August 19, 2024

Attn: Mr. Phillip Richard 875 South Fourth Avenue Park Falls, WI 54552

Wisconsin Department of Natural Resources





Subject:

Monitored Natural Attenuation Sampling Plan **Phillips Plating Corporation** 984 N Lake Avenue Phillips, Wisconsin 54555 BRRTS#: 02-51-559634

Dear Mr. Richards:

Enclosed is a Monitored Natural Attenuation Sampling Plan summarizing the proposed sample parameters and frequency for the above referenced site. This report is intended to satisfy the required work plan submittal in the WDNR's Technical Assistance Request letter dated April 22, 2024. The sampling plan summaries REI proposed reduced sampling frequency for select monitoring points and initial locations for collection of PFAS samples.

Please call me if you have questions or comments at (715) 675-9784 or email me at Mmichalski@REIengineering.com.

Sincerely, **REI Engineering**, Inc.

latthew C. Michaldu

Matthew Michalski, P.G. Hydrogeologist

Phillips Platting Corporation, Attn: Darin Baratka (e-copy) cc:





MONITORED NATURAL ATTENUATION SAMPLING PLAN

PHILLIPS PLATING CORPORATION 984 N LAVE AVENUE PHILLIPS, WI 54555 BRRTS #02-51-559634 REI PROJECT #6134B

COMPREHENSIVE SERVICES WITH PRACTICAL SOLUTIONS

MONITORED NATURAL ATTENUATION SAMPLING PLAN

PHILLIPS PLATTING CORPORATION 984 N LAKE AVENUE PHILLIPS, WI 54555 BRRTS #02-51-559634

REI PROJECT #6134B



PREPARED FOR:

Phillips Platting Corporation Attn: Darin Baratka 984 N Lake Avenue Phillips, WI 54555

AUGUST 2024

MONITORED NATURAL ATTENUATION SAMPLING PLAN

WISCONSIN ADMINISTRATIVE CODE CHAPTER NR712 CERTIFICATIONS

The recommendations contained in this report are based on the information obtained from our study of the site and were arrived at in accordance with accepted hydrogeologic and engineering practices at this time and location.

"I, Matthew C. Michalski, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Matthew C. Micharlan

Hydrogeologist

<u>8/19/2024</u> Date

"I, Ken J. Lassa, hereby certify that I am a scientist as that term is defined in s. NR 712.03 (3), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

famero los

Senior Consultant/Vice President

<u>8/19/2024</u> Date

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MONITORED NATURAL ATTENUATION SAMPLING PLAN

PHILLIPS PLATTING CORPORATION 984 N LAKE AVENUE PHILLIPS, WI 54555 BRRTS #02-51-559634

REI PROJECT #6134B

1.0 INTRODUCTION

The subject property has been historically, since 1969, and is currently utilized for metallic plating on plastic parts. The facility utilizes acids, metal chlorides, and other chemicals in the plating process. Acids, chlorides and other chemicals are stored inside the building in plastic and steel drums. Historically, six (6) underground storage tanks (USTs) were located inside the building, beneath the concrete floor ranging in size from 500 to 5,500 gallons. The historic USTs were utilized in the facilities wastewater stream.

Since identification of the release, Phillips Plating has replaced or upgraded all process water tanks and piping by adding secondary containment, additionally the facility has removed Underground Storage Tanks (USTs) associated with the wastewater process system and replacing with Aboveground Storage Tanks (ASTs). The flooring beneath the plating machines was recoated with chemical resistant epoxy to prevent migration of materials. Therefore, it is believed that there are no additional leaks or ongoing sources of contamination entering the local environment.

REI submitted the Site Investigation Report / Remedial Action Plan on October 30, 2013. REI presented three (3) alternatives as a part of the Remedial Action Plan including source excavation, chemical injection, and long-term groundwater monitoring for natural attenuation. Groundwater monitoring for natural attenuation was selected due to the limited ability to access the impacted source areas beneath the onsite structure and additional limitations accessing contamination located beneath State Highway 13 and a railroad right-of-way along the northeast side of State Highway 13. Site Update reports summarizing results of the ongoing monitoring natural attenuation results have been submitted to the WDNR on January 24, 2013; March 13, 2013; October 14, 2014; January 19, 2017; December 29, 2017;



September 4, 2018; September 5, 2019; December 6, 2021; April 19, 2022; May 26, 2023; and February 20, 2024. These reports conclude that groundwater contamination originating from the Phillips Plating former wastewater process system remains on the subject property and has migrated onto off-site properties.

The February 20, 2024 annual Site Update Report was submitted with a Technical Assistance Request for WDNR review of the report and comment on the following sections:

- Completeness of Emerging Contaminant Statement
- Verification that the degree and extent of contamination has been adequately defined.
- A pathway to case closure based on the overall stable to decreasing contaminant concentrations trends.

On April 22, 2024, the WDNR provided a formal response requiring the following:

- Sampling Per- and Polyfluorinated Substances (PFAS) compounds at the site collected at/near the source area from select wells.
- Information on utilities located on the subject property and State Highway 13.
- A sampling plan for continued groundwater monitoring of the well network, however reduction of the number and/or frequency of the wells sampled may be appropriate.
- Submittal of a work plan for future groundwater monitoring for compounds currently sampled and PFAS by May 30, 2024.

2.0 BACKGROUND INFORMATION AND SCOPE OF WORK

2.1 Purpose of Report

The purpose of this report is to summarize the results of the site investigation pursuant to the requirements of Wisconsin Administrative Code (WAC) Chapter NR716. The primary goal of the site investigation was to define the degree and extent of contamination associated with stained soils identified on the subject property adjacent to a petroleum loading rack.

Monitoring Natural Attenuation Sampling Plan Phillips Platting Corporation August 2024



2.2 General Information

2.2.1 Responsible Party

Phillips Plating Corporation Attn: Darin Baratka 984 N Lake Avenue Phillips, WI 54555

2.2.2 Environmental Consulting Firm

REI Engineering, Inc. Attn: Matthew C. Michalski 4080 North 20th Avenue Wausau, Wisconsin 54401 Phone (715) 675-9784

2.2.3 Regulatory Contact

Wisconsin Department of Natural Resources Remediation and Redevelopment Program Attn: Mr. Phillips Richards Park Falls Office 875 South Fourth Avenue Park Falls, WI 54552

2.2.4 Site Name and Location

<u>Site Name & Address:</u> Phillips Plating Corporation 984 N Lake Avenue Phillips, WI 54555

Facility ID: 851030070

Public Land Survey System:

Part of the Northwest Quarter (NW $\frac{1}{4}$) of the Southwest Quarter (SW $\frac{1}{4}$) in Section Seven (07), Township Thirty-seven North (37N), Range One East (01E), City of Phillips, Price County, Wisconsin.



<u>WTM Coordinates:</u> Easting: 487,879.8 Northing: 580,717.0

<u>Latitude & Longitude:</u> Latitude: 45° 41' 57.34" N Longitude: 90° 24' 45.31" W

2.3 Site Background

The subject property has been historically, since 1969, and is currently utilized for metallic plating on plastic parts. The facility utilizes acids, metal chlorides, and other chemicals in the plating process. Acids, chlorides and other chemicals are stored inside the building in plastic and steel drums. Historically, six (6) underground storage tanks (USTs) were located inside the building, beneath the concrete floor ranging in size from 500 to 5,500 gallons. The historic USTs were utilized in the facilities wastewater stream.

Since identification of the release, Phillips Plating has replaced or upgraded all process water tanks and piping by adding secondary containment, additionally the facility has removed Underground Storage Tanks (USTs) associated with the wastewater process system and replacing with Aboveground Storage Tanks (ASTs). The flooring beneath the plating machines was recoated with chemical resistant epoxy to prevent migration of materials. Therefore, it is believed that there are no additional leaks or ongoing sources of contamination entering the local environment. The site location is depicted in Figure 1. A site map depicting the current site layout, historic UST locations, and sample locations is included in Figure 2.

2.4 Report Submittals

- Notification of Hazardous Substance Discharge November 29, 2012
- Phase II Environmental Site Assessment November 29, 2012
- Site Investigation Work Plan December 10, 2012
- Site Update January 24, 2013
- Site Update March 13, 2013
- Site Update October 14, 2014
- Site Update January 19, 2017
- Site Update December 29, 2017

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Monitoring Natural Attenuation Sampling Plan Phillips Platting Corporation August 2024



- Site Update September 4, 2018
- Site Update September 5, 2019
- Site Update December 6, 2021
- Site Update April 19, 2022
- Site Update May 26, 2023
- Site Update February 20, 2024

2.5 Scope of Work

REI recommends the following work scope for ongoing monitored natural attenuation as part of the Phillips Plating Corporation site:

- REI will investigate buried utilities located on the subject property and State Highway
 13 as requested in the WDNR letter dated April 22, 2024.
- 2. Continued semiannual groundwater monitoring events with collection of water level, temperature, dissolved oxygen, specific conductivity, pH, and oxygen reduction potential from all accessible monitoring locations.
- 3. Collection of groundwater samples for laboratory analysis as presented in section 2.6 with continuing evaluation based on laboratory analytical results.
- 4. Collection of PFAS samples for laboratory analysis from monitoring well MW6 and piezometers PZ1. REI will evaluate the results from these monitoring locations to determine if additional locations will require sample collection after the first semiannual event.
- 5. REI will prepare annual site update reports summarizing data collected during the previous twelve (12) month period along with analysis of contaminant concentration trends for each monitoring point.

2.6 Laboratory Analysis Parameters and Frequency

Continued laboratory analysis will be based monitoring locations with identified unstable to increasing contaminant concentrations. Sample frequency by monitoring location and parameter are summarized in Table 1.

2.61. Dissolved Chromium

REI will continue to collect semiannual groundwater samples, for laboratory analysis of dissolved chromium, from monitoring locations which have identified unstable to



increasing dissolved phase contaminant trends for Dissolved Chromium. Dissolved Chromium samples will be collected from all accessible monitoring locations for the last two (2) semi-annual groundwater monitoring events before submittal of the case closure request for the site.

2.6.2 Hexavalent Chromium

REI is recommending the discontinuation of Hexavalent Chromium samples from all monitoring locations except for the last two (2) semi-annual monitoring events before submittal of the case closure request for the site.

2.6.3 Dissolved Nickel

REI will continue to collect semiannual groundwater samples, for laboratory analysis of dissolved chromium, from monitoring locations which have identified unstable to increasing dissolved phase contaminant trends for Dissolved Nickel. Dissolved Nickel samples will be collected from all accessible monitoring locations for the last two (2) semi-annual groundwater monitoring events before submittal of the case closure request for the site.

2.6.4 Dissolved Iron & Manganese

REI is recommending the discontinuation of Dissolved Iron & Manganese samples from all monitoring locations except for the last two (2) semi-annual monitoring events before submittal of the case closure request for the site.

2.6.5 Nitrate as Nitrogen & Sulfate

REI is recommending the discontinuation of Nitrate as Nitrogen & Sulfate samples from all monitoring locations except for the last two (2) semi-annual monitoring events before submittal of the case closure request for the site.

2.7 Semi-Annual Monitoring Event Parameters

Based on the above criteria, REI is proposing the following parameters be collected from Monitoring Wells MW5, MW6, MW10, and Piezometer PZ3 for laboratory analysis:

- Dissolved Chromium
- Dissolved Nickel



REI is proposing the following field measurements will be collected on a semi-annual basis from all accessible monitoring points during the semi-annual groundwater monitoring events:

- Depth to Groundwater
- Temperature
- Dissolved Oxygen
- Specific Conductivity
- pH
- Oxygen Reduction Potential

2.8 Last Two (2) Monitoring Events Before Submittal of Case Closure Request

REI is proposing the following parameters be collected from all site monitoring points for laboratory analysis during the last two (2) monitoring events before preparation and submittal of case closure documentation for the site:

- Dissolved Chromium
- Hexavalent Chromium
- Dissolved Nickel
- Dissolved Iron
- Dissolved Manganese
- Nitrate as Nitrogen
- Sulfate

REI is proposing the following field measurements will be collected from all site monitoring points during the last two (2) monitoring events before preparation and submittal of case closure documentation for the site:

- Depth to Groundwater
- Temperature
- Dissolved Oxygen
- Specific Conductivity
- pH
- Oxygen Reduction Potential



2.9 Initial PFAS Analysis

REI is proposing that groundwater samples for laboratory analysis of WDNR 33 LIST PFAS compounds be collected from the following monitoring points:

Monitoring well MW6.

Piezometer PZ1.

After receipt of the initial sample event for PFAS analysis, a determination will be made to determine if additional rounds of PFAS sample collection and/or additional monitoring locations should be added to investigate if PFAS is associated with the release.

3.0 METHODOLOGIES

3.1 Per- and Polyfluorinated Substances

PFAS samples, from select monitoring points, will be collected utilizing low-flow sample collection techniques. New high-density polyethylene (HDPE) tubing shall be inserted down the well casing to the desired sample depth within the screened interval. Groundwater shall be pumped utilizing a peristaltic pump are a rate that limits changes in the groundwater elevation within the well. A YSI ProPlus, or similar meter, with flow cell will be installed on the discharge side of the peristaltic pump and used to monitor stabilization criteria within the well. Once stabilization has been achieved, the YSI ProPlus, or similar meter, and flow cell will be disconnected, and laboratory provided containers filled. After collection of the PFAS samples the HDPE tubing will be removed from the monitoring point and disposed of as trash along with PPE utilized during the sample collection events.

PFAS samples will be collected prior to any other parameters and stored in a separate cooler on ice.

3.2 Metals & Inorganic Compounds

Groundwater samples for laboratory analysis of Metals and Inorganic Compounds will be collected utilizing a new disposable bottom decanting bailer. Prior to sample collection, depth to groundwater will be collected along with field measurements utilizing a YSI ProPlus, or similar meter. At least three (3) well volumes will be removed from the well prior to sample collection.



3.3 Investigative Wastes – Groundwater

Groundwater removed from the subsurface during well development and well sampling events will be containerized in approved DOT steel drums and transported to the Wausau Wastewater Treatment Plant for treatment and discharge back into the local environment in accordance with their municipal Wisconsin Pollutant Discharge Elimination System (WPDES) Permit.

3.4 Quality Assurance/Quality Control (QA/QC)

REI personnel will maintain strict adherence to established QA/QC procedures during sample collection and handling. EPA and/or WDNR standard accepted sample collection, transportation and storage protocols will be implemented prior to analysis of samples by a state certified laboratory. Sample containers will be properly preserved and stored prior to analysis. Dates of analysis, contingent upon the shelf life of the parameter of interest, will be noted. Field chain-of-custody (COC) documentation will be maintained for each sample. Internal laboratory QA/QC protocols will be adhered to in accordance with protocols outlined in EPA document SW846: Test Methods for Evaluating Solid Waste, EPA Method 300.0: Determination of Inorganic Anions by Ion Chromatography, EPA 6010D: Inductively Coupled Plasma – Atomic Emission Spectrometry, Standard Methods 3500-CR B, and Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Analysis Using Isotope Dilution by LC/MS/MS.

3.4.1 Chain of Custody

Upon completion of a soil or groundwater sample, a chain of custody log will be initiated. The chain of custody record will include the following information: project name, work order number, shipped by, shipped to, sampling point, location, field ID number, date and time taken, sample type, number of containers, analysis required, sampler(s) signature(s), etc. The fewest number of people possible will handle the samples.

3.4.2 Decontamination

Decontamination of all field equipment will be performed to eliminate potential crossmixing between discrete sampling points. All sampling equipment will be decontaminated by washing with an Decon-It/distilled water solution, rinsing with distilled water and triple rinsing with deionized water. Wash water will be contained



on-site in Wisconsin Department of Transportation (WDOT) approved 55-gallon drums pending proper disposal or treatment.

4.0 CHEMICAL ANALYSIS OF GROUNDWATER

Groundwater samples will be collected from each monitoring well and will be sent to the laboratory for analysis of appropriate constituents. Samples will be collected in laboratory prepared vials and jars, placed into an iced cooler, and transported to a state certified laboratory for one or more of the following analyses:

Method	Analytical Constituent	Method Detection Limit
EPA 6010D	Dissolved Chromium, Nickel, Iron, Manganese	variable
SM 3500-CR B	Hexavalent Chromium	variable
EPA 300.0	Nitrate as Nitrogen, Sulfate	variable
WDNR 33 List	PFAS	variable
ug/L = ppb		
mg/L = ppm		

TABLES



Table 1 Groundwater Monitorign Wells & Piezometers Samplign Frequency Phillips Platting Corporation 984 N Lake Avenue, Phillips, WI BRRTS#: 02-51-559634

		Metals															Inorganics	6	Field Measurments								
Well ID	PFAS (WDNR 33 List)	Hexavalent Chromium	Chromium Dissolved	Nickel Dissolved	l ron Dissolved	Manganese Dissolved	Chromium Total	Nickel Total	l ron Total	Manganese Total	Arsenic Dissolved	Barium Dissolved	Cadmium Dissolved	Lead Dissolved	Mercury Dissolved	Selenium Dissolved	Silver Dissolved	Zinc Total	Nitrate (NO ₃) as Nitrogen	NitrIte (NO ₂) as Nitrogen	Sulfate (SO ₄)	Water Level	Temperature	Dissolved Oxygen (DO)	Specific Conductivity	На	Oxygen Reduction Potential (ORP)
CAS Number		78540-29-9	7440-47-3	7440-02-0	7439-89-6	7439-96-5	7440-47-3	7440-02-0	7439-89-6	7439-96-5	7440-38-2	7440-39-3	7440-43-9	7439-92-1	7439-97-6	7782-49-2	7440-22-4	7440-66-6	14797-55-8	14797-65-0	14808-79-8						
MW1		2YR	2YR	2YR	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
MW2		2YR	2YR	2YR	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
MW4		2YR	2YR	2YR	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
MW5		2YR	SA	SA	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
MW6	IA	2YR	SA	SA	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
MW7		2YR	2YR	2YR	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
MW8		2YR	2YR	2YR	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
MW9		2YR	2YR	2YR	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
MW10		2YR	SA	SA	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
MW11		2YR	2YR	2YR	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
MW12		2YR	2YR	2YR	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
MW13		2YR	2YR	2YR	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
MW14		2YR	2YR	2YR	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
MW15		2YR	2YR	2YR	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
PZ1	IA	2YR	2YR	2YR	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
PZ2		2YR	2YR	2YR	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
PZ3		2YR	SA	SA	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA
PZ4		2YR	2YR	2YR	2YR	2YR													2YR		2YR	SA	SA	SA	SA	SA	SA

IA = Initial Assessment - Sampling frequency and locations to be assessed after first monitoring event

IA

SA 2R

SA = Semi-annual (Mar/Apr and Sept/Oct) 2R = Collected for last two (2) rounds before submittal of case closure request

Sampling Eliminated/Not Required at This Time



Created: 4/25/2024 Updated: 5/30/2024

FIGURES





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