

From: Harvey, Christopher <CHarvey@trccompanies.com>
Sent: Thursday, July 22, 2021 4:04 PM
To: McKnight, Kevin - DNR
Cc: Haas, David J - DNR; Phelps, William L - DNR; Austin, Brian P - DNR; Smith, Jason
Subject: RE: [EXTERNAL] Tecumseh Products Company (02-08-363333) Remedial Action Approval and Injection/Infiltration Permit
Attachments: 07.22.2021_Tecumseh Products Remedial Action Design Report Review_BRRTS 02-08-363333.pdf; 07.22.2021_Tecumseh Products Infiltration Injection Temporary Exemption Request_BRRTS 02-08-363333.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Kevin,

Thank you for providing the review and approval of the Remedial Action Design Report and for providing the temporary exemption for the injection of a remedial material in groundwater. TRC is providing the attached responses to reconsider a couple of the recommendations and monitoring requirements.

Please let me know if you have any questions or comments.

Thank you,
Chris

-----Original Message-----

From: McKnight, Kevin - DNR <Kevin.McKnight@wisconsin.gov>
Sent: Friday, July 2, 2021 9:47 AM
To: Smith, Jason <jason.smith@tecumseh.com>
Cc: Harvey, Christopher <CHarvey@trccompanies.com>; Haas, David J - DNR <David.Haas@wisconsin.gov>; Phelps, William L - DNR <William.Phelps@wisconsin.gov>; Austin, Brian P - DNR <Brian.Austin@wisconsin.gov>
Subject: [EXTERNAL] Tecumseh Products Company (02-08-363333) Remedial Action Approval and Injection/Infiltration Permit

This is an EXTERNAL email. Do not click links or open attachments unless you validate the sender and know the content is safe.

Mr. Smith,

Attached are the Remedial Action Plan and Injection/Infiltration approvals for this site. Please contact me with any questions.

Regards,

Kevin

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<https://nam10.safelinks.protection.outlook.com/?url=http%3A%2F%2Fdnr.wi.gov%2Fcustomersurvey&data=04%7C01%7CCharvey%40trccompanies.com%7Cd83639ac0cb447478cb908d93d684385%7C543eaf7b7e0d4076a34d1fc8cc20e5bb%7C0%7C0%7C637608340580056954%7CUnknown%7CTWFpbGZsb3d8eyJWljojMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IjEhaWwiLCJXVCi6Mn0%3D%7C1000&sdta=zW%2B10Yql3yZruLrLTFcF2bRRLiQB4aXOhlt8lo6hZWo%3D&reserved=0> to evaluate how I did.

Kevin D. McKnight

Hydrogeologist - Remediation and Redevelopment Program Wisconsin Department of Natural Resources

Oshkosh Service Center

625 E CTY Y, Suite 700

Oshkosh WI 54901

Phone: 920-808-0170 (This is the number you should use to contact me from this point forward)

Kevin.McKnight@wisconsin.gov

dnr.wi.gov

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July 22, 2021

[sent electronically]

Kevin McKnight
Hydrogeologist/Project Manager
Remediation & Redevelopment Program
Wisconsin Department of Natural Resources
Oshkosh Service Center
625 E Cth Y, Suite 700
Oshkosh, WI 54901

**Subject: Infiltration/Injection Temporary Exemption Request
Tecumseh Products Co – New Holstein, 1604 Michigan Ave, New Holstein
BRRS 02-08-363333
WPDES Permit Site ID (FIN): 77951**

Dear Mr. McKnight:

Thank you for providing the temporary exemption for the injection of a remedial material in groundwater for the above-referenced Site. Tecumseh Products Company (“Tecumseh”) and TRC Environmental Corporation (“TRC”) received the temporary exemption dated July 2, 2021. TRC is providing this response to address and reconsider two of the monitoring conditions. The monitoring conditions with TRC’s response are provided below.

2. That baseline monitoring be performed prior to the first injection event, for the following groundwater parameters, at the following wells:

We do not believe that a baseline groundwater monitoring event is warranted. The last groundwater monitoring event was completed in November 2020, which will be approximately 10 months prior to the anticipated injection. There has been 15+ years of quarterly and annual groundwater monitoring. Based on the evaluation of recent groundwater data, the overall extent of the dissolved contaminant plume remains relatively stable with minor fluctuations. The groundwater conditions are well established and understood. Completing a groundwater monitoring event in late summer 2021 would be redundant and would not provide different results than what we have now and what we would expect. Therefore, a baseline groundwater event prior to injection is unnecessary.

3. That after completion of the injection phase of the remedial action (between 30 to 40 days), all monitoring wells be sampled for the parameters listed in #2.a.

We request that the first post-remedial groundwater sampling be performed approximately 6 months after the initial injections. This time period is based on the low groundwater seepage velocity of the unconsolidated glacial deposits. As presented in the October 2019 *Remedial Action Options Report* (RAOR), the average linear groundwater flow velocity in the unconsolidated glacial deposits is approximately 2.5 feet per year. We believe that sampling groundwater 30 to 40 days after the injection is too soon to provide meaningful groundwater results. Because the injection borings will be placed at approximate 12 foot spacing, we believe that sampling groundwater at least 6 months after the injection will allow advection and dispersion to better distribute the reagent between borings in the treatment area, which could be observed at the monitoring wells at that time.

Mr. Kevin McKnight
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Thank you for your consideration of our requests. If you have any questions, please contact me at 312.800.5910 or via e-mail at charvey@trccompanies.com.

Sincerely,

TRC



Chris Harvey, PE
Principal

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



July 22, 2021

[sent electronically]

Kevin McKnight
Hydrogeologist/Project Manager
Remediation & Redevelopment Program
Wisconsin Department of Natural Resources
Oshkosh Service Center
625 E Cth Y, Suite 700
Oshkosh, WI 54901

**Subject: Remedial Action Design Report Review
Tecumseh Products Co – New Holstein, 1604 Michigan Ave, New Holstein
BRRTS 02-08-363333**

Dear Mr. McKnight:

Thank you for providing the review and approval of the *Remedial Action Design Report*, dated May 4, 2021, for the above-referenced Site. Tecumseh Products Company (“Tecumseh”) and TRC Environmental Corporation (“TRC”) received the review with comments and recommendations, dated July 2, 2021. TRC is providing this response to address and reconsider two of the recommendations. The recommendations with TRC’s response are provided below.

Pre-remediation soil samples should be collected in the northern plating line treatment zone.

We do not believe that additional soil sampling in the former northern plating line area is warranted for the following reasons. There are three soil borings near the former northern plating line area (see attached figure). These soil borings had no results above the NR 720 screening levels for chromium or lead (see the attached analytical summary table). In addition, the purpose of the proposed supplement remedy is to address the residual chromium impacts in groundwater. TRC’s approved remedy does include soil mixing in the unconsolidated soil to address groundwater, targeting potential groundwater fluctuation zones. The approved soil performance standard (SPS) addresses any residual soil impacts, including residual soil impacts for other incidents.

Because soil will be fully mixed in both former plating lines from ground surface to approximately six feet below ground surface (bgs), the approximate deeper depth of the groundwater table, there will be no way to compare results at pre-and post-remedial soil sampling locations. The depth to groundwater at the wells near this area were last measured to be between 2.98 and 6.28 ft bgs. Therefore, pre-remedial soil sampling is unnecessary.

A post-remedial soil sampling plan is required to evaluate the effectiveness of the remedial Action in the shallow unsaturated soil beneath the cap in the soil mixing areas.

We do not believe that a post-remedial soil sampling is warranted. Again, because soil will be fully mixed in both former plating lines from ground surface to approximately six feet bgs, the approximate deeper depth of the groundwater table, there will be no way to compare results at pre-and post-remedial soil sampling locations. There will also be residual reagents in the post-remedial soils that are designed to chemically and biologically reduce the hexavalent chromium to trivalent chromium. While this is an intentional part of the groundwater treatment, it will confound the chemical analyses. In addition, as part of the approved SPS, a cap exists and will be replaced over the former plating lines to reduce/eliminate infiltration through the soil

Mr. Kevin McKnight
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beneath the former plating lines. The cap eliminates potential direct contact exposure, which means that a comparison of soil concentrations to direct contact standards is not warranted. Therefore, pre-remedial and/or post-remedial soil sampling is unnecessary.

Thank you for your consideration of our recommendations. If you have any questions, please contact me at 312.800.5910 or via e-mail at charvey@trccompanies.com.

Sincerely,

TRC



Chris Harvey, PE
Principal

Attachments

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

Table – Soil Sampling Results Summary

**Table 1: Soil Sampling Results Summary
 Tecumseh Products Company (BRRTS# 02-08-3633333)
 New Holstein, Calumet County, Wisconsin**

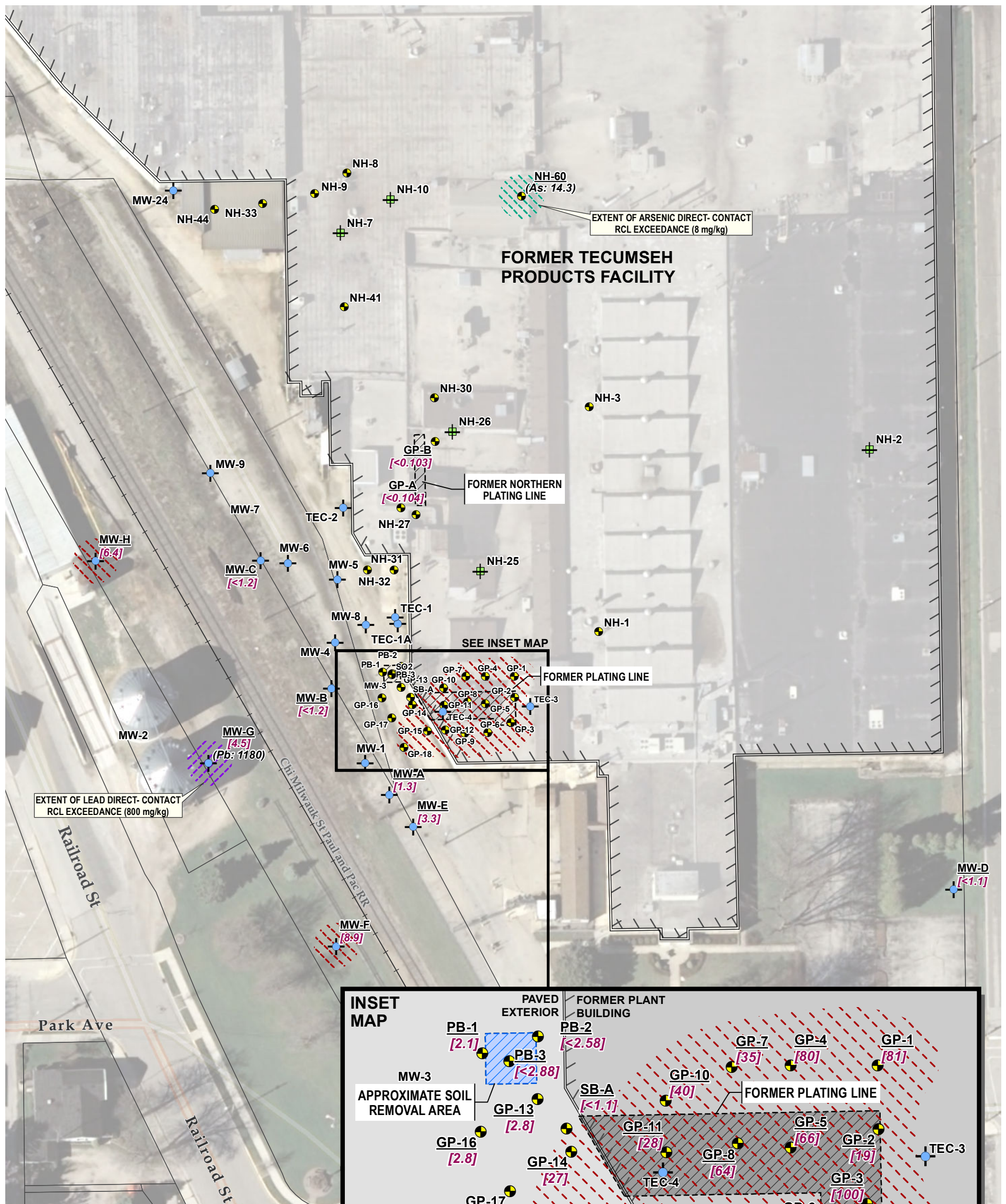
Sample ID	GP-A	GP-A	GP-A	GP-A	GP-A	GP-B	GP-B	GP-B	NH-SB-GP27
Sample Depth (ft)	0-2	2-4	4-6	6-8	8-10	0-2	2-4	4-6	8-10
Sample Date	4/7/2010	4/7/2010	4/7/2010	4/7/2010	4/7/2010	4/7/2010	4/7/2010	4/7/2010	3/12/2012
Data Source	TRC	TRC	TRC	TRC	TRC	TRC	TRC	TRC	REL
Year of Source Report	2010	2010	2010	2010	2010	2010	2010	2010	2012
Metals (mg/kg)									
Chromium	--	17.2	574	110	402	18.2	17.7	18	36.4
Chromium (VI)	--	<0.104	<0.064	<0.051	<0.051	<0.051	<0.051	<0.051	--
Chromium (III)	--	--	--	--	--	--	--	--	--
Lead	--	3.7	10.2	9.4	8.2	5.6	6.3	20.1	10.3

Notes:

1. mg/kg = milligrams per kilogram (ppm)
2. -- = Not analyzed

Created By: B. Wachholz 7/16/2021

Figure – Soil Map



EXTENT OF LEAD DIRECT- CONTACT RCL EXCEEDANCE (800 mg/kg)

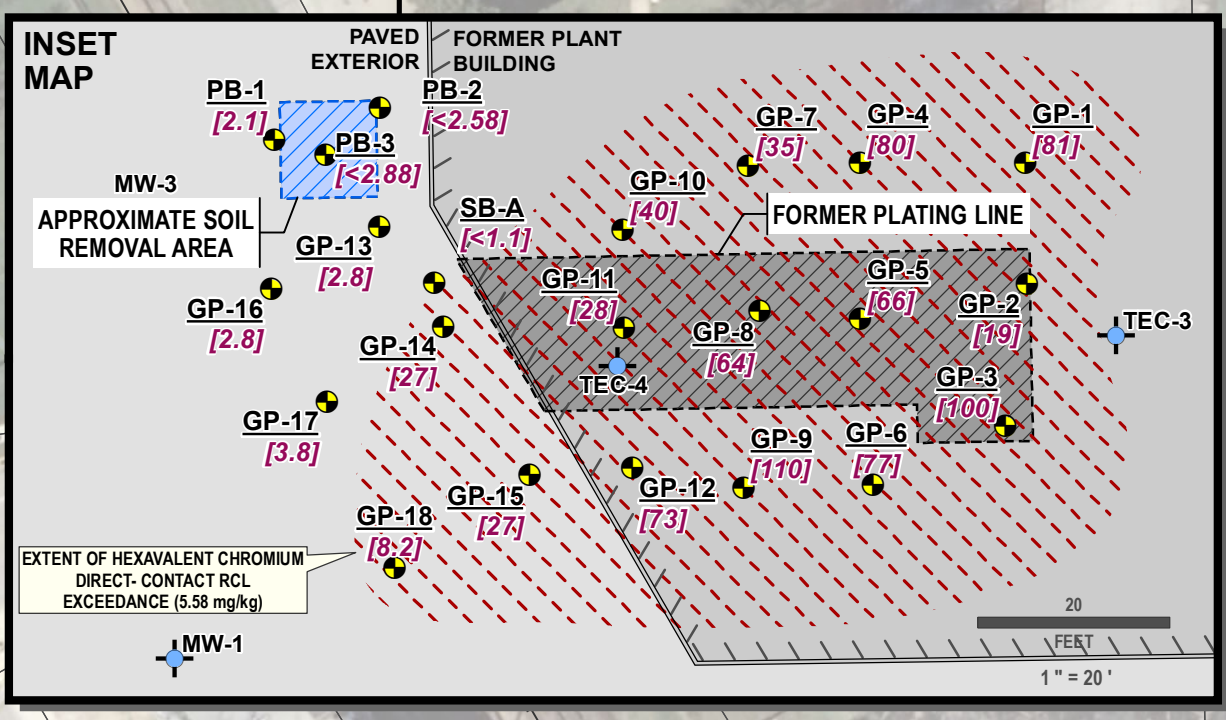
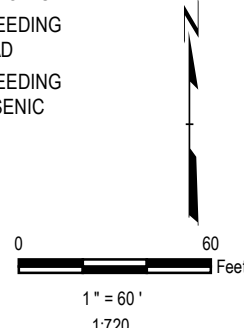
EXTENT OF ARSENIC DIRECT- CONTACT RCL EXCEEDANCE (8 mg/kg)

EXTENT OF HEXAVALENT CHROMIUM DIRECT- CONTACT RCL EXCEEDANCE (5.58 mg/kg)

- NOTES**
1. BASE MAP IMAGERY FROM CALUMET COUNTY, SPRING 2010.
 2. THE INDUSTRIAL DIRECT-CONTACT RCL FOR CHROMIUM IS 5.58 mg/kg.
 3. THE INDUSTRIAL DIRECT-CONTACT RCL FOR LEAD IS 800 mg/kg.
 4. SURFACE SAMPLE "SO2" EXCEEDED THE USEPA CHARACTERISTIC TOXICITY LEVEL OF 5 mg/L, THUS THE AREA AROUND "SO2" WAS EXCAVATED AND DISPOSED.

- LEGEND**
- PARCEL BOUNDARY
 - BUILDING
 - SAMPLE LOCATIONS
 - MONITORING WELL (TRC)
 - MONITORING WELL (R.E. LEE)
 - SOIL BORING
 - [6.4] HEXAVALENT CHROMIUM CONCENTRATION IN UNSATURATED SOIL (mg/kg)
 - (As: 14.3) OTHER PARAMETER EXCEEDING RCL
 - SOIL EXCAVATION AREA (CLEAN BACKFILL)

- APPROXIMATE EXTENT OF SOIL EXCEEDING DIRECT-CONTACT RCL FOR CHROMIUM
- APPROX. EXTENT OF SOIL EXCEEDING DIRECT CONTACT RCL FOR LEAD
- APPROX. EXTENT OF SOIL EXCEEDING DIRECT CONTACT RCL FOR ARSENIC



PROJECT: BRRTS #02-08-36333		TECUMSEH PRODUCTS CO. (FORMER) - CHROMIUM LINE NEW HOLSTEIN, WISCONSIN	
SHEET TITLE: SOIL MAP			
DRAWN BY: J. PAPEZ	SCALE: 1:720	PROJ. NO. 107927-200-9300	FIGURE 4
CHECKED BY: C. HARVEY	DATE PRINTED:	FILE NO. 107927-200-015.mxd	
APPROVED BY: C. HARVEY	DATE: OCTOBER 2019		



708 Heartland Trail, Suite 3000
Madison, WI 53717
Phone: 608.826.3600
www.trcsolutions.com