97
1324			6.21		6.85	60.1	666	528	217	1.35	2.52

Record measurements in units listed on form
microSiemens/cm = micromhos/cm
All depth measurements are feet below top of casing

Sample Location	TEC-1 Dup-1
Date	11/5/2020
Client	
Site	Tecumseh - HARP

Static Depth to Water (ft)	3.78	Sample Collection Time	1410
Total Purge Volume (gal)		Purge Method	Low Flow using Peristaltic Pump and Poly Tubing
Total Depth (ft)		Sample Method	Low Flow using Peristaltic Pump and Poly Tubing
Screen Depth Interval (ft)		Water Description	HC Odor: Y / N HC Sheen: Y / N Description:
Pump Intake Depth (ft)		Sampling Personnel	AJ / TG

Condition of Manhole or Protective Cover	☐ Good	☒ Fair	☐ Poor/Requires Replacement	Comment: Casing heaved up
Condition of Compression Plug	☒ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Padlock	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Well Label	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft)	Drawdown (ft) < 0.3 ft	pH (SU) ± 0.1	Temp (F) ± 3%	Conductivity (u-mhos/cm) ± 3%	TDS (mg/L) ± 3%	ORP (mV) ± 10 mV	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) ± 10%
1351		0.12	3.97		7.52	57.2	412	340	214	4.78	3.70
1355			3.98		7.40	56.2	402	335	214	4.52	1.86
1359			3.98		7.38	56.1	400	334	214	4.46	3.40
1403			4.00		7.36	56.4	400	333	213	4.46	4.36
1407											

Record measurements in units listed on form
microSiemens/cm = micromhos/cm
All depth measurements are feet below top of casing

Sample Location	MW-8	
Date	11/5/2020	
Client		
Site	Tecumseh - HARP	

Static Depth to Water (ft)	3.03	Sample Collection Time	1440
Total Purge Volume (gal)		Purge Method	Low Flow using Peristaltic Pump and Poly Tubing
Total Depth (ft)		Sample Method	Low Flow using Peristaltic Pump and Poly Tubing
Screen Depth Interval (ft)		Water Description	HC Odor: **Y / N** HC Sheen: **Y / N** Description:
Pump Intake Depth (ft)		Sampling Personnel	AJ / TG

Condition of Manhole or Protective Cover	☐ Good	☒ Fair	☐ Poor/Requires Replacement	Comment: Partially buried
Condition of Compression Plug	☒ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Padlock	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Well Label	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft)	Drawdown (ft) < 0.3 ft	pH (SU) ± 0.1	Temp (F) ± 3%	Conductivity (u-mhos/cm) ± 3%	TDS (mg/L) ± 3%	ORP (mV) ± 10 mV	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) ± 10%
1421		0.12	3.24		7.08	57.6	468	381	-50	1.96	2.79
1425			3.27		6.94	57.1	375	309	9	1.69	2.78
1429			3.30		6.89	57.0	362	299	17	1.65	2.96
1433			3.33		6.87	56.9	352	292	52	1.65	2.71
1438			3.34		6.85	56.7	349	289	76	1.62	3.80

Record measurements in units listed on form
microSiemens/cm = micromhos/cm
All depth measurements are feet below top of casing

TRC

Sample Location	MW-5
Date	11/5/2020
Client	
Site	Tecumseh - HARP

Static Depth to Water (ft)	3.08	Sample Collection Time	1515
Total Purge Volume (gal)		Purge Method	Low Flow using Peristaltic Pump and Poly Tubing
Total Depth (ft)		Sample Method	Low Flow using Peristaltic Pump and Poly Tubing
Screen Depth Interval (ft)		Water Description	HC Odor: **Y / N** HC Sheen: **Y / N** Description:
Pump Intake Depth (ft)		Sampling Personnel	AS / TG

Condition of Manhole or Protective Cover	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Compression Plug	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Padlock	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Well Label	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft)	Drawdown (ft) < 0 3 ft	pH (SU) ± 0.1	Temp (F) ± 3%	Conductivity (u-mhos/cm) ± 3%	TDS (mg/L) ± 3%	ORP (mV) ± 10 mV	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) ± 10%
1454		0.12	3.28		6.97	57.1	512	422	167	3.21	4.74
1458			3.30		6.79	56.7	510	422	171	3.09	3.12
1502			3.32		6.76	56.4	508	422	174	3.03	3.34
1506					6.75	56.1	506	423	178	2.97	2.84

Record measurements in units listed on form
microSiemens/cm = micromhos/cm
All depth measurements are feet below top of casing

Sample Location	MW-A
Date	11/5/2020
Client	
Site	Tecumseh - HARP

Static Depth to Water (ft)	5.33	Sample Collection Time	1605
Total Purge Volume (gal)		Purge Method	Low Flow using Peristaltic Pump and Poly Tubing
Total Depth (ft)		Sample Method	Low Flow using Peristaltic Pump and Poly Tubing
Screen Depth Interval (ft)		Water Description	HC Odor: **Y / N** HC Sheen: **Y / N** Description:
Pump Intake Depth (ft)		Sampling Personnel	AJ / TG

Condition of Manhole or Protective Cover	☒ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Compression Plug	☒ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Padlock	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Well Label	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft)	Drawdown (ft) < 0.3 ft	pH (SU) ± 0.1	Temp (F) ± 3%	Conductivity (u-mhos/cm) ± 3%	TDS (mg/L) ± 3%	ORP (mV) ± 10 mV	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) ± 10%
1542		0.12	5.41		6.99	58.4	524	425	200	5.13	3.30
1546			5.44		6.95	57.8	517	421	200	4.69	3.86
1550			5.47		6.93	57.7	515	421	200	4.57	1.59
1554			5.48		6.92	57.3	513	422	201	4.50	3.06
1558			5.49		6.92	57.0	514	425	202	4.38	1.92

Record measurements in units listed on form
microSiemens/cm = micromhos/cm
All depth measurements are feet below top of casing

Sample Location	MW-B
Date	11/5/2020
Client	
Site	Tecumseh - HARP

Static Depth to Water (ft)	4.32	Sample Collection Time	1630
Total Purge Volume (gal)		Purge Method	Low Flow using Peristaltic Pump and Poly Tubing
Total Depth (ft)		Sample Method	Low Flow using Peristaltic Pump and Poly Tubing
Screen Depth Interval (ft)		Water Description	HC Odor: **Y / N** HC Sheen: **Y / N** Description:
Pump Intake Depth (ft)		Sampling Personnel	AJ / TG

Condition of Manhole or Protective Cover	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Compression Plug	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Padlock	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Well Label	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft)	Drawdown (ft) < 0.3 ft	pH (SU) ± 0.1	Temp (F) ± 3%	Conductivity (u-mhos/cm) ± 3%	TDS (mg/L) ± 3%	ORP (mV) ± 10 mV	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) ± 10%
1615		0.12	4.42		7.15	55.0	492	418	206	6.14	15.06
1619			4.47		7.03	55.0	491	417	207	4.74	17.95
1623			4.48		7.02	54.7	489	417	208	4.66	17.90
1627			4.51		7.01	54.4	487	417	210	4.62	17.18

Record measurements in units listed on form
microSiemens/cm = micromhos/cm
All depth measurements are feet below top of casing

TRC	Sample Location	MW-F
	Date	11/5/2020
	Client	
	Site	Tecumseh - HARP

Static Depth to Water (ft)	7.27	Sample Collection Time	1710
Total Purge Volume (gal)		Purge Method	Low Flow using Peristaltic Pump and Poly Tubing
Total Depth (ft)		Sample Method	Low Flow using Peristaltic Pump and Poly Tubing
Screen Depth Interval (ft)		Water Description	HC Odor: **Y / N** HC Sheen: **Y / N** Description:
Pump Intake Depth (ft)		Sampling Personnel	AJ / TG

Condition of Manhole or Protective Cover	☒ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Compression Plug	☒ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Padlock	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:
Condition of Well Label	☐ Good	☐ Fair	☐ Poor/Requires Replacement	Comment:

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft)	Drawdown (ft) < 0.3 ft	pH (SU) ± 0.1	Temp (F) ± 3%	Conductivity (u-mhos/cm) ± 3%	TDS (mg/L) ± 3%	ORP (mV) ± 10 mV	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) ± 10%
1647		0.12	7.58		6.84	54.9	676	579	202	3.87	17.30
1651			7.43		6.78	54.2	676	580	210	3.60	11.36
1655			7.45		6.76	54.1	674	579	213	3.49	5.87
1659			7.48		6.76	54.0	672	578	216	3.52	5.65

Record measurements in units listed on form
microSiemens/cm = micromhos/cm
All depth measurements are feet below top of casing

ATTACHMENT B

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

December 07, 2020

Chris Harvey
TRC Environmental
230 W. Monroe St
Suite 630
Chicago, IL 60606

RE: Project: TECUMSEH-HARP
Pace Project No.: 40217966

Dear Chris Harvey:

Enclosed are the analytical results for sample(s) received by the laboratory on November 07, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Laurie Woelfel

Laurie Woelfel
laurie.woelfel@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Tyler Gomoll, TRC Solutions
Tanner Hess, TRC

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: TECUMSEH-HARP
Pace Project No.: 40217966

Pace Analytical Services Green Bay
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: TECUMSEH-HARP
Pace Project No.: 40217966

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40217966001	**TEC-3**	Water	11/05/20 10:15	11/07/20 10:45
40217966002	**TEC-4**	Water	11/05/20 10:45	11/07/20 10:45
40217966003	**NH-26**	Water	11/05/20 11:20	11/07/20 10:45
40217966004	**NH-7**	Water	11/05/20 12:05	11/07/20 10:45
40217966005	**MW-E**	Water	11/05/20 13:30	11/07/20 10:45
40217966006	**TEC-1**	Water	11/05/20 14:10	11/07/20 10:45
40217966007	**DUP-1**	Water	11/05/20 00:00	11/07/20 10:45
40217966008	**MW-8**	Water	11/05/20 14:40	11/07/20 10:45
40217966009	**MW-5**	Water	11/05/20 15:15	11/07/20 10:45
40217966010	**MW-A**	Water	11/05/20 16:05	11/07/20 10:45
40217966011	**MW-B**	Water	11/05/20 16:30	11/07/20 10:45
40217966012	**MW-F**	Water	11/05/20 17:10	11/07/20 10:45

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: TECUMSEH-HARP
Pace Project No.: 40217966

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40217966001	**TEC-3**	EPA 6010	TXW	1	PASI-G
40217966002	**TEC-4**	EPA 6010	TXW	1	PASI-G
40217966003	**NH-26**	EPA 6010	TXW	1	PASI-G
40217966004	**NH-7**	EPA 6010	TXW	1	PASI-G
40217966005	**MW-E**	EPA 6010	TXW	1	PASI-G
40217966006	**TEC-1**	EPA 6010	TXW	1	PASI-G
40217966007	**DUP-1**	EPA 6010	TXW	1	PASI-G
40217966008	**MW-8**	EPA 6010	TXW	1	PASI-G
40217966009	**MW-5**	EPA 6010	TXW	1	PASI-G
40217966010	**MW-A**	EPA 6010	TXW	1	PASI-G
40217966011	**MW-B**	EPA 6010	TXW	1	PASI-G
40217966012	**MW-F**	EPA 6010	TXW	1	PASI-G

PASI-G = Pace Analytical Services - Green Bay

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: TECUMSEH-HARP
Pace Project No.: 40217966

Sample: TEC-3 **Lab ID: 40217966001** Collected: 11/05/20 10:15 Received: 11/07/20 10:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Chromium, Dissolved	**4560**	ug/L	10.0	2.5	1		11/09/20 20:27	7440-47-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: TECUMSEH-HARP
Pace Project No.: 40217966

Sample: TEC-4 **Lab ID: 40217966002** Collected: 11/05/20 10:45 Received: 11/07/20 10:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Chromium, Dissolved	**26100**	ug/L	10.0	2.5	1		11/09/20 20:37	7440-47-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: TECUMSEH-HARP
Pace Project No.: 40217966

Sample: NH-26 **Lab ID: 40217966003** Collected: 11/05/20 11:20 Received: 11/07/20 10:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Chromium, Dissolved	**1080**	ug/L	10.0	2.5	1		11/09/20 20:39	7440-47-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: TECUMSEH-HARP
Pace Project No.: 40217966

Sample: NH-7 **Lab ID: 40217966004** Collected: 11/05/20 12:05 Received: 11/07/20 10:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Chromium, Dissolved	**311**	ug/L	10.0	2.5	1		11/09/20 20:42	7440-47-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: TECUMSEH-HARP
Pace Project No.: 40217966

Sample: MW-E **Lab ID: 40217966005** Collected: 11/05/20 13:30 Received: 11/07/20 10:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Chromium, Dissolved	**1420**	ug/L	10.0	2.5	1		11/09/20 20:17	7440-47-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: TECUMSEH-HARP
Pace Project No.: 40217966

Sample: TEC-1 **Lab ID: 40217966006** Collected: 11/05/20 14:10 Received: 11/07/20 10:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Chromium, Dissolved	**318**	ug/L	10.0	2.5	1		11/09/20 20:44	7440-47-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: TECUMSEH-HARP
Pace Project No.: 40217966

Sample: DUP-1 **Lab ID: 40217966007** Collected: 11/05/20 00:00 Received: 11/07/20 10:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Chromium, Dissolved	**319**	ug/L	10.0	2.5	1		11/09/20 20:47	7440-47-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: TECUMSEH-HARP
Pace Project No.: 40217966

Sample: MW-8 **Lab ID: 40217966008** Collected: 11/05/20 14:40 Received: 11/07/20 10:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Chromium, Dissolved	**5.0J**	ug/L	10.0	2.5	1		11/09/20 20:49	7440-47-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: TECUMSEH-HARP
Pace Project No.: 40217966

Sample: MW-5 **Lab ID: 40217966009** Collected: 11/05/20 15:15 Received: 11/07/20 10:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Chromium, Dissolved	**102**	ug/L	10.0	2.5	1		11/09/20 20:51	7440-47-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: TECUMSEH-HARP
Pace Project No.: 40217966

Sample: MW-A **Lab ID: 40217966010** Collected: 11/05/20 16:05 Received: 11/07/20 10:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Chromium, Dissolved	**779**	ug/L	10.0	2.5	1		11/09/20 20:54	7440-47-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: TECUMSEH-HARP
Pace Project No.: 40217966

Sample: MW-B **Lab ID: 40217966011** Collected: 11/05/20 16:30 Received: 11/07/20 10:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Chromium, Dissolved	**73.3**	ug/L	10.0	2.5	1		11/09/20 20:56	7440-47-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: TECUMSEH-HARP
Pace Project No.: 40217966

Sample: MW-F **Lab ID: 40217966012** Collected: 11/05/20 17:10 Received: 11/07/20 10:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Pace Analytical Services - Green Bay								
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		11/09/20 21:04	7440-47-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: TECUMSEH-HARP
Pace Project No.: 40217966

QC Batch: 370698 — Analysis Method: EPA 6010
QC Batch Method: EPA 6010 — Analysis Description: ICP Metals, Trace, Dissolved
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40217966001, 40217966002, 40217966003, 40217966004, 40217966005, 40217966006, 40217966007, 40217966008, 40217966009, 40217966010, 40217966011, 40217966012

METHOD BLANK: 2143712 — Matrix: Water
Associated Lab Samples: 40217966001, 40217966002, 40217966003, 40217966004, 40217966005, 40217966006, 40217966007, 40217966008, 40217966009, 40217966010, 40217966011, 40217966012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium, Dissolved	ug/L	<2.5	10.0	11/09/20 20:13	

LABORATORY CONTROL SAMPLE: 2143713

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Dissolved	ug/L	500	496	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2143715 2143716

Parameter	Units	40217966005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium, Dissolved	ug/L	1420	500	500	1910	1900	98	95	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: TECUMSEH-HARP
Pace Project No.: 40217966

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TECUMSEH-HARP
Pace Project No.: 40217966

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40217966001	**TEC-3**	EPA 6010	370698		
40217966002	**TEC-4**	EPA 6010	370698		
40217966003	**NH-26**	EPA 6010	370698		
40217966004	**NH-7**	EPA 6010	370698		
40217966005	**MW-E**	EPA 6010	370698		
40217966006	**TEC-1**	EPA 6010	370698		
40217966007	**DUP-1**	EPA 6010	370698		
40217966008	**MW-8**	EPA 6010	370698		
40217966009	**MW-5**	EPA 6010	370698		
40217966010	**MW-A**	EPA 6010	370698		
40217966011	**MW-B**	EPA 6010	370698		
40217966012	**MW-F**	EPA 6010	370698		

Pace Analytical
www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 **WI:** 920-469-2436

Page 1 of 1

CHAIN OF CUSTODY

(Please Print Clearly)	
Company Name:	TRC
Branch/Location:	Chicago
Project Contact:	Tyler Gronell
Phone:	847-871-3000
Project Number:	
Project Name:	Tecumseh - HARP
Project State:	WI
Sampled By (Print):	Tyler Gronell
Sampled By (Sign):	
PO #:	Regulatory Program:

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☒ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
Sl = Sludge	WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: Dissolved Cl	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	TEC-3	11/5/20	1015	GW		Y / D	X			
002	TEC-4		1045				X			
003	NH-26		1120				X			
004	NH-7		1205				X			
005	MW-E		1330				X			
~~006~~	MS/MSD		1330				X			
006	TEC-1		1410				X			
007	Dup-1		—				X			
008	MW-8		1440				X			
009	MW-5		1515				X			
010	MW-A		1605				X			
011	MW-B		1630				X			
012	MW-F	—	1710				X			

11/7/20 SRK

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Tyler Gronell	11/6/20 1140		
Fed Ex	11/7/20 0845	Sam Klopp Pace	11/7/20 0845

PACE Project No.
Receipt Temp = N/A °C
Sample Receipt pH
(OK) / Adjusted
Cooler Custody Seal
(Present) / Not Present
(Intact) / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Sample Preservation Receipt Form

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Client Name: TRC Project # Y0217966

All containers needing preservation have been checked and noted below: ☒Yes ☐No ☐N/A

Initial when completed: SRK Date/ Time: 11/7/20

Lab Lot# of pH paper: 10D4194 Lab Std #ID of preservation (if pH adjusted):

Pace Lab #	Glass								Plastic					Vials						Jars				General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN							
001												1																			X		2.5 / 5 / 10
002												1																			X		2.5 / 5 / 10
003												1																			X		2.5 / 5 / 10
004												1																			X		2.5 / 5 / 10
005												3																			X		2.5 / 5 / 10
006												1																			X		2.5 / 5 / 10
007												1																			X		2.5 / 5 / 10
008												1																			X		2.5 / 5 / 10
009												1																			X		2.5 / 5 / 10
010												1																			X		2.5 / 5 / 10
011												1																			X		2.5 / 5 / 10
012												1																			X		2.5 / 5 / 10
013																																	2.5 / 5 / 10
014																																	2.5 / 5 / 10
015																																	2.5 / 5 / 10
016																																	2.5 / 5 / 10
017																																	2.5 / 5 / 10
018																																	2.5 / 5 / 10
019																									11/7/20 SRK								2.5 / 5 / 10
020																																	2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:_____ Headspace in VOA Vials (>6mm) : ☐Yes ☐No ☒N/A ***If yes look in headspace column**

AG1U	1 liter amber glass
BG1U	1 liter clear glass
AG1H	1 liter amber glass HCL
AG4S	125 mL amber glass H2SO4
AG4U	120 mL amber glass unpres
AG5U	100 mL amber glass unpres
AG2S	500 mL amber glass H2SO4
BG3U	250 mL clear glass unpres

BP1U	1 liter plastic unpres
BP3U	250 mL plastic unpres
BP3B	250 mL plastic NaOH
BP3N	250 mL plastic HNO3
BP3S	250 mL plastic H2SO4

VG9A	40 mL clear ascorbic
DG9T	40 mL amber Na Thio
VG9U	40 mL clear vial unpres
VG9H	40 mL clear vial HCL
VG9M	40 mL clear vial MeOH
VG9D	40 mL clear vial DI

JGFU	4 oz amber jar unpres
JG9U	9 oz amber jar unpres
WGFU	4 oz clear jar unpres
WPFU	4 oz plastic jar unpres
SP5T	120 mL plastic Na Thiosulfate
ZPLC	ziploc bag
GN	

Pace Analytical® 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 26Mar2020
	Document No.: ENV-FRM-GBAY-0014-Rev.00	Author: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO#: 40217966

40217966

Client Name: TRC

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco ☐ Client ☐ Pace Other:

Tracking #: 8152 5165 2417

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Thermometer Used SR - N/A **Type of Ice:** Wet Blue Dry (None) ☐ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: N/A /Corr:

Temp Blank Present: ☐ yes ☒ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:
Date: 11/7/20 /Initials: SRK

Labeled By Initials:

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☐Yes ☒No ☐N/A	2. Proj. #, mail/invoice info. 11/7/20 SRK
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☒No	6.
Rush Turn Around Time Requested:	☐Yes ☒No	7.
Sufficient Volume: For Analysis: ☒Yes ☐No MS/MSD:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No	9.
-Pace Containers Used:	☐Yes ☒No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☒N/A	
Containers Intact:	☒Yes ☐No	10.
Filtered volume received for Dissolved tests	☒Yes ☐No ☐N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
Trip Blank Present:	☐Yes ☐No ☒N/A	13.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

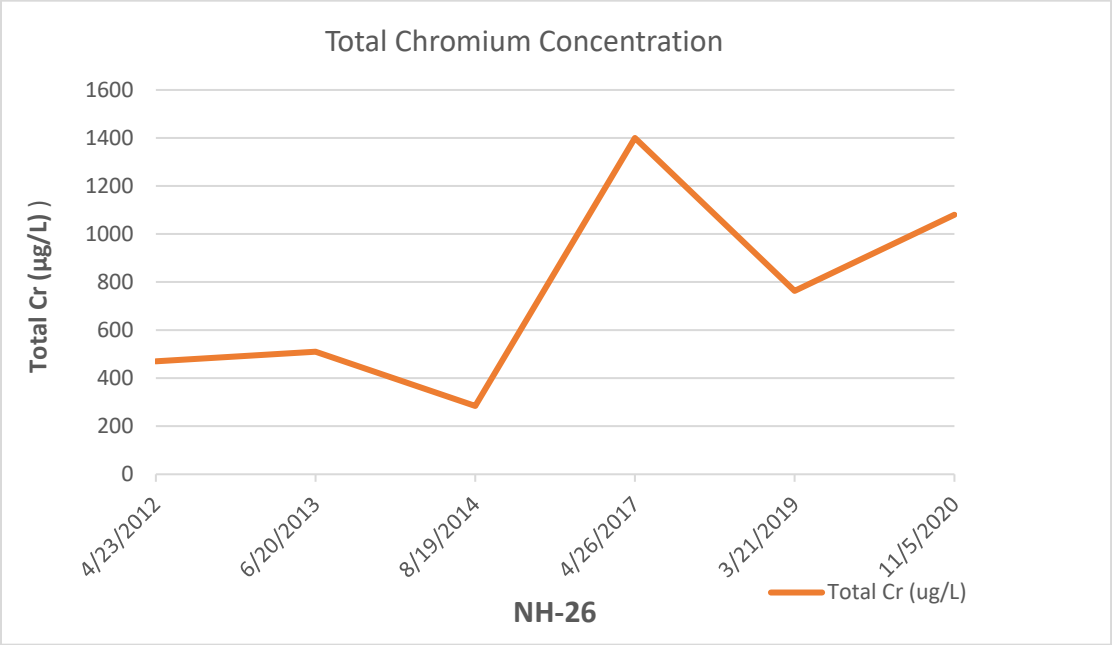
Comments/ Resolution:

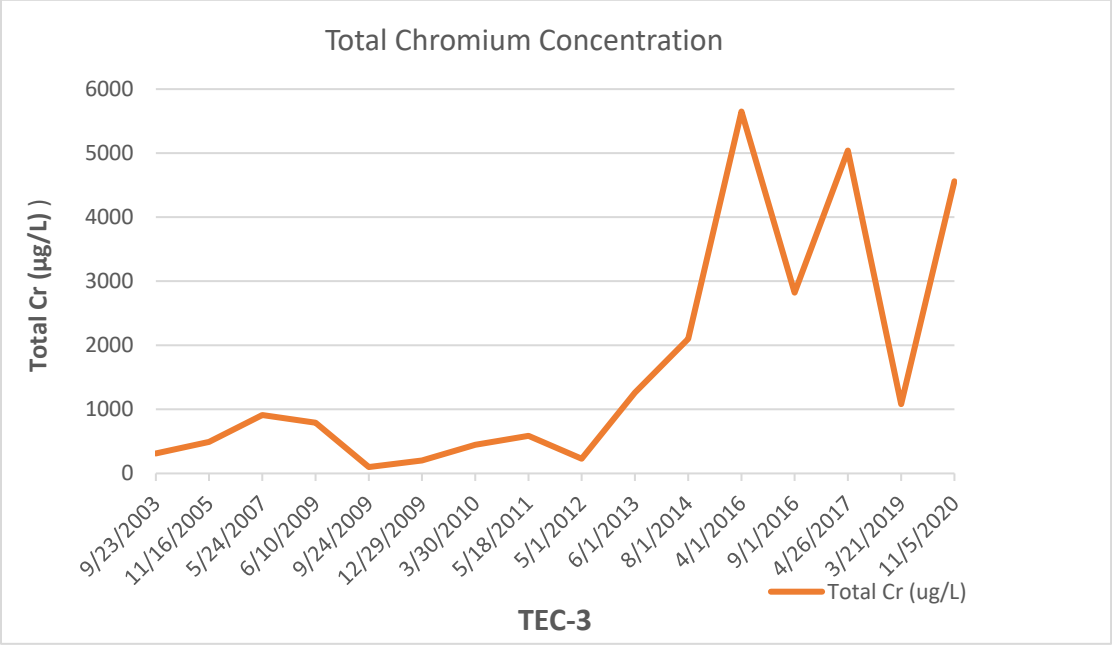
PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir

ATTACHMENT C

Attachment C – Trend Analysis Charts

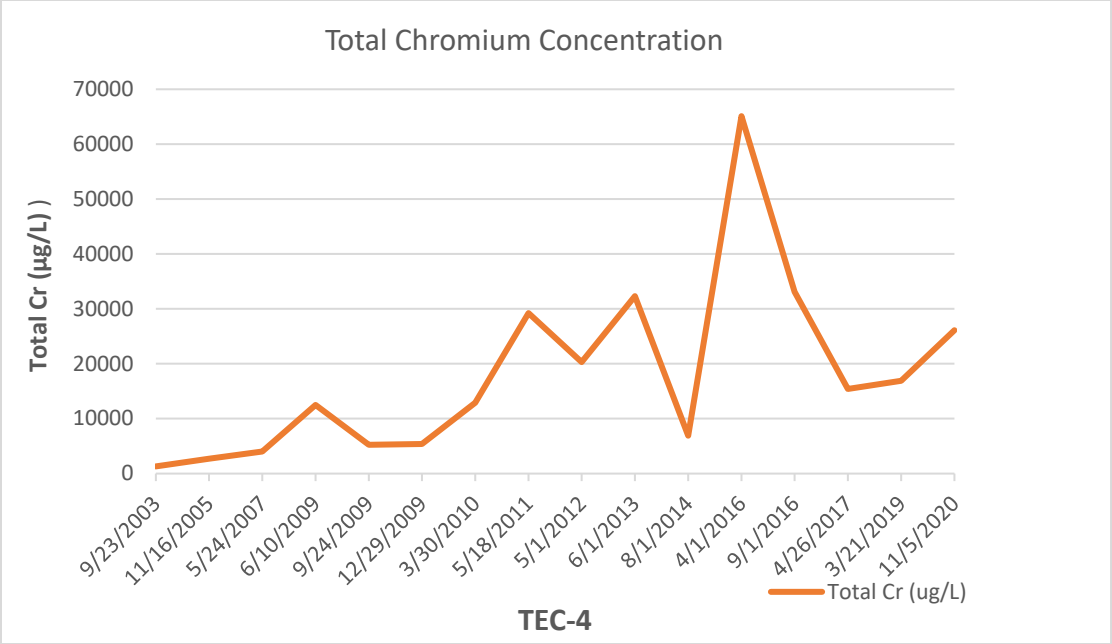
Source Area Monitoring Wells



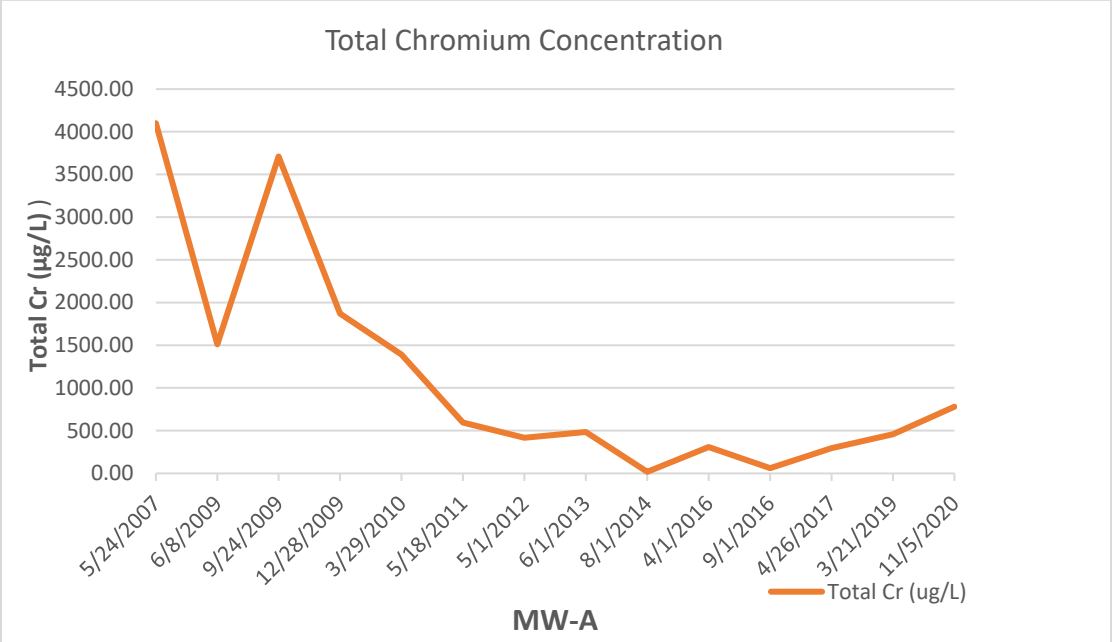


Trends depict sample date verses chromium concentration in micrograms per liter (ug/L)

Attachment C – Trend Analysis Charts

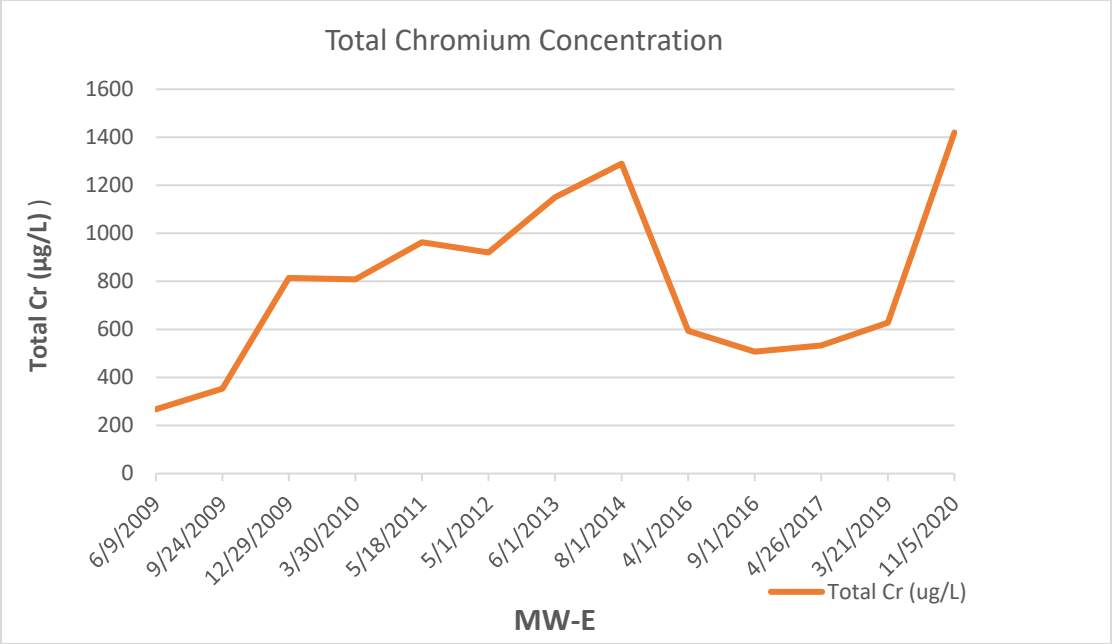


Down-gradient - Southwest

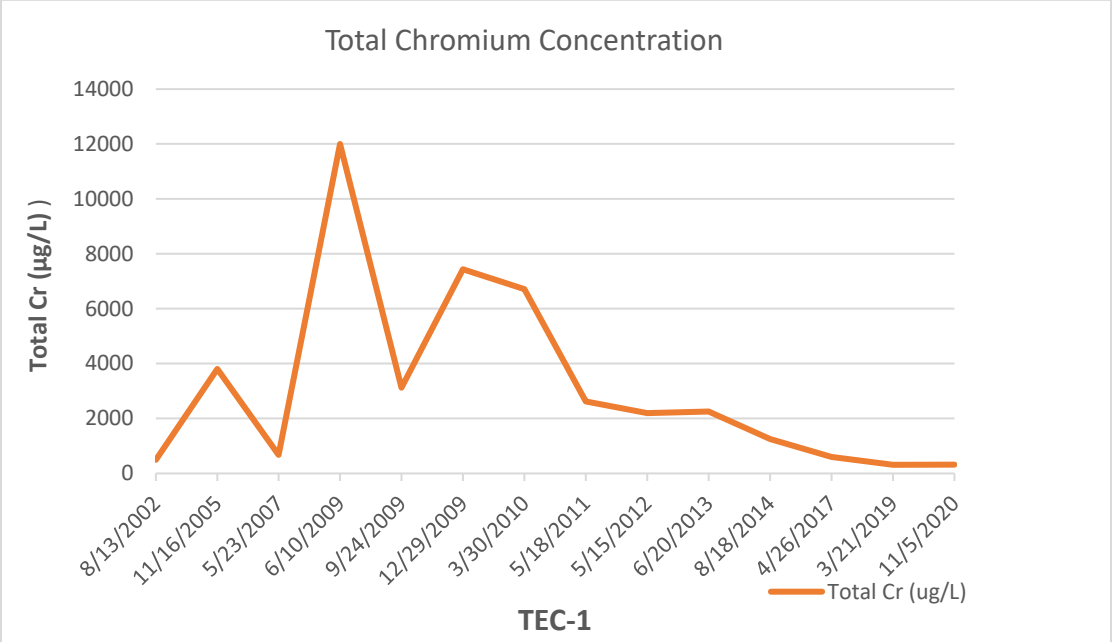


Trends depict sample date verses chromium concentration in micrograms per liter (ug/L)

Attachment C – Trend Analysis Charts



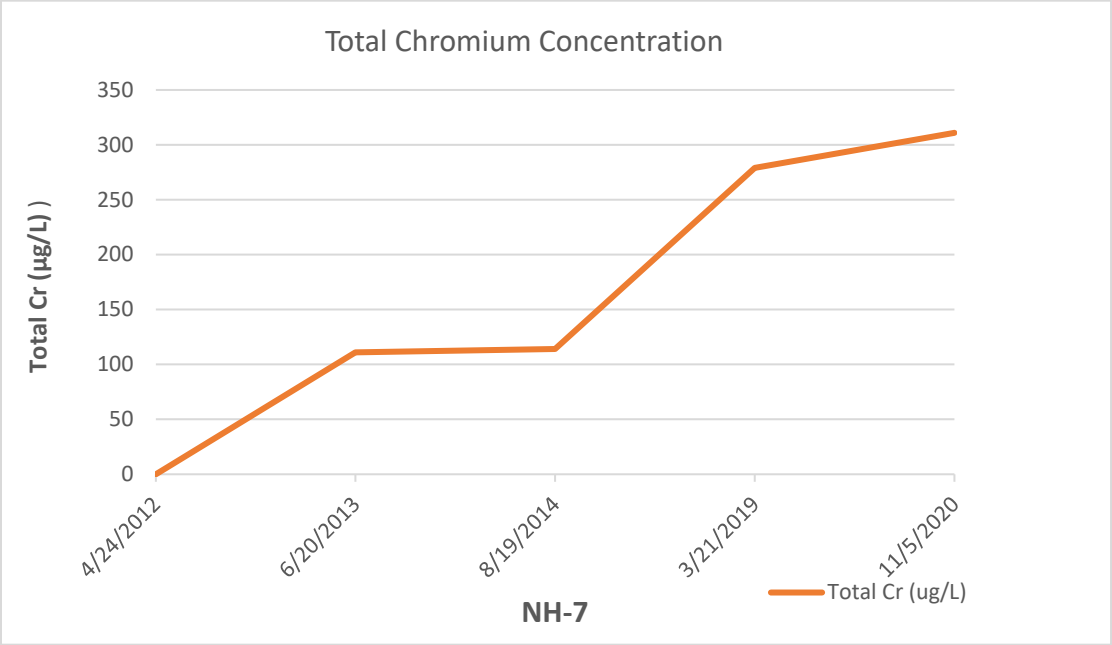
Down-gradient – West



Trends depict sample date verses chromium concentration in micrograms per liter (ug/L)

Attachment C – Trend Analysis Charts

Down-gradient - Northwest



Trends depict sample date verses chromium concentration in micrograms per liter (ug/L)