AECOM

Remedial Action Work Plan

Erdle Perforating Site No. 828072

New York State Department of Environmental Conservation

Work Assignment: D009803-54
Project number: 60745349

June 2026

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Quality Information

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0	05/07/2026	First Issue	Yes	Michael Gardner, P.E.	Engineer-of-Record
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List of Abbreviations and Acronyms

AECOM	AECOM USA, Inc.
bgs	below ground surface
BMW	bedrock monitoring well
CVOC	chlorinated volatile organic compound
DCE	dichloroethene
DER	Division of Environmental Remediation
DO	dissolved oxygen
DOH	Department of Health
Erdle	Erdle Perforating Company
ERH	Electrical Resistance Heating
EVO	Emulsifed Vegetable Oil
FS	Feasibility Study
gpm	gallons per minute
GWETS	groundwater extraction and treatment system
IDW	Investigation Derived Waste
ISCR	in site chemical reduction
IW	injection well
LaBella	LaBella Associates, L.L.C.
MW	monitoring well
NAPL	Non-Aqueous Phase Liquid
NYCDEP	New York City Department of Environmental Protection
NYSDEC	New York State Department of Environmental Conservation
O&M	Operation and Maintenance
OMW	overburden monitoring well
ORP	oxidation reduction potential
PCB	polychlorinated biphenyl
PCE	perchloroethylene (tetrachloroethylene)
PID	Photoionization Detector
POTW	Publicly Owned Treatment Works
ppb	parts per billion
PVC	polyvinyl chloride
RAWP	Remedial Action Work Plan
RDWP	Remedial Design Work Plan
RD	Remedial Design
RI	Remedial Investigation
ROD	Record of Decision
ROI	radius of influence
RQD	Rock Quality Designation
RSK	Robert S. Kerr
SCG	Site Cleanup Goal
SDS	Safety Data Sheet
SSDS	Sub-slab Depressurization System
SVI	soil vapor intrusion
SVOC	semivolatile organic compound
TAL	Target Analyte List
TCE	Trichloroethene
UIC	Underground Injection Control
UST	Underground Storage Tank
USEPA	United States Environmental Protection Agency
VC	vinyl chloride
VOC	volatile organic compound

1. Introduction

AECOM USA, Inc. (AECOM) is pleased to present this Remedial Action Work Plan (RAWP) to the New York State Department of Environmental Conservation (NYSDEC) for a remedial design and remedial action at the Erdle Perforating Site (Site No. 828072) located in the Town of Gates, Monroe County, New York (**Figure 1**).This RAWP is supplemental to the *Remedial Design Work Plan (RDWP)* prepared for the Site by AECOM, dated August 2024. For details on various components of the remedial design, please refer to the original RDWP.

This document presents the modified scope for the injection well design elements, site background, and description for mixing and application of the emulsified vegetable oil (EVO) in the injection wells. AECOM prepared this RAWP for LaBella Associates, L.L.C. (LaBella) and NYSDEC as part of Work Assignment D009803-54 of the AECOM standby engineering services contract with the NYSDEC.

LaBella will complete the field activities associated with this RAWP. AECOM will review and approve the applicable submittals from LaBella prior to the start of any field activities. LaBella shall not initiate any field activities without the prior approval by NYSDEC and AECOM.

1.1 Site History and Background

Erdle Perforating Company (Erdle) constructed the facility in 1968 on what was then farmland. Erdle used a variety of lubricants in its perforating processes which were removed from the finished product using chlorinated degreasing solvents, such as trichloroethene (TCE). From the early 1970's to 1987, Erdle collected spent TCE degreasing solvent in a 2,000-gallon underground storage tank (UST) prior to shipping off-site for disposal. The TCE UST was located adjacent to the southwestern edge of the building. Erdle also stored waste oils in an UST next to the TCE UST. In February 1987, the TCE UST failed a pressure test. Subsequent soil and groundwater sampling confirmed that Site soil and groundwater had been impacted by TCE. The TCE tank and several other tanks (including the waste oils tank formerly adjacent to the TCE UST) were removed in 1987, along with approximately 100 cubic yards of contaminated soil. Erdle provided a report on these removals to the NYSDEC in July 1987. Because of the TCE release, the Site was listed as a Class 2 site in the NYSDEC Registry of Inactive Hazardous Waste Disposal Sites. A Class 2 site is defined as a "significant threat to public health or environment – action required".

1.1.1 Site Location and Description

The Site is approximately 9.2 acres and is bounded on the south by CSX railroad tracks and an undeveloped wooded area further south of the railroad tracks, on the north and east by light industry, and on the west by open land and Interstate 490. The Site contains one occupied 84,000 square foot facility building which was constructed in 1968. The main site feature is the building which is surrounded by an asphalt parking to the north and grass and wooded areas to the south, east, and west. The Site and surrounding developed areas are serviced by public water. A townhouse development (Hidden Valley Development) is located approximately 800 feet south of the Site. The property and land south of the Site are low lying, with areas of intermittent stagnant water. A drainage swale is located along the west side of the Site parcel. The drainage swale passes under the railroad tracks, through the undeveloped wooded land south of the Site and eventually along the western edge of the Hidden Valley Development to a small pond located along the western edge of the development.

The Site is currently active and is zoned for industrial purposes including manufacturing and processing. Site occupants include a manufacturer of various types of perforated sheet metal products. The surrounding parcels to the north, east and west, which include both undeveloped and developed properties, are also zoned for industrial purposes. The undeveloped and developed areas located south of the CSX railroad tracks are zoned for one-family residential. The Site Plan is presented as **Figure 2**.

1.1.2 Hydrogeology

Groundwater occurs under unconfined conditions in both the overburden materials and bedrock. Groundwater flow in the overburden is generally toward the west-southwest with a low horizontal hydraulic gradient of approximately 0.012 feet per foot (ft/ft) between monitoring wells MW-02A and MW-3A and 0.047 ft/ft between MW-03A and MW-06, see **Figure 3**. Groundwater in the bedrock flows through secondary porosity features including faults, joints, solution cavities, and bedding planes. Shallow bedrock groundwater elevation data indicates groundwater flows locally toward the east and west at an approximate low horizontal hydraulic gradient of 0.047 ft/ft between monitoring wells MW-2D and MW-3D, see **Figure 4**. The horizontal hydraulic gradient in the intermediate bedrock groundwater is nearly flat, see **Figure 5**.

1.1.3 Contaminants of Concern

Based on the results of groundwater, soil, and soil vapor sampling completed during a 2007 onsite Remedial Investigation (RI), primary contaminants of concern are chlorinated volatile organic compounds (CVOCs), including TCE from the former UST leak and associated CVOC breakdown products including cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride (VC).

1.2 Previous Site Work and Investigations

The following narratives provide a remedial history timeline and a summary of the available project records that document key investigative and remedial milestones for the Site. Refer to these documents for details. Previous work performed prior to this RAWP included the following:

- 1987: Leaking UST identified and removed along with contaminated soil (NYSDEC, 2010).
- 1987: Site listed as Class 2 site in Registry of Inactive Hazardous Waste Disposal Sites (NYSDEC, 2010).
- October 24, 1994: Consent Order B8-0185-87-05 signed by Erdle Perforating Company (NYSDEC, 2010).
- 1995: Phase I Site Investigation completed by Erdle Perforating Company (Radian Corporation, 1995).
- 1996: Phase II Site Investigation completed by Erdle Perforating Company (NYSDEC, 2010).
- 1997: Installation of a dual phase extraction system as an interim remedial measure (IRM), by Erdle Perforating Company (NYSDEC, 2010).
- 1998: Remedial Alternatives Feasibility Study completed by Erdle Perforating Company (Radian Corporation, 1998).
- 1999: Installation of off-site groundwater monitoring wells completed by Erdle Perforating Company (NYSDEC, 2010).
- 2002: Dual phase extraction system shut down by Erdle Perforating Company (NYSDEC, 2010).
- 2005: Off-site limited soil vapor intrusion (SVI) study by Erdle Perforating Company (NYSDEC, 2010).
- 2006: Erdle Perforating Company Site referred to State Superfund by NYSDEC (NYSDEC, 2010).
- 2007: Off-site SVI study performed by NYSDEC (NYSDEC, 2010).
- 2008-2010 Remedial Investigation/Feasibility Study (RI/FS) completed by MACTEC Engineering and Consulting, P.C. (MACTEC) for the NYSDEC (included installation of sub-slab depressurization systems [SSDSs]) (MACTEC, 2010).

- July 2012: Baseline groundwater sampling completed by MACTEC for the NYSDEC (MACTEC, 2012).
- June 2013: SSDSs installed at 391 Upper Valley Road and 394 Upper Valley Road, by Mitigation Tech (MACTEC, 2013).
- December 8, 2014: Dual phase extraction system removed by TRS (MACTEC, 2017).
- January 2015 - June 2015: electrical resistivity heating (ERH) system components installed by TRS (MACTEC, 2017).
- June 26, 2015 - April 2016: ERH system operated and maintained by TRS (MACTEC, 2017).
- May 2018: Post ERH groundwater sampling (MACTEC, 2018).
- May 2019: Groundwater sampling conducted for the NYSDEC (MACTEC, 2019).
- November 2019: Groundwater sampling conducted for the NYSDEC (MACTEC, 2020a).
- June 2020: Groundwater sampling conducted for the NYSDEC (MACTEC, 2020b).
- July 2022: Pre-Design Investigation (AECOM, 2022a)
- August 2024: Remedial Design (AECOM, 2024)
- February 2025: Remedial Action – LaBella and AECOM

2. Remedial Action

2.1 Remedial Actions Completed to Date

Between March 18, 2025, and April 29, 2025, LaBella completed excavation and backfilling of the overburden, located immediately south of the source area, down to bedrock, placement of Provect-IR ® in accordance with the RD. During excavation, groundwater was pumped, treated with the on-site temporary treatment system, and discharged to the Monroe County Publicly Owned Treatment Works (POTW).

On March 6, 2025, six existing monitoring wells that were situated in the excavation area were abandoned by LaBella in accordance with NYSDEC CP-43 requirements. Between August 19, 2025, and September 10, 2025, these monitoring wells were replaced in kind after the excavation and backfilling operations were completed. The two overburden monitoring wells, OMW-2 and MW-1A, included a two (2)-inch diameter schedule 40 polyvinyl chloride (PVC) casing and screen (.020-inch continuous wrap, V-wire) and were installed to the top of rock at 14.2 ft. and 14.5 ft. bgs, respectively. The two shallow bedrock monitoring wells, MW-1D and BMW-2D, included a four (4)-inch open hole in bedrock installed from the top of bedrock to 31 ft. bgs. The two intermediate bedrock monitoring wells, MW-1DD and MW-2DD, included a four (4)-inch open hole in bedrock installed from approximately 31 feet to 40 feet bgs. In shallow and intermediate monitoring wells, the overburden was sealed off with a nominal four (4)-inch inside diameter carbon steel casing.

Between September 23, 2025, and October 1, 2025, LaBella completed groundwater sampling and well performance monitoring from September 23, 2025, through October 1, 2025. Samples were analyzed for Volatile Organic Compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260D, Total and Dissolved Metals by USEPA Method 6010D, Chloride by USEPA Method 300, Nitrate-Nitrogen by USEPA Method 300, Methane & Ethane by Robert S. Kerr (RSK) Method 175, Sulfide by USEPA Method 376.1, Sulfate by USEPA Method 300, and Alkalinity by Method SM 2320B. The VOC, Metals, and Chloride analytical results are depicted on **Figure 6**.

AECOM completed a Technical Memorandum in February 2026, summarizing remedial actions completed to date and assessment and evaluation of the post-excavation groundwater monitoring results (AECOM, 2026).

2.2 Scope of Work

2.2.1 Injection Well Installation

LaBella will install the injection wells in accordance with the Contract Documents and modifications presented herein and their approved Work Plan, dated March 2025. Injection wells will be installed at the locations shown in **Figure 7**. Select locations were modified from original positioning and two additional overburden injection wells have been included beyond what was originally proposed. Injection well repositioning was based on hydraulic gradient and groundwater movement to intercept dissolved phase flow. The additional overburden injection wells were included to remediate residual contamination from the source area.

2.2.2 In Situ Chemical Reduction (ISCR)

The ISCR injection approach will follow the approach provided in the original RDWP, dated August 2024. Groundwater remediation will be implemented using EVO and was selected as the ISCR reagent at the site. EVO is blended with Vitamin B12 which provides micronutrients for enhancing bioremediation.

2.2.2.1 Injection Approach

EVO will be mixed on site at a ratio of four (4) gallons of water to one (1) gallon of EOS™ concentrate. Five hundred milliliters of Vitamin B12 supplement, supplied by the manufacturer, will be added to each 55-gallon drum of EVO concentrate. In addition, sodium sulfite will be added as an oxygen scavenger to prevent the introduction of oxygen into the EVO mixture during injection. The dilute solution will be prepared and applied the saturated zone using a direct pressurized injection system that includes a motorized mixing hopper, hydraulic pump (with a minimum pressure rating of 15 pounds per square inch – (psi)), and pneumatic packer assembly. In shallow bedrock injection wells, the solution will be injected under pressure in two successive increments of approximately 7 to 8 feet, starting from the bottom of each open rock intake. Each zone will be isolated by the packers. Approximately 29 gallons of EOS mixed with water will be injected into each seven (7) to eight (8)-foot increment. Approximately 61 gallons of distribution water will be injected into each well following application of the 20% EOS solution. In overburden injection wells, the solution will be injected under pressure in two successive increments of approximately five (5) feet, starting from the bottom of each well screen. Each zone will be isolated by packer assembly. Approximately 103 gallons of EOS mixed with water will be injected into each five (5)-foot increment. Approximately 1,084 gallons of distribution water will be injected into each well following application of the 20% EOS solution.

2.2.2.1.1 Injection Sequence

The following protocol shall be taken for implementation of the Injection Program:

Spatially/Horizontally:

- Injections shall begin at the most distant perimeter bedrock wells and proceed toward the Source Area.
- Shallow bedrock well injections shall be completed first, followed by overburden well injections.
- Injections shall not be performed simultaneously at wells in the same pair.
- Injections shall not be performed simultaneously at adjacent wells.

Vertically:

- In shallow bedrock injection wells, the reducing reagent solution shall be injected with a packer assembly in two successive increments of approximately 7 to 8 feet, starting from the bottom of each open rock intake.
- In overburden injection wells, the reducing reagent solution shall be injected with a packer assembly in two successive increments of approximately 5 feet, starting from the bottom of each well screen.

An injection sequence summary is presented in Table 1.

2.2.2.2 Delivery System

Precise components of the delivery system will be considered means and methods to be proposed by LaBella and will be subject to review and approval by NYSDEC and the Engineer. However, components of the delivery system are expected to generally include the items described in the following paragraph.

There will be EVO solution transfer from the transport container and mixing vessels (e.g., 2,100-gallon totes and large volume poly container on flatbed trailer, mixing vessels) to injection wells through flexible hoses. Secondary containment will be implemented around containers and other points of potential discharge. Hoses will be covered with traffic ramps to allow traffic as necessary. Flow meters will be used to measure the volume of EVO solution injected. Injection pressures will be measured with pressure gauges. Aboveground manifolds may be used to allow delivery of the EVO solution at several injection wells at one time, while monitoring flow rates and injections pressures to each well.

Materials used for aboveground hoses used for transfer of the EVO solution, pumps used for transfer or injection, and storage containers will be compatible with the solution. The manufacturer's recommendations for decontamination and/or maintenance will be followed to prevent corrosion of hoses, pumps, and/or any equipment exposed to the solution. EVO will be delivered to the site in 55-gallon drums.

2.2.2.3 Storage, Containment and Safety Measures

EVO is non-hazardous and only routine general handling practices are required. The SDS is included in Appendix A and lists storage and handling requirements. The EVO will be staged and mixed at on-site in accordance with the manufacturer's recommendations.

Secondary containment will be implemented as a precaution required by and will comply with the NYSDEC bulk storage regulations. Secondary containment will be implemented for EVO transfer, storage, mixing and manifold operations and at connection points (e.g., hose and/or piping connections) secondary containment measures will be implemented. Any spilled EVO solution will be contained and, if possible, reused.

2.2.2.4 Injection Schedule

As listed in the Contract Drawings, an estimated 35,500 gallons of EVO solution and distribution water will be injected into thirty-one (31) overburden and shallow bedrock injection wells. Two injection events are planned, with the second injection event to take place approximately six (6) months to 12 months after the first event. The injection schedule is presented in **Figure 8**.

The first EVO application is anticipated to require approximately two (2) to three (3) weeks depending upon injection rate and LaBella's delivery system. This does not include mobilization, demobilization or travel time between injection wells. Site conditions and lithology at individual wells may allow for increased or require decreased flow rates. Injections may be conducted at several injection wells at one time, and/or using manifolds. Both options would decrease the overall time frame required for remediation. The second injection application is anticipated to require approximately the same duration of the first application.

2.2.2.5 Performance Monitoring

Following the injection of EVO field parameters (water level, oxidation-reduction potential (ORP), dissolved oxygen (DO), pH, specific conductivity, turbidity, temperature) will be measured in injection and monitoring wells in accordance with the schedule shown on the Drawings. These parameters will be measured at all injection wells and all existing and new monitoring wells north of the railroad tracks. Post-excavation performance monitoring was completed by LaBella in September and October 2025. Refer to Baseline and Post-Excavation Groundwater Sampling Results and Evaluation Technical Memorandum (AECOM, 2026) for the results of that performance monitoring.

Groundwater will be sampled at all monitoring wells listed in the Contract Drawings prior to the initial ISCR application, following the first ISCR injection, following the second ISCR injection, and approximately six months after the second ISCR injection. The groundwater samples will be analyzed for VOCs, TAL metals (total and dissolved), alkalinity, sulfide, sulfate, methane, ethene, nitrite-nitrogen, and total organic carbon as shown on the Contract Drawings.

2.2.2.6 Utility Requirements for Injection

Minimal power will be required for injection pumps that can be supplied by running a portable generator supplied by LaBella. Water will need to be on hand to address spills if they occur. Water could be obtained from hydrants, or it could be trucked in. Hydrant permits will be obtained, if needed.

3. Permits and Approvals

Injection wells used for aquifer remediation and experimental technologies are distinguished from hazardous waste injection wells and are designated as Class V under the United States Environmental Protection Agency (USEPA) Underground Injection Control (UIC) Program. Class V wells covered by the Federal UIC Program are authorized by rule and do not require a separate UIC permit. However, an Inventory of Injection Wells Form must be submitted to the USEPA as required by the USEPA UIC Program to document well installation. LaBella will be required to obtain a hydrant permit for municipal water usage and coordinate all activities with the Engineer, NYSDEC, and Mr. Charles Gartley – Operations Manager for Erdle Perforating.

4. Reductant Purchase and Construction Sequence

Permanganate products are available from several vendors within the United States including the following:

Redox Tech
200 Quade Drive
Cary, North Carolina 27513
Direct: 919.602.6619
Office: 919.678.0140
Contact: Brad Elkins
Email: elkins@redox-tech.com
Company Web Page: https://www.redox-tech.com/

Evonik Active Oxygens, LLC
2005 Market Street, Suite 3200
Philadelphia, PA 19103 USA
Telephone: 517.669.5400
Contact: John Valkenburg
Email: John.Valkenburg@Evonik.com
Company Web Page: http://www.evonik.com/remediation/

Regenesis, Inc.
1011 Calle Sombra
San Clemente, CA 92673
Telephone: 781.223.5201
Contact: Maureen Dooley
Email: MDooley@Regenesis.com
Company Web Page: http://www.regenesis.com/

Hepure Technologies
40 Route 31, Suite 3200
Speedway Plaza - #75
Flemington, NJ 08822
Phone: 866.727.4776 ext. 3
Fax: 888.975.9840
Contact: Santo Auriemma
Email: santo@hepure.com
Company Web Page: http://www.hepure.com/

This section presents a description of remediation sequencing. LaBella will determine the actual sequence and duration of work segments within the time frame specified in the Contract Documents. The major remediation work elements presented in the expected sequence of implementation are described below.

1. **Mobilization of Equipment, Workforce, and Temporary Facilities:** It is expected that any temporary facilities will need to be re-established onsite.
2. **Injection Well Installation:** Twelve (12) overburden injection wells and 19 shallow bedrock injection wells will be installed at locations depicted in the Contract Drawings.
3. **Reductant Injection:** EVO solution will be injected during two events in the overburden and shallow bedrock wells during two events as listed on the Contract Drawings. Groundwater will be monitored in between each injection to evaluate the effectiveness of bioremediation. Adjustments to the dose may be implemented as appropriate based on the monitoring results.
4. **Drummed Waste Materials:** Drummed waste materials will be temporarily stored on-site and will be picked up on a routine basis.
5. **Performance Monitoring:** Performance monitoring will be completed after the injection event following the requirements in the Contract Documents
6. **Demobilization:** All temporary facilities will be removed from the Site, temporary utilities discontinued, and disturbed areas restored to the original condition.
7. **Well Decommissioning and Final Site Restoration:** Injection wells installed for this work will be decommissioned after monitoring is complete and accepted as directed by the NYSDEC. The ground surface will be restored to surrounding conditions.
8. **Schedule:** LaBella will submit a detailed construction schedule to NYSDEC and update the schedule as needed.

5. References

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MACTEC. 2018. May 2018 Post-ERH Remediation Groundwater Sampling Report. July 25.

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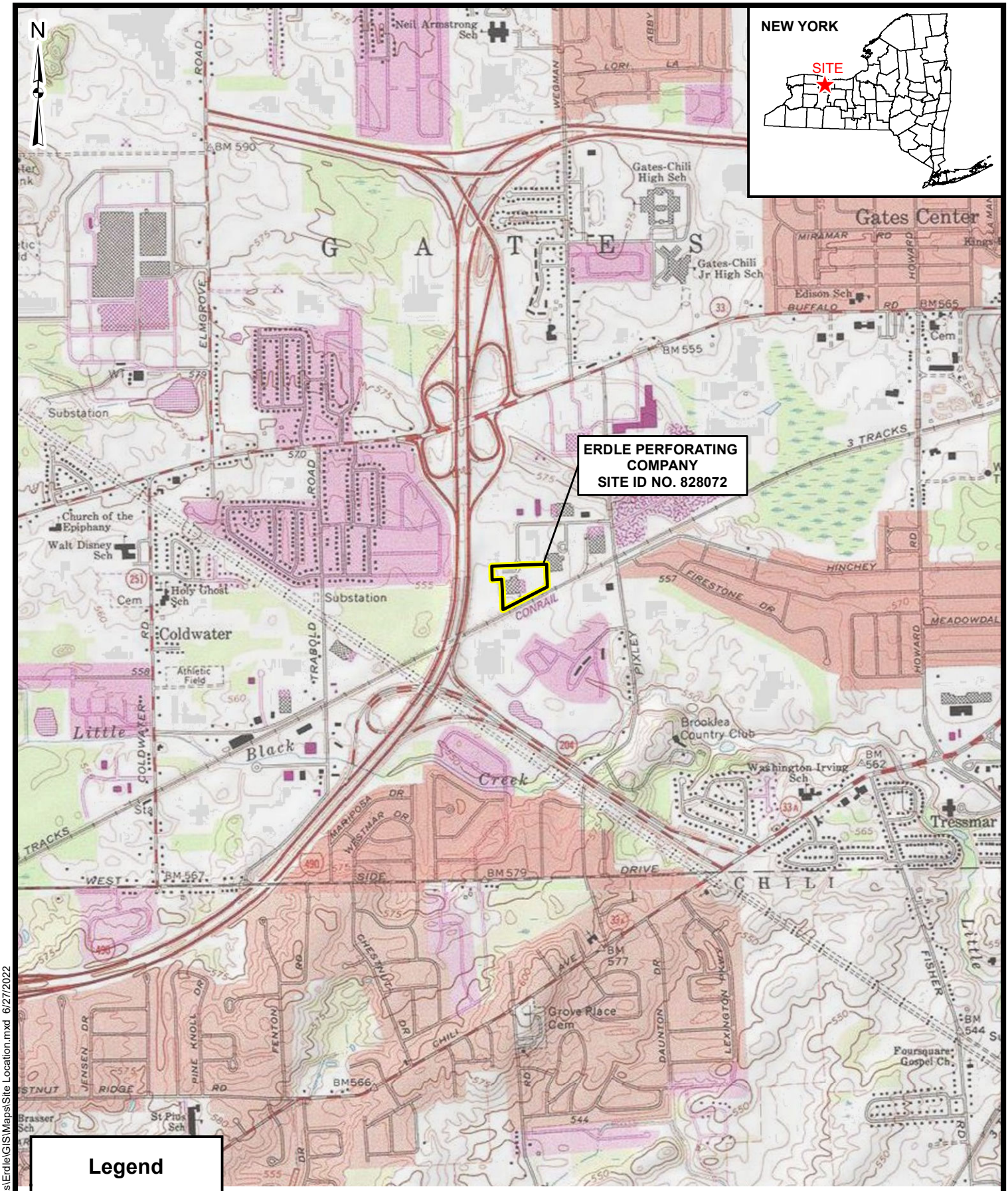
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Tables

Table 1
Injection Sequence Summary

Injection Sequence	Well Identification
1	IWSB-10
2	IWSB-09
3	IWSB-08
4	IWSB-07
5	IWSB-05
6	IWSB-06
7	IWSB-19
8	IWSB-18
9	IWSB-17
10	IWSB-16
11	IWSB-15
12	IWSB-14
13	IWSB-13
14	IWSB-12
15	IWSB-11
16	IWSB-03
17	IWSB-04
18	IWSB-02
19	IWSB-01
20	IWO-10
21	IWO-09
22	IWO-08
23	IWO-07
24	IWO-05
25	IWO-06
26	IWO-12
27	IWO-11
28	IWO-03
29	IWO-04
30	IWO-02
31	IWO-01

Figures



AECOM

ERDLE PERFORATING COMPANY SITE
SITE ID NO. 828072
TOWN OF GATES, MONROE COUNTY, NEW YORK
SITE LOCATION

FIGURE 1

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\Site Location.mxd 6/27/2022

N

MW-5 MW-5D

MW-1D MW-1
MW-1DD MW-1A
MW-3 MW-2
MW-3A MW-2A
MW-3D MW-2D
MW-6 MW-21
MW-21D
MW-10
MW-6D MW-7
MW-7D

MW-8 MW-8D
MW-9 MW-9D

MW-12

MW-17 MW-17D
MW-11 MW-11D
MW-16D
MW-16

MW-13
MW-13DD MW-13D
MW-14 MW-15
MW-14D MW-15D

MW-020
MW-20D

MW-18D MW-18

MW-19D
MW-19

Legend

- Existing Monitoring Wells
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary

250 0 250 Feet

C:\Users\maxwell.reis\Documents\Erdle\GIS\Maps\Site Plan_2.mxd 6/29/2022

ERDLE PERFORATING COMPANY SITE
SITE PLAN

AECOM

FIGURE 2

N

ERDLE BUILDING

ROAD

551.0

551.5

552.0

550.5

552.5

550.0

549.5

549.0

552.0

MW-01A, 550.94

OMW-2, 550.90

MW-02A, 552.55

MW-03A, 552.03

OMW-1, 551.08

MW-06, 548.51

MW-21, 551.42

OVERVIEW

MW-05, 554.76

553.0

552.0

552.5

540

200 0 200 Feet

20 0 20 Feet

Legend

- Monitoring Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Soil Excavation Area
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary
- Approximate Treeline

ERDLE PERFORATING COMPANY SITE
GROUNDWATER ELEVATION CONTOURS
OVERBURDEN AQUIFER (2025)

AECOM

FIGURE 3

C:\Users\maxwell.reis\OneDrive - AECOM\Documents\Erdle\GIS\Maps\Groundwater_Elevation_Overburden_2025.mxd 2/6/2026

N

ERDLE BUILDING

ROAD

MW-01D, 550.95

BMW-2D, 550.92

MW-04D, 550.25

MW-02D, 550.11

MW-03D, 551.97

BMW-1D, 551.09

BMW-3D, 551.33

MW-21D, 551.53

550.5

550.0

550.5

551.0

551.5

OVERVIEW

MW-05D, 550.86

200 0 200 Feet

20 0 20 Feet

Legend

- Monitoring Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Soil Excavation Area
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary
- Approximate Treeline

ERDLE PERFORATING COMPANY SITE
GROUNDWATER ELEVATION CONTOURS
SHALLOW AQUIFER (2025)

AECOM

FIGURE 4

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N

ERDLE BUILDING

ROAD

MW-01DD, 550.66

MW-02DD, 550.75

BMW-1DD, 550.70

BMW-3DD, 550.65

Legend

- Monitoring Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Soil Excavation Area
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary
- Approximate Treeline

20 0 20 Feet

ERDLE PERFORATING COMPANY SITE
GROUNDWATER ELEVATION CONTOURS
INTERMEDIATE AQUIFER (2025)

AECOM

FIGURE 5

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N

ERDLE BUILDING

ROAD

MW-01D	CRIT	09/25
VOCs:		
cis-1,2-Dichloroethylene	5	14
Trichloroethylene (TCE)	5	12
Metals:		
Iron	0.3	1.77
Magnesium	35	39
Sodium	20	548
Thallium	0.0005	0.0027
Misc.:		
Chloride	250	860

MW-01DD	CRIT	09/25
VOCs:		
Acetone	50	260
Trichloroethylene (TCE)	5	90
Vinyl chloride	2	5
Metals:		
Iron	0.3	3.45
Sodium	20	168
Misc.:		
Chloride	250	770

MW-01A	CRIT	05/18	09/25
VOCs:			
Acetone	50	460	3900
cis-1,2-Dichloroethylene	5	41	3300
Methyl ethyl ketone (MEK, 2-Butanone)	50	120	1100
Toluene	5	11	ND
Trichloroethylene (TCE)	5	ND	15000
Vinyl chloride	2	110	590
Metals:			
Barium	1	NA	1.7
Sodium	20	NA	486
Misc.:			
Chloride	250	NA	690

MW-05D	CRIT	05/18	10/25
SVOCs:			
1,4-Dioxane (p-Dioxane)	0.35	2.9	NA
Metals:			
Iron	0.3	ND	2.87
Magnesium	35	ND	356
Manganese	0.3	ND	5.06
Sodium	20	ND	2260
Misc.:			
Chloride	250	ND	7100

OVERVIEW

200 0 200 Feet

OMW-2	CRIT	08/21	09/25
VOCs:			
Acetone	50	ND	4900
Chloroform	7	ND	15
cis-1,2-Dichloroethylene	5	27000	130
Methyl ethyl ketone (MEK, 2-Butanone)	50	ND	630
Trichloroethylene (TCE)	5	140000	680
Styrene	5	ND	6.2
Vinyl chloride	2	2200	24
Metals:			
Barium	1	NA	1.97
Nickel	0.1	NA	0.137
Sodium	20	NA	879
Misc.:			
Chloride	250	NA	1200

BMW-2D	CRIT	08/21	09/25
VOCs:			
Acetone	50	ND	1200
cis-1,2-Dichloroethylene	5	190	110
Methyl ethyl ketone (MEK, 2-Butanone)	50	ND	310
Trichloroethylene (TCE)	5	150	25
Vinyl chloride	2	8.7	20
Metals:			
Sodium	20	NA	473
Misc.:			
Chloride	250	NA	950

MW-02D	CRIT	05/18	09/25
VOCs:			
cis-1,2-Dichloroethylene	5	12	180
Trichloroethylene (TCE)	5	BC	12
Vinyl chloride	2	BC	26
Metals:			
Iron	0.3	NA	3.67
Magnesium	35	NA	35.8
Manganese	0.3	NA	0.552
Sodium	20	NA	416
Misc.:			
Chloride	250	NA	860

MW-02DD	CRIT	09/25
VOCs:		
Acetone	50	3500
cis-1,2-Dichloroethylene	5	2000
Methyl ethyl ketone (MEK, 2-Butanone)	50	360
trans-1,2-Dichloroethylene	5	9.2
Trichloroethylene (TCE)	5	4000
Vinyl chloride	2	250
Metals:		
Iron	0.3	0.304
Nickel	0.1	0.111
Sodium	20	808
Misc.:		
Chloride	250	1200

BMW-2DD	CRIT	08/21
No Excedances		

MW-02A	CRIT	05/18	09/25
VOCs:			
1,1-Dichloroethylene	5	ND	70
cis-1,2-Dichloroethylene	5	6000	21000
trans-1,2-Dichloroethylene	5	ND	120
Trichloroethylene (TCE)	5	660	5700
Vinyl chloride	2	970	690
Metals:			
Iron	0.3	NA	0.779
Magnesium	35	NA	68
Manganese	0.3	NA	0.88
Sodium	20	NA	52

MW-04D	CRIT	09/25
VOCs:		
cis-1,2-Dichloroethylene	5	15
Trichloroethylene (TCE)	5	8.7
Metals:		
Iron	0.3	1.65
Sodium	20	371
Misc.:		
Chloride	250	770

MW-03A	CRIT	05/18	09/25
VOCs:			
Acetone	50	950	BC
Benzene	1	ND	2.8
cis-1,2-Dichloroethylene	5	750	570
Methyl ethyl ketone (MEK, 2-Butanone)	50	250	ND
Toluene	5	ND	5.4
trans-1,2-Dichloroethylene	5	ND	21
Vinyl chloride	2	2000	860
Metals:			
Iron	0.3	NA	4.63
Magnesium	35	NA	39.3
Manganese	0.3	NA	0.58
Sodium	20	NA	199
Misc.:			
Chloride	250	NA	370

MW-03D	CRIT	05/18	09/25
VOCs:			
Acetone	50	370	BC
cis-1,2-Dichloroethylene	5	1100	BC
Methyl ethyl ketone (MEK, 2-Butanone)	50	76	ND
Vinyl chloride	2	410	ND
Metals:			
Iron	0.3	NA	1.29
Manganese	0.3	NA	0.85
Sodium	20	NA	333
Misc.:			
Chloride	250	NA	1600

BMW-1DD	CRIT	08/21	09/25
VOCs:			
Acetone	50	ND	1800
cis-1,2-Dichloroethylene	5	ND	16
Methyl ethyl ketone (MEK, 2-Butanone)	50	ND	140
Vinyl chloride	2	ND	40
Metals:			
Magnesium	35	NA	81.7
Sodium	20	NA	424
Misc.:			
Chloride	250	NA	790

BMW-3D	CRIT	08/21	09/25
VOCs:			
cis-1,2-Dichloroethylene	5	BC	5.5
Vinyl chloride	2	ND	2.9
Metals:			
Iron	0.3	NA	2.37
Magnesium	35	NA	39.6
Sodium	20	NA	520
Misc.:			
Chloride	250	NA	960

BMW-3DD	CRIT	08/21	09/25
VOCs:			
Acetone	50	ND	290
Metals:			
Iron	0.3	NA	0.459
Magnesium	35	NA	47.7
Sodium	20	NA	420
Misc.:			
Chloride	250	NA	920

OMW-1	CRIT	08/21	09/25
VOCs:			
cis-1,2-Dichloroethylene	5	260	140
Vinyl chloride	2	99	110
Metals:			
Iron	0.3	NA	4.77
Magnesium	35	NA	42.9
Sodium	20	NA	442
Misc.:			
Chloride	250	NA	820

MW-06	CRIT	10/25
Metals:		
Iron	0.3	0.481
Magnesium	35	288
Manganese	0.3	0.938
Sodium	20	58.6

MW-21	CRIT	05/18	09/25
VOCs:			
cis-1,2-Dichloroethylene	5	33	130
Trichloroethylene (TCE)	5	6.2	BC
Vinyl chloride	2	12	64
Metals:			
Iron	0.3	NA	2.13
Magnesium	35	NA	48.7
Sodium	20	NA	470
Misc.:			
Chloride	250	NA	880

MW-21D	CRIT	05/18	10/25
VOCs:			
Acetone	50	ND	1500
cis-1,2-Dichloroethylene	5	48	40
Methyl ethyl ketone (MEK, 2-Butanone)	50	ND	530
Toluene	5	ND	10
Trichloroethylene (TCE)	5	BC	22
Vinyl chloride	2	2.1	18
Metals:			
Iron	0.3	NA	0.453
Sodium	20	NA	642
Misc.:			
Chloride	250	NA	1100

BMW-1D	CRIT	08/21	09/25
VOCs:			
cis-1,2-Dichloroethylene	5	490	250
Trichloroethylene (TCE)	5	2300	17
Vinyl chloride	2	ND	15
Metals:			
Iron	0.3	NA	2.23
Magnesium	35	NA	36.5
Sodium	20	NA	461
Misc.:			
Chloride	250	NA	1000

Legend

- Monitoring Well
- Soil Excavation Area
- ERH Treatment Area
- Former Staging Area
- Site Location
- Parcel Boundary
- Approximate Treeline

Criteria

Location ID — BMW-1D | CRIT | 08/21 — Date

VOCs: cis-1,2-Dichloroethylene | 5 | 490

Parameter — Concentration (ug/l for VOCs/SVOCs mg/l for all others)

NOTES:
BC = Below Criteria
NA = Not Analyzed
ND = Not Detected
CRIT = NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

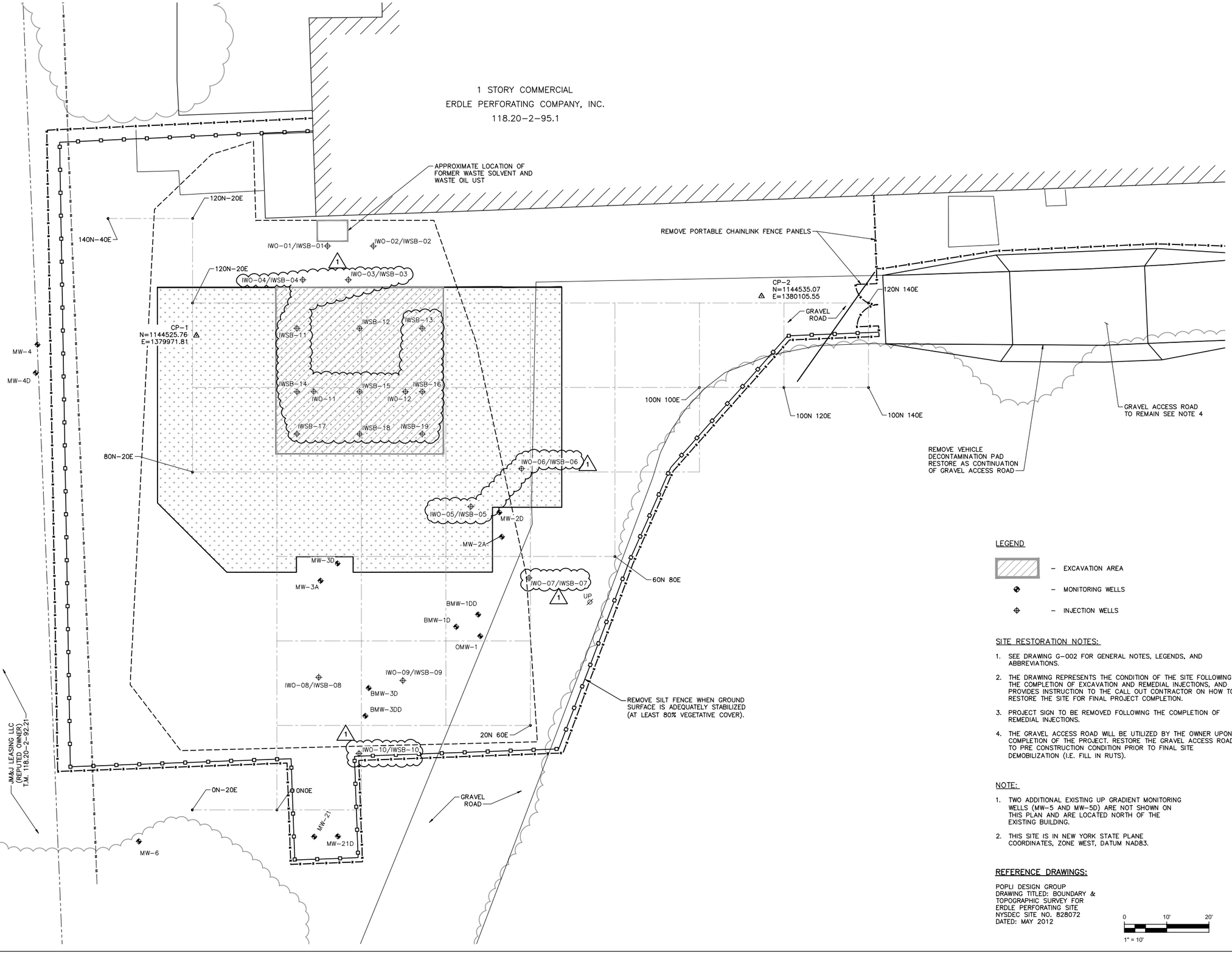
20 0 20 Feet

ERDLE PERFORATING COMPANY SITE GROUNDWATER ANALYTICAL RESULTS

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FIGURE 6

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LEGEND

- EXCAVATION AREA
- MONITORING WELLS
- INJECTION WELLS

SITE RESTORATION NOTES:

1. SEE DRAWING G-002 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.
2. THE DRAWING REPRESENTS THE CONDITION OF THE SITE FOLLOWING THE COMPLETION OF EXCAVATION AND REMEDIAL INJECTIONS, AND PROVIDES INSTRUCTION TO THE CALL OUT CONTRACTOR ON HOW TO RESTORE THE SITE FOR FINAL PROJECT COMPLETION.
3. PROJECT SIGN TO BE REMOVED FOLLOWING THE COMPLETION OF REMEDIAL INJECTIONS.
4. THE GRAVEL ACCESS ROAD WILL BE UTILIZED BY THE OWNER UPON COMPLETION OF THE PROJECT. RESTORE THE GRAVEL ACCESS ROAD TO PRE CONSTRUCTION CONDITION PRIOR TO FINAL SITE DEMOBILIZATION (I.E. FILL IN RUTS).

NOTE:

1. TWO ADDITIONAL EXISTING UP GRADIENT MONITORING WELLS (MW-5 AND MW-5D) ARE NOT SHOWN ON THIS PLAN AND ARE LOCATED NORTH OF THE EXISTING BUILDING.
2. THIS SITE IS IN NEW YORK STATE PLANE COORDINATES, ZONE WEST, DATUM NAD83.

REFERENCE DRAWINGS:

POPLI DESIGN GROUP
DRAWING TITLED: BOUNDARY & TOPOGRAPHIC SURVEY FOR ERDLE PERFORATING SITE
NYSDEC SITE NO. 828072
DATED: MAY 2012

0 10' 20'
1" = 10'

NEW YORK STATE | Department of Environmental Conservation

PROJECT NAME:
ERDLE PERFORATING SITE
ID No. 828072

100 PIXLEY INDUSTRIAL PARKWAY
GATES, NEW YORK

STANDBY INVESTIGATION AND REMEDIATION
CONTRACT C100116
LABELLA ASSOCIATES, D.P.C.

Engineer:
AECOM
50 LAKEFRONT BLVD.
SUITE 111
BUFFALO, NEW YORK 14202
T: 716.856.5636

Seal and Signature:

REV. NO.	DATE:	REVISION:
1	6/2/26	UPDATED INJECTION WELL LOCATIONS

Sheet title:
ERDLE PERFORATING RESTORATION PLAN

Scale: AS SHOWN

Date:	JUNE 2026
Project No.:	60644886
Dwg By:	EJH
Chk By:	C. DUSEL
Project Engineer:	C. Pawlewski / L. Hunka

FIGURE 7

L:\DCS\Projects\60644886_ErdlePe_RD\900_CAD_GIS\910_CAD\C-005-RI-HATCH.dwg, C-005, 1:1, 6/2/26 -1-EJH

EXISTING MONITORING WELL SUMMARY

Well ID	Well Location	NORTHING	EASTING	Well Diameter (inches)	Ground Elevation[1]	Riser Elevation[1]	Casing Elevation[1]	Depth of Monitoring Well (ft bgs.)	Measurement Point
MW-1A	On-Site	1144526.7	1380000.0	2.0	557.30	NA	560.62	10.0	TOC
MW-1D	On-Site	1144532.3	1380000.0	4.0	556.49	558.91	559.07	26.5	TOR
MW-1DD	On-Site	1144529.2	1379994.8	4.0	557.22	558.30	558.42	41.7	TOR
MW-2A	On-Site	1144478.1	1380044.1	2.0	559.37	NA	559.76	10.0	TOC
MW-2D	On-Site	1144483.9	1380043.5	6.0	556.37	557.32	557.32	22.0	TOR
MW-3A	On-Site	1144467.7	1380001.2	2.0	555.37	NA	559.04	10.0	TOC
MW-3D	On-Site	1144471.8	1380005.2	6.0	555.75	556.87	556.87	20.3	TOR
MW-4	On-Site	1144523.6	1379934.2	2.0	555.41	556.94	557.06	9.5	TOR
MW-4D	On-Site	1144516.9	1379933.8	6.0	555.46	NA	557.51	22.1	TOC
MW-5	Upgradient	1144941.1	1380028.0	2.0	555.00	554.76	555.00	7.8	TOR
MW-5D	Upgradient	1144939.1	1380032.8	6.0	555.16	555.36	555.36	NA	TOR
MW-6	On-Site	1144406.0	1379958.2	2.0	554.72	556.36	556.34	10.1	TOR
MW-6D	On-Site	1144340.7	1379960.1	4.0	553.76	555.67	555.67	25.6	TOR
MW-7	On-Site	1144312.6	1380014.1	2.0	553.89	556.24	556.48	17.0	TOR
MW-7D	On-Site	1144316.0	1380009.1	4.0	553.70	555.49	555.49	27.1	TOR
MW-8	Downgradient	1144077.7	1379996.2	2.0	565.37	566.80	566.73	27.9	TOR
MW-8D	Downgradient	1144079.8	1380000.2	4.0	565.25	566.65	566.65	38.7	TOR
MW-9	Downgradient	1144035.0	1379910.9	2.0	567.01	568.91	568.86	30.2	TOR
MW-9D	Downgradient	1144036.5	1379916.4	4.0	566.76	568.86	568.86	48.0	TOR
MW-10	Downgradient	1144352.3	1379863.4	2.0	553.86	556.90	557.03	17.0	TOR
MW-11	Downgradient	1143571.4	1380264.4	2.0	553.55	556.60	556.75	13.3	TOR
MW-11D	Downgradient	1143564.8	1380271.7	4.0	554.05	555.09	557.81	23.7	TOR
MW-12	Downgradient	1143932.8	1380455.6	2.0	554.66	557.60	557.74	12.0	TOR
MW-13	Downgradient	1143217.5	1380158.8	2.0	553.71	553.40	553.79	7.8	TOR
MW-13D	Downgradient	1143215.3	1380165.4	2.0	553.57	553.33	553.63	12.3	TOR
MW-13DD	Downgradient	1143220.3	1380149.2	2.0	553.55	553.33	553.60	40.1	TOR
MW-14	Downgradient	1143172.6	1379837.7	2.0	552.88	552.64	553.01	16.2	TOR
MW-14D	Downgradient	1143170.4	1379836.0	2.0	552.96	552.78	552.97	33.8	TOR
MW-15	Downgradient	1143189.0	1380373.6	2.0	553.18	553.11	553.30	6.5	TOR
MW-15D	Downgradient	1143190.4	1380376.0	2.0	553.22	553.09	553.28	23.9	TOR
MW-16	Downgradient	1143362.1	1380725.0	2.0	553.94	553.78	553.96	8.9	TOR
MW-16D	Downgradient	1143396.4	1380733.8	2.0	553.94	553.64	553.97	22.2	TOR
MW-17	Downgradient	1143645.5	1380795.9	2.0	553.88	553.43	553.95	7.7	TOR
MW-17D	Downgradient	1143644.6	1380799.9	2.0	554.01	553.73	554.09	23.2	TOR
MW-18	Downgradient	1142854.1	1380205.6	2.0	552.34	551.84	552.25	10.9	TOR
MW-18D	Downgradient	1142854.3	1380200.7	2.0	552.28	551.72	552.23	22.8	TOR
MW-19	Downgradient	1142686.5	1380552.2	2.0	552.03	551.55	551.95	7.2	TOR
MW-19D	Downgradient	1142690.2	1380555.5	2.0	551.98	551.43	552.02	19.5	TOR
MW-20	Downgradient	1142988.1	1380691.8	2.0	553.62	553.39	553.70	6.8	TOR
MW-20D	Downgradient	1142981.0	1380694.6	2.0	553.59	553.39	553.64	20.9	TOR
MW-21	On-Site	1144407.1	1379999.7	2.0	554.10	NA	557.44	12.7	TOC
MW-21D	On-Site	1144407.2	1380005.3	2.0	554.41	NA	557.81	22.0	TOC
GPZ-1S1	Downgradient	1143878.9	1379994.7	1.0	552.70	554.91	NA	8.6	TOR
GPZ-1D	Downgradient	1143873.0	1379997.9	1.0	552.99	555.50	NA	15.5	TOR
GPZ-2S1	Downgradient	1143971.4	1379807.5	1.0	562.79	565.01	NA	16.6	TOR
GPZ-2D	Downgradient	1143969.1	1379805.7	1.0	562.38	564.88	NA	27.5	TOR
GPZ-5S	Downgradient	1144115.6	1380061.4	1.0	563.99	566.94	NA	20.0	TOR
GPZ-5D	Downgradient	1144113.7	1380058.4	1.0	564.08	566.98	NA	29.1	TOR
GPZ-6S	Downgradient	1144151.9	1380168.9	1.0	563.72	564.14	NA	20.1	TOR
GPZ-6D	Downgradient	1144150.6	1380165.8	1.0	564.25	566.74	NA	28.4	TOR
GPZ-7S	On-Site	1144404.7	1380172.4	1.0	557.95	560.57	NA	NA	TOR
GPZ-7D	On-Site	1144402.0	1380171.2	1.0	557.82	560.37	NA	NA	TOR
* OMW-1	On-Site	1144454.6	1380039.0	2.0	555.41	558.06	558.06	13.8	TOR
* BMW-1D	On-Site	1144456.8	1380033.3	2.0	555.56	557.44	557.44	31.0	TOR
* BMW-1DD	On-Site	1144459.7	1380038.5	2.0	555.53	557.65	557.65	42.0	TOR
* OMW-2	On-Site	1144504.6	1380009.6	2.0	556.41	556.19	556.41	14.0	TOR
* BMW-2D	On-Site	1144495.5	1380008.6	2.0	556.13	555.92	556.13	31.0	TOR
* BMW-2DD	On-Site	1144499.5	1380008.8	2.0	556.21	555.95	556.21	42.0	TOR
* BMW-3D	On-Site	1144442.3	1380012.6	2.0	555.26	557.60	557.60	31.0	TOR
* BMW-3DD	On-Site	1144435.7	1380011.8	2.0	555.13	557.71	557.71	42.0	TOR

NOTES:

* WELLS SURVEYED BY AECOM – NORTHING/EASTING = NORTH AMERICAN DATUM 83/96 – NYSPCS WEST (US SURVEY FT.)
ELEVATIONS = NORTH ATLANTIC VERTICAL DATUM 88 (US SURVEY FT.)
SOURCE FOR EXISTING MONITORING WELL DATA MACTEC ENGINEERING AND CONSULTING P.C. 2017
TOR/TOC = FROM TOP OF RISER OR TOP OF CASING
SCREEN DETAILS (I.E., TOP, BOTTOM, ETC.) WERE NOT AVAILABLE FOR THE MAJORITY OF THE WELLS; NA = NOT AVAILABLE

PERFORMANCE MONITORING SCHEDULE AND SAMPLING SUMMARY

ACTIVITY	FIELD ANALYSIS – PERFORMANCE MONITORING						SAMPLE COLLECTION AND LABORATORY ANALYSIS FOR EVALUATION		NUMBER OF WELLS
FREQUENCY	FOLLOWING 1ST AND 2ND INJECTION EVENTS (EVERY 4 WEEKS)			QUARTERLY			PRIOR TO 1ST AND 2ND INJECTION EVENT	POST–REMEDIATION FOLLOWING 1ST AND 2ND INJECTION EVENTS	
	MONTH 1	MONTH 2	MONTH 3						
	WEEK 4	WEEK 8	WEEK 12	6 MONTHS	9 MONTHS	12 MONTHS	ONCE	TWICE	
GROUNDWATER MONITORING WELLS									
VOCs BY SW846 8260C							X	X	22
TOTAL AND DISSOLVED METALS BY SW846 6010D							X	X	22
CHLORIDE BY USEPA 300							X	X	22
NITRATE–NITROGEN BY USEPA 300							X	X	22
METHANE & ETHANE BY RSK 175							X	X	22
SULFIDE BY USEPA 376.1							X	X	22
SULFATE BY USEPA 300.0							X	X	22
ALKALINITY BY SM 2320B							X	X	22
INJECTION WELLS AND GROUNDWATER MONITORING WELLS									
GROUNDWATER ELEVATION	X	X	X	X	X	X	X	X	51
FIELD PARAMETERS: TEMPERATURE									
pH, CONDUCTIVITY, DO, ORP, TURBIDITY, NAPL	X	X	X	X	X	X	X	X	51

MONITORING WELLS FOR LABORATORY SAMPLING AND ANALYSIS

NOTES:

1. THE CALL OUT CONTRACTOR SHALL ALSO PERFORM THE PRE–INJECTION SAMPLING EVENT DESCRIBED IN SPECIFICATIONS.
2. INJECTION WELLS FOR FIELD ANALYSIS (TOTAL OF 29) IWO–01 THROUGH IWO–10, IWSB–01 THROUGH IWSB–19
3. THE INDEPENDENT TESTING LABORATORY HIRED BY THE CALL OUT CONTRACTOR SHALL COMPLETE BATCH QUALITY CONTROL ON THE ANALYTICAL SAMPLES LISTED IN THE PERFORMANCE MONITORING SCHEDULE AND SAMPLING SUMMARY TABLE.

DELIVERY SUMMARY
WELL AND REAGENT INJECTION SCHEDULE

TCE PLUME AREA	OVERBURDEN		SHALLOW BEDROCK	
	1ST EVENT	2ND EVENT	1ST EVENT	2ND EVENT
NUMBER OF INJECTION LOCATIONS	12	12	19	19
1 TOTAL VOLUME OF EOS 100% SOLUTION (GAL) – 12 OVERBURDEN WELLS/ 19 BEDROCK WELLS TOTAL	990		440	
1 TOTAL VOLUME OF EOS 20% SOLUTION (GAL) – 12 OVERBURDEN WELLS/ 19 BEDROCK WELLS	1 4,950		2,200	
TOTAL VOLUME EOS 20% SOLUTION (GAL) PER WELL	206	206	58	58
TOTAL VOLUME OF DISTRIBUTION WATER (GAL)	1 13,003	13,003	1,166	1,166
VOLUME OF DISTRIBUTION WATER (GAL) PER WELL	1,084	1,084	61	61
DURATION OF INJECTION PER EVENT (ASSUMING INJECTION RATE OF 5 GPM FOR OVERBURDEN WELLS AND 3 GPM FOR BEDROCK WELLS)	43	43	23	23

SOIL AND CONTACT WATER SAMPLING SCHEDULE

MATRIX	FREQUENCY	ANALYSIS	ANALYTICAL METHOD
SOIL	1 PER 500 CY	VOC's	USEPA SW–846 METHOD 8260D
		FULL TCLP	USEP SW–846 METHOD 1311
		HERBICIDES/PESTICIDES	
		RCRA Characteristics	
		PCB's	
		PERCENT SOLIDS	
CONTACT WATER	1 PER BAKER TANK	VOC's	USEPA SW–846 METHOD 8260D

EVO BEDROCK WELL INJECTION SCHEDULE

WELL #	EVO INJECTION VOLUME 20% SOLUTION (GAL)	VOLUME OF DISTRIBUTION WATER (GAL)
IWSB–01	58	61
IWSB–02	58	61
IWSB–03	58	61
IWSB–04	58	61
IWSB–05	58	61
IWSB–06	58	61
IWSB–07	58	61
IWSB–08	58	61
IWSB–09	58	61
IWSB–10	58	61
IWSB–11	58	61
IWSB–12	58	61
IWSB–13	58	61
IWSB–14	58	61
IWSB–15	58	61
IWSB–16	58	61
IWSB–17	58	61
IWSB–18	58	61
IWSB–19	58	61

EVO OVERBURDEN WELL INJECTION SCHEDULE

WELL #	EVO INJECTION VOLUME 20% SOLUTION (GAL)	VOLUME OF DISTRIBUTION WATER (GAL)
IWO–01	206	1,084
IWO–02	206	1,084
IWO–03	206	1,084
IWO–04	206	1,084
IWO–05	206	1,084
IWO–06	206	1,084
IWO–07	206	1,084
IWO–08	206	1,084
IWO–09	206	1,084
IWO–10	206	1,084
1 IWO–11	206	1,084
1 IWO–12	206	1,084

Department of Environmental Conservation

PROJECT NAME:
ERDLE PERFORATING SITE
ID No. 828072

100 PIXLEY INDUSTRIAL PARKWAY
GATES, NEW YORK

STANDBY INVESTIGATION
AND REMEDIATION
CONTRACT C100116
LABELLA ASSOCIATES, D.P.C.

Engineer:
AECOM
50 LAKEFRONT BLVD.
SUITE 111
BUFFALO, NEW YORK 14202
T: 716.856.5636

Seal and Signature:

REV. NO.	DATE:	REVISION:
1	6/2/26	UPDATED INJECTION QUANTITIES

Sheet title:

SCHEDULES AND SAMPLING SUMMARIES

Scale: NONE

Date: JUNE 2026
Project No.: 60644886
Dwg By: EJH
Chk By: C. DUSEL
Project Engineer: C. Pawlewski / L. Hunka

FIGURE 8

L:\DCS\Projects\60644886_ErdlePe_RD\900_CAD_GIS\910_CAD\C-007-R1.dwg, C-007, 1:1, 6/2/26--1--EJH

Appendix A: Safety Data Sheets

EOS Remediation, LLC

EOS PRO

SAFETY DATA SHEET

Section 1: Identification	
Product Name:	**EOS Pro**
Chemical Description:	Mixture; vegetable oil emulsion
Manufacturer:	EOS Remediation PO Box 14266 Research Triangle Park NC 27709 (P): 919-873-2204 www.eosremediation.com
Recommended Use:	Groundwater bioremediation (environmental applications)
Restricted Use:	Not for human consumption.
24-Hour Emergency Contact:	ChemTel: United States (P): 800-255-3924 ChemTel: International (P): 813-248-0585

Section 2: Hazard(s) Identification	
Hazard Classification:	Irritant (skin and eye)
Signal Word:	Warning
Hazard Statement(s):	Potential eye and skin irritant.
Pictograms:	
Precautionary Statement(s):	Not for human consumption. Do not store near excessive heat or oxidizers. Avoid contact with eyes and skin. Wear protective gloves and eye protection.

Section 3: Composition/Information on Ingredients		
Common Name(s)	**CAS NO.**	**% by Weight**
Soybean Oil	8001-22-7	60
Food Grade Emulsifiers Trade Secret[1,2]	111-03-5	10
Soluble Substrates (glycerol) Trade Secret[1,2]	56-81-5	4
Water	7732-18-5	26

1 – The precise composition of this product is proprietary information. A more complete disclosure will be provided to a physician in the event of a medical emergency.
2 – The soluble substrates and emulsifiers are generally recognized as safe for food contact.

Section 4: First-Aid Measures	
Routes of Exposure	**Emergency First-Aid Procedures**
Inhalation	Remove to fresh air.
Eye Contact	Flush with water for 15 minutes; if irritation persists see a physician.
Skin Contact	Wash with mild soap and water.
Ingestion	Product is non-toxic. If nausea occurs, induce vomiting and seek medical attention.

Section 5: Fire-Fighting Measures	
Extinguishing Media:	CO_2, foam, dry chemical Note: Water, fog and foam may cause frothing and spattering.
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus and chemical resistant clothing. Use water spray to cool fire exposed containers.
Fire Hazard(s):	Burning will cause oxides of carbon.

Section 6: Accidental Release Measures	
Personal Precautions:	Avoid contact with eyes and skin. Do not consume.
Emergency Procedures:	N/A
Methods & Materials used for Containment:	Compatible granular absorbent
Cleanup Procedures:	Spread compatible granular absorbent over spill area and sweep using broom and pan; dispose in appropriate receptacle. Clean area with water.

Section 7: Handling and Storage	
Safe Handling & Storage:	Do not store near excessive heat or oxidizers.
Other Precautions:	Consumption of food and beverages should be prevented in work area where product is being used. After handling product, always wash hands and face thoroughly with soap and water before eating, drinking, or smoking.

Section 8: Exposure Controls/Personal Protection		
Exposure Limits		
OSHA PEL:	NE	
ACGIH TLV:	NE	
NIOSH REL:	NE	
Personal Protective Measures		
Respiratory Protection:	Not normally required. P95 respirator if aerosols might be generated.	
Hand Protection:	Protective gloves are recommended	
Eye Protection:	Recommended	
Engineering Measures:	Local exhaust ventilation if aerosols are generated	
Hygiene Measures:	Wash promptly with soap & water if skin becomes irritated from contact.	
Other Protection:	Wear appropriate clothing to prevent skin contact.	

Section 9: Physical and Chemical Properties			
Appearance:	White Liquid	Explosive Limits:	NE
Odor:	Vegetable Oil	Vapor Pressure:	NE
Odor Threshold:	NE	Vapor Density:	Heavier than air
pH:	6.0-7.0 (su)	Relative Density:	0.96-0.98
Melting Point/Freezing Point:	Liquid at room temperature	Solubility:	Dispersible
Boiling Point:	212°F (100°C)	Partition coefficient:	NE
Flash Point:	>300°F (149°C)	Auto-ignition Temperature:	NE
Evaporation Rate:	NE	Decomposition Temperature:	N/A
Flammability (solid, gas):	NE	Viscosity:	500-1500 cP

NE – Not Established

Section 10: Stability and Reactivity	
Stability:	Stable
Incompatibility:	Strong acids and oxidizers
Hazardous Decomposition Products:	Thermal decomposition may produce oxides of carbon
Hazardous Reactions/Polymerization:	Will not occur
Conditions to Avoid:	None known

Section 11: Toxicological Information		
Likely Routes of Exposure:		Ingestion, dermal and eye contact
Signs and Symptoms of Exposure:		None known
Health Hazards		
	Acute:	Potential eye and skin irritant
	Chronic:	None known
Carcinogenicity		
	NTP:	No
	IARC:	No
	OSHA:	No

Section 12: Ecological Information (non-mandatory)
There is no data on the ecotoxicity of this product.

Section 13: Disposal Considerations (non-mandatory)	
Waste Disposal Methods:	Dispose of according to Federal and local regulations for non-hazardous waste. Recycle, if practical.

Section 14: Transport Information (non-mandatory)
The product is not covered by international regulation on the transport of dangerous goods.
No transport warning required.

Section 15: Regulatory Information (non-mandatory)
N/A

Section 16: Other Information	
Date of Preparation:	29 May 2014
Last Modified Date:	27 June 2019
The information contained herein is based on available data and is believed to be correct. However, EOS Remediation, LLC makes no warranty, expressed or implied, regarding the accuracy of this data or the results to be obtained thereof. This information and product are furnished on the condition that the person receiving them shall make his/her own determination as to the suitability of the product for his/her particular purpose.	