

Notice: Use this form to request a **written response (on agency letterhead)** from the Department of Natural Resources (DNR) regarding technical assistance, a post-closure change to a site, a specialized agreement or liability clarification for Property with known or suspected environmental contamination. A fee will be required as is authorized by s. 292.55, Wis. Stats., and NR 749, Wis. Adm. Code., unless noted in the instructions below. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31 - 19.39, Wis. Stats.].

Definitions

"Property" refers to the subject Property that is perceived to have been or has been impacted by the discharge of hazardous substances.

"Liability Clarification" refers to a written determination by the Department provided in response to a request made on this form. The response clarifies whether a person is or may become liable for the environmental contamination of a Property, as provided in s. 292.55, Wis. Stats.

"Technical Assistance" refers to the Department's assistance or comments on the planning and implementation of an environmental investigation or environmental cleanup on a Property in response to a request made on this form as provided in s. 292.55, Wis. Stats.

"Post-closure modification" refers to changes to Property boundaries and/or continuing obligations for Properties or sites that received closure letters for which continuing obligations have been applied or where contamination remains. Many, but not all, of these sites are included on the GIS Registry layer of RR Sites Map to provide public notice of residual contamination and continuing obligations.

Select the Correct Form

This form should be used to request the following from the DNR:

- Technical Assistance
- Liability Clarification
- Post-Closure Modifications
- Specialized Agreements (tax cancellation, negotiated agreements, etc.)

Do not use this form if one of the following applies:

- Request for an **off-site liability exemption or clarification** for Property that has been or is perceived to be contaminated by one or more hazardous substances that originated on another Property containing the source of the contamination. Use DNR's Off-Site Liability Exemption and Liability Clarification Application Form 4400-201.
- Submittal of an Environmental Assessment for the **Lender Liability Exemption**, s 292.21, Wis. Stats., **if no response or review by DNR is requested**. Use the Lender Liability Exemption Environmental Assessment Tracking Form 4400-196.
- Request for an **exemption to develop on a historic fill site** or licensed landfill. Use DNR's Form 4400-226 or 4400-226A.
- **Request for closure** for Property where the investigation and cleanup actions are completed. Use DNR's Case Closure - GIS Registry Form 4400-202.

All forms, publications and additional information are available on the internet at: dnr.wi.gov/topic/Brownfields/Pubs.html.

Instructions

1. Complete sections 1, 2, 6 and 7 for all requests. Be sure to provide adequate and complete information.
2. Select the type of assistance requested: Section 3 for technical assistance or post-closure modifications, Section 4 for a written determination or clarification of environmental liabilities; or Section 5 for a specialized agreement.
3. Include the fee payment that is listed in Section 3, 4, or 5, unless you are a "Voluntary Party" enrolled in the Voluntary Party Liability Exemption Program **and** the questions in Section 2 direct otherwise. Information on to whom and where to send the fee is found in Section 8 of this form.
4. Send the completed request, supporting materials and the fee to the appropriate DNR regional office where the Property is located. See the map on the last page of this form. A paper copy of the signed form and all reports and supporting materials shall be sent with an electronic copy of the form and supporting materials on a compact disk. For electronic document submittal requirements see: <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>

The time required for DNR's determination varies depending on the complexity of the site, and the clarity and completeness of the request and supporting documentation.

Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

Form 4400-237 (R 12/18)

Page 2 of 6

Section 1. Contact and Recipient Information

Requester Information

This is the person requesting technical assistance or a post-closure modification review, that his or her liability be clarified or a specialized agreement and is identified as the requester in Section 7. DNR will address its response letter to this person.

Last Name Wisnieweski	First Steve	MI	Organization/ Business Name Millennium Forms
Mailing Address 550 East Centralia Street		City Elkhorn	State WI
		ZIP Code 53121	
Phone # (include area code) (262) 723-7778	Fax # (include area code)	Email sw@millenniumforms.com	

The requester listed above: (select all that apply)

- Is currently the owner
 Is considering selling the Property
 Is renting or leasing the Property
 Is considering acquiring the Property
 Is a lender with a mortgagee interest in the Property
 Other. Explain the status of the Property with respect to the applicant:

Contact Information (to be contacted with questions about this request)

Select if same as requester

Contact Last Name Reese	First Christine	MI	Organization/ Business Name The Reese Group, LLC
Mailing Address 1433 N Water Street, Ste 400		City Milwaukee	State WI
		ZIP Code 53202	
Phone # (include area code) (414) 326-4875	Fax # (include area code)	Email treese@the-reese-group.com	

Environmental Consultant (if applicable)

Contact Last Name Reese	First Christine	MI	Organization/ Business Name The Reese Group, LLC
Mailing Address 1433 N Water Street, Ste 400		City Milwaukee	State WI
		ZIP Code 53202	
Phone # (include area code) (414) 326-4875	Fax # (include area code)	Email treese@the-reese-group.com	

Property Owner (if different from requester)

Contact Last Name Hauck	First Walter	MI	Organization/ Business Name Millennium Forms
Mailing Address 550 E Centralia Street		City Elkhorn	State WI
		ZIP Code 53121	
Phone # (include area code) (232) 723-7778	Fax # (include area code)	Email wh@millenniumforms.com	

Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

Form 4400-237 (R 12/18)

Page 3 of 6

Section 2. Property Information

Property Name Millennium Forms		FID No. (if known)	
BRRTS No. (if known) 02-65-587693		Parcel Identification Number	
Street Address 550 East Centralia Street		City Elkhorn	State WI
			ZIP Code 53121
County Walworth	Municipality where the Property is located <input checked="" type="radio"/> City <input type="radio"/> Town <input type="radio"/> Village of Walworth	Property is composed of: <input type="radio"/> Single tax parcel <input checked="" type="radio"/> Multiple tax parcels	Property Size Acres 5

1. Is a response needed by a specific date? (e.g., Property closing date) Note: Most requests are completed within 60 days. Please plan accordingly.

No Yes

Date requested by: _____

Reason:

2. Is the "Requester" enrolled as a Voluntary Party in the Voluntary Party Liability Exemption (VPLE) program?

No. **Include the fee that is required for your request in Section 3, 4 or 5.**

Yes. **Do not include a separate fee.** This request will be billed separately through the VPLE Program.

Fill out the information in Section 3, 4 or 5 which corresponds with the type of request:

Section 3. Technical Assistance or Post-Closure Modifications;

Section 4. Liability Clarification; or Section 5. Specialized Agreement.

Section 3. Request for Technical Assistance or Post-Closure Modification

Select the type of technical assistance requested: **[Numbers in brackets are for WI DNR Use]**

- No Further Action Letter (NFA) (Immediate Actions) - NR 708.09, [183] - **Include a fee of \$350.** Use for a written response to an immediate action after a discharge of a hazardous substance occurs. Generally, these are for a one-time spill event.
- Review of Site Investigation Work Plan - NR 716.09, [135] - **Include a fee of \$700.**
- Review of Site Investigation Report - NR 716.15, [137] - **Include a fee of \$1050.**
- Approval of a Site-Specific Soil Cleanup Standard - NR 720.10 or 12, [67] - **Include a fee of \$1050.**
- Review of a Remedial Action Options Report - NR 722.13, [143] - **Include a fee of \$1050.**
- Review of a Remedial Action Design Report - NR 724.09, [148] - **Include a fee of \$1050.**
- Review of a Remedial Action Documentation Report - NR 724.15, [152] - **Include a fee of \$350**
- Review of a Long-term Monitoring Plan - NR 724.17, [25] - **Include a fee of \$425.**
- Review of an Operation and Maintenance Plan - NR 724.13, [192] - **Include a fee of \$425.**

Other Technical Assistance - s. 292.55, Wis. Stats. [97] (For request to build on an abandoned landfill use Form 4400-226)

- Schedule a Technical Assistance Meeting - **Include a fee of \$700.**
- Hazardous Waste Determination - **Include a fee of \$700.**
- Other Technical Assistance - **Include a fee of \$700.** Explain your request in an attachment.

Post-Closure Modifications - NR 727, [181]

- Post-Closure Modifications: Modification to Property boundaries and/or continuing obligations of a closed site or Property; sites may be on the GIS Registry. This also includes removal of a site or Property from the GIS Registry. **Include a fee of \$1050, and:**
 - Include a fee of \$300 for sites with residual soil contamination; and
 - Include a fee of \$350 for sites with residual groundwater contamination, monitoring wells or for vapor intrusion continuing obligations.

Attach a description of the changes you are proposing, and documentation as to why the changes are needed (if the change to a Property, site or continuing obligation will result in revised maps, maintenance plans or photographs, those documents may be submitted later in the approval process, on a case-by-case basis).

Technical Assistance, Environmental Liability
Clarification or Post-Closure Modification Request

Form 4400-237 (R 12/18)

Page 4 of 6

Skip Sections 4 and 5 if the technical assistance you are requesting is listed above and complete Sections 6 and 7 of this form.

Section 5. Request for a Specialized Agreement

Select the type of agreement needed. Include the appropriate draft agreements and supporting materials. Complete Sections 6 and 7 of this form. More information and model draft agreements are available at: dnr.wi.gov/topic/Brownfields/lgu.html#tabx4.

- Tax cancellation agreement - s. 75.105(2)(d), Wis. Stats. [654]
 - ❖ Include a fee of \$700, and the information listed below:
 - (1) Phase I and II Environmental Site Assessment Reports,
 - (2) a copy of the Property deed with the correct legal description.
- Agreement for assignment of tax foreclosure judgement - s.75.106, Wis. Stats. [666]
 - ❖ Include a fee of \$700, and the information listed below:
 - (1) Phase I and II Environmental Site Assessment Reports,
 - (2) a copy of the Property deed with the correct legal description.
- Negotiated agreement - Enforceable contract for non-emergency remediation - s. 292.11(7)(d) and (e), Wis. Stats. [630]
 - ❖ Include a fee of \$1400, and the information listed below:
 - (1) a draft schedule for remediation; and,
 - (2) the name, mailing address, phone and email for each party to the agreement.

Section 6. Other Information Submitted

Identify all materials that are included with this request.

Send both a paper copy of the signed form and all reports and supporting materials, and an electronic copy of the form and all reports, including Environmental Site Assessment Reports, and supporting materials on a compact disk.

Include one copy of any document from any state agency files that you want the Department to review as part of this request. The person submitting this request is responsible for contacting other state agencies to obtain appropriate reports or information.

- Phase I Environmental Site Assessment Report - Date: _____
- Phase II Environmental Site Assessment Report - Date: _____
- Legal Description of Property (required for all liability requests and specialized agreements)
- Map of the Property (required for all liability requests and specialized agreements)
 - Analytical results of the following sampled media: Select all that apply and include date of collection.
 - Groundwater Soil Sediment Other medium - Describe: _____
 - Date of Collection: _____
- A copy of the closure letter and submittal materials
- Draft tax cancellation agreement
- Draft agreement for assignment of tax foreclosure judgment
- Other report(s) or information - Describe: Site Investigation Work Plan

For Property with newly identified discharges of hazardous substances only: Has a notification of a discharge of a hazardous substance been sent to the DNR as required by s. NR 706.05(1)(b), Wis. Adm. Code?

- Yes - Date (if known): _____
- No

Note: The Notification for Hazardous Substance Discharge (non-emergency) form is available at: dnr.wi.gov/files/PDF/forms/4400/4400-225.pdf.

Section 7. Certification by the Person who completed this form

- I am the person submitting this request (requester)
- I prepared this request for: Christine Reese
Requester Name

I certify that I am familiar with the information submitted on this request, and that the information on and included with this request is true, accurate and complete to the best of my knowledge. I also certify I have the legal authority and the applicant's permission to make this request.

**Technical Assistance, Environmental Liability
Clarification or Post-Closure Modification Request**

Form 4400-237 (R 12/18)

Page 5 of 6

Chris Rees

Signature

6/28/2021

Date Signed

Project Manager

Title

(414) 326-4875

Telephone Number (include area code)

Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

Form 4400-237 (R 12/18)

Page 6 of 6

Section 8. DNR Contacts and Addresses for Request Submittals

Send or deliver one paper copy and one electronic copy on a compact disk of the completed request, supporting materials, and fee to the region where the property is located to the address below. Contact a DNR regional brownfields specialist with any questions about this form or a specific situation involving a contaminated property. For electronic document submittal requirements see: <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>.

DNR NORTHERN REGION

Attn: RR Program Assistant
Department of Natural Resources
223 E Steinfest Rd Antigo, WI 54409

DNR NORTHEAST REGION

Attn: RR Program Assistant
Department of Natural Resources
2984 Shawano Avenue
Green Bay WI 54313

DNR SOUTH CENTRAL REGION

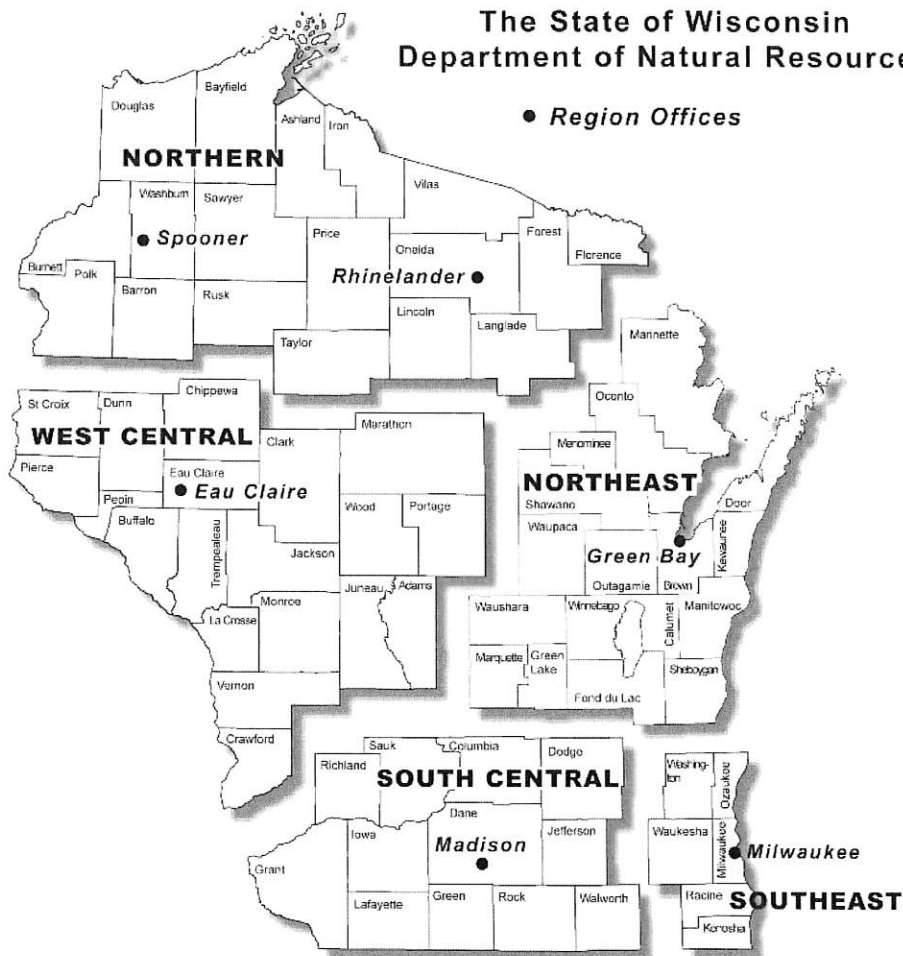
Attn: RR Program Assistant
Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg WI 53711

DNR SOUTHEAST REGION

Attn: RR Program Assistant
Department of Natural Resources
2300 North Martin Luther King Drive
Milwaukee WI 53212

DNR WEST CENTRAL REGION

Attn: RR Program Assistant
Department of Natural Resources
1300 Clairemont Ave.
Eau Claire WI 54702



Note: These are the Remediation and Redevelopment Program's designated regions. Other DNR program regional boundaries may be different.

DNR Use Only			
Date Received	Date Assigned	BRRTS Activity Code	BRRTS No. (if used)
DNR Reviewer		Comments	
Fee Enclosed? <input type="radio"/> Yes <input type="radio"/> No	Fee Amount \$	Date Additional Information Requested	Date Requested for DNR Response Letter
Date Approved	Final Determination		

June 28, 2021

Ms. Hilary Carris
Millennium Forms
550 E Centralia St
Elkhorn, WI 53121
hc@millenniumforms.com

**RE: Site Investigation Work Plan
Millennium Forms
550 E Centralia St.
Elkhorn, Wisconsin
BRRTS # 02-65-587693**

1.0 INTRODUCTION

The Reese Group, LLC has been retained to assist Millenium Forms with environmental investigation and remediation activities at the Millennium Forms property located at 550 E Centralia Street in Elkhorn, Wisconsin. This report presents a work plan to complete a Site Investigation. The information provided herein is based on the requirements of NR 716, Wisconsin Administrative Code (WAC). A NR 712.09 submittal certification is included in Appendix A.

2.0 PROJECT BACKGROUND

2.1 Site Location, Contacts and Description

The Millennium Forms Site, herein referred to as the “Site” or “Property”, includes two adjacent parcels totaling approximately 5.2 acres located at 550 E Centralia Street in the City of Elkhorn, Wisconsin including Tax Key Numbers YV SE 00009K and YV SE 00004D1. The Site is generally located in the SE ¼ of the NW ¼ of Section 6, Range 17E, Township 2N.

The following contact information is provided for the facility and environmental consultant:

Facility Representative:	Steve Wisniewski Millennium Forms 550 E Centralia Street Elkhorn, Wisconsin sw@millenniumforms.com 262-723-7778 Ext. 112
WDNR Project Manager	Jeff Ackerman Remediation and Redevelopment Program Wisconsin Department of Natural Resources 3911 Fish Hatchery Road Fitchburg, Wisconsin 53711 Jeffrey.Ackerman@wisconsin.gov 608-219-2302
Environmental Consultant	Christine (Tina) Reese, P.G. The Reese Group, LLC 1433 N Water Street, Ste 400 Milwaukee, Wisconsin 53202 treese@the-reese-group.com 414-326-4875

The Site is currently developed as an industrial manufacturing facility of stamped tiles and panel systems for commercial and residential buildings. The current production process at Millennium Forms includes the use of acids (phosphoric, chromic, and sulfuric), bases (sodium hydroxide), and other industrial chemicals for finishing and coating processes for tiles and panels.

Historically, the Site has been developed for industrial purposes including a printing plant and currently as a manufacturer of tiles/panels. Previous industries that occupied the property include Enerquip Electro-Polish, Elkhorn Webpress, Inc., Brown Printing Company – Woodstock Division (Elkhorn Plant), and Millennium Forms. Chemicals associated with former printing operations include inks, solvents, adhesives, and methyl ethyl ketone. Listed Hazardous Wastes produced by the former Brown Printing Company included waste codes D001 (ignitable wastes), F003 (non-halogenated solvents), F005 (non-halogenated solvents), D018 (benzene), and D035 (methyl ethyl ketone (MEK)).

The Site is bordered to the north and east by residential neighborhoods and Interstate 43, to the west by the 540 E Centralia St property (industrial development), and the south by E Centralia St. The topography is relatively flat with surface elevations ranging from approximately 990 to 1,000 feet above mean sea level (USGS, 1971). Previous environmental reports have documented

historic spills on site, remedial actions (excavation of contaminated soil), and the presence of contaminants including lubricating oil, polycyclic aromatic hydrocarbons (PAHs), and hexavalent chromium.

2.2 Geologic/Hydrogeologic Conditions

The Site location is depicted on a United States Geologic Service (USGS) topographic map included as **Figure 1**. It appears that the topography slopes toward the south/southwest, with an approximate ten (10) foot drop across the Site.

Based on information obtained during the Phase II ESA, the geology at the Property consists of asphalt, concrete and/or topsoil underlain by light to medium silty sand with gravel, light brown silt with sand, dark brown silt with sand and light brown and gray clay with little gravel.

The depth to groundwater is shallow, between five (5) and seven (7) feet below ground surface (bgs) in the three temporary monitoring wells installed at the Property. Based on the topography at the Site and hydrogeologic information identified by others during a site investigation on a nearby facility located at 501 and 503 E Centralia Street, groundwater flow on the Property is toward the south/southwest.

2.3 Summary of Previous Investigations

TRG conducted a review of historical environmental site investigation and remediation reports that were provided by the client and/or available on the Wisconsin Department of Natural Resources (WDNR) BRRTS on the Web online database for contaminated sites in the State of Wisconsin. Three previous BRRTS cases were identified for the subject property including:

- 1. 04-65-044291 550 E CENTRALIA ST [HISTORIC SPILL]** – Closed Historic SPILL case (Closed in 1989). Spill of paints, inks, and dyes reported at Elkhorn Webpress in 1989 due to after burner failure.
- 2. 02-65-152260 ELKHORN WEBPRESS INC** – Closed ERP case (Closed in 1997). Spill of unknown amount of lubricating oil/engine oil in 1997. Braun Intertec Corporation conducted a Phase 1 ESA and limited remedial investigation at the Elkhorn Webpress Site located at 550 E Centralia St in Elkhorn, WI in June of 1997. During the Phase 1 ESA, two areas of surface staining were observed near down spouts and beneath a former discharge line from air compressors. A total of four soil samples were submitted for laboratory analytical analysis from previous excavation and geoprobe/investigation activities conducted by Braun Intertec Corp. from May to July 1997. PAHs and diesel range organics (DRO) were detected in soil samples collected on site ranging from 0 to 6 ft bgs. DRO was detected at 230 mg/Kg, which exceeded the WDNR Generic RCL of 100 mg/Kg. A small remedial excavation approximately 3 ft wide by 4 ft deep was conducted in the

area of the stained soil.

- 3. 04-65-552088 MILLENIUM TILES SPILL** – Closed SPILL case (Closed in 2008). Spill of chromic and sulfuric acid on site near NE corner of building. Spill cleanup and remediation was conducted by North Shore Environmental Construction, Inc. The liquid mixture had spilled inside the building and flowed out of the northeastern corner of the building under the walls and the door of the facility. Spilled liquid was observed running off the edge of the building floor from under the walls and onto the grass, which made its way to a swale located approximately 10 to 20 ft from the building.

A remedial action was implemented and included the excavation of approximately 120 tons of impacted soil. The excavated soil was temporarily stockpiled on site, sampled for hexavalent chromium, and transported to a landfill for disposal. A total of eight (8) soil samples (MT-1 through MT-8) were collected from approximately 2-4" bgs. Hexavalent chromium ranged from 12.4 to 91.4 mg/Kg in the verification soil samples collected from the excavation area.

4. 02-65-587693 MILLENNIUM FORMS LLC, PHASE II ENVIRONMENTAL SITE ASSESSMENT

A Phase II Environmental Site Assessment was completed by The Reese Group, LLC (TRG) on behalf of Millennium Forms of the property located at 550 E Centralia Street in Elkhorn, Wisconsin. The following is a summary of the results for soil and groundwater samples collected across the Site.

Based on the laboratory analytical results of Site soil and groundwater samples the following conclusions and recommendations are made:

Soil

- RCRA metals and Hexavalent Chromium were detected in samples collected from soil boring locations TRG SB-1 and TRG SB-3.
- PAHs were detected at concentrations below regulatory standards at boring location TRG SB-1.
- VOCs were not detected in any soil sample.
- Hexavalent chromium exceeded its Non-Industrial DC RCL in two of the three soil boring locations including TRG SB-1 and TRG SB-3.

Groundwater

- VOCs, RCRA Metals and/or Hexavalent Chromium were detected in samples collected from each temporary monitoring well installed at the Site.
- PAHs were not detected in any groundwater sample.
- Arsenic and/or lead concentrations exceeded their respective PALs at sample locations TRG TW-1 and TRG TW-2.
- Chromium (total) exceeded its PAL at sample location TRG TW-2. Chromium exceeded its ES at TRG TW-3.
- Hexavalent chromium is an oxidation state of total chromium. The chromium concentrations reported in TRG-TW-2 and TRG-TW-3 are likely comprised of all hexavalent chromium.
- pH readings are elevated in samples collected from TRG TW-2 and TRG TW-3 ranging from 8.0 to 9.9.

GW RCL exceedances for Vinyl chloride were likely a result of a historical release(s) to the environment from past operations and/or historical use of solvents by former industries at the Site. The total chromium/hexavalent PAL and ES exceedances are likely related to current industrial operations.

2.4 Investigation Scoping

Based on the results of the Phase II ESA, additional work is needed to complete a site investigation. TRG proposes the following scope of work:

- Install NR-141-compliant monitoring wells to determine the magnitude and extent of contaminants of concern identified in soil and groundwater samples collected during the Phase II ESA.
- Install vapor pins to evaluate whether vapor intrusion is a concern for the Property.

The Phase II ESA identified the following constituents of concern:

Soil:

- RCRA Metals
- Hexavalent Chromium

Groundwater

- RCRA Metals
- Hexavalent Chromium
- Volatile Organic Compounds (VOCs)

To the best of the current property owners' knowledge (Millennium Forms), they are not aware of any current or historical activities on site that would have been associated with the generation, storage, or placement of PFOA/PFOS related materials or other emerging contaminants of concern such as 1,4 dioxane. As such, these compounds will not be addressed in this work plan.

3.0 OVERVIEW OF INVESTIGATION STRATEGY

This work plan presents the means and methods for conducting investigation activities at the Site. The results of the investigation will be used in conjunction with the previous investigation data and data to be collected during the site investigation activities to evaluate the extent of impacts on the Property and to develop a remediation strategy. The work plan proposes the following investigation activities:

- Advance six (6) soil borings to a depth of approximately 15 ft bgs; four borings in the vicinity of the plating process tank; one boring downgradient of the hazardous materials storage area; and, one boring in the northeast corner of the building in an area of a previous release to the environment. These borings are being advanced as part of an investigation to evaluate RCRA metals and hexavalent chromium in soil and groundwater.
- Collect one (1) round of groundwater samples to be analyzed for VOCs, RCRA metals and hexavalent chromium.
- Collect one round of sub-slab vapor samples using the high purge volume (HPV) method to evaluate the risk of vapor intrusion into the facility.
- Preparation of a site investigation report.

4.0 INVESTIGATION WORK PLAN

The following sections present a description of the work to be completed during the investigation. The contents of this section will be prepared in accordance with NR716.09 WAC.

4.1 Health and Safety

Prior to beginning the investigation, a site-specific Health and Safety Plan (HASP) will be prepared to address the planned field activities. Utility marking arrangements will be made through

Digger's Hotline (the State of Wisconsin Public Utility clearance service), and discussions with the Property owner. If conditions are encountered during site investigation activities that differ from those outlined in the HASP, the Site activities will be reevaluated to determine the appropriate actions that will ensure the health and well-being of the workers.

4.2 Soil Boring Locations

The proposed soil boring / monitoring well locations described in this work plan were selected based on information identified during the investigation scoping and known industrial processes performed onsite. The boring locations were selected to evaluate soil and/or groundwater quality in areas of known releases to the environment. Figures 3A/3B depicts the locations of the proposed soil boring well / monitoring well locations, respectively.

It should be noted that the proposed boring locations depicted on Figure 3A/3B are approximate. Changes to these locations may occur based on field conditions during site investigation activities, such as, screening results of nearby borings, impediments such as underground utilities, and above ground infrastructure.

4.3 Sample and Analysis Plan (SAP)

The soil assessment consists of physical and chemical characterization of the subsurface soil conditions. Rationale for the where and why soil samples collected from each boring is discussed below.

4.3.1 Soil Boring Location Rationale

Location *TRG SB/MW-1* was selected to evaluate groundwater quality and background contamination at the northeastern boundary of the Property in an area of a known spill.

Location *TRG SB/MW-2* is located immediately north of the process tank. It will be installed to evaluate soil and groundwater quality in the vicinity of the trench system that transports spillage from the process tank to the containment area in the vicinity of *TRG SB-3/TW-3*.

Location *TRG SB/MW-3* is located south and west of *TRG SB-3/TW-3*, a soil boring / temporary monitoring well installed during the Phase II ESA immediately west of the process tank and containment pit. *TRG SB/MW-3* will be installed to document the magnitude and extent of impacts to soil and groundwater quality downgradient of the trench system and containment area.

Location *TRG SB/MW-4* is located immediately east of the process tank. It will be installed to evaluate soil and groundwater quality in the vicinity of the trench system that transports spillage from the process tank to the containment area in the vicinity of *TRG SB-3/TW-3*.

Location *TRG SB/MW-5* is located immediately south of the process tank. It will be installed to evaluate soil and groundwater quality in the vicinity of the trench system that transports spillage from the process tank to the containment area in the vicinity of *TRG SB-3/TW-3*.

Location *TRG SB/MW-6* is located downgradient of *TRG SB-2/TW-2*. *TRG SB/MW-6* will be installed to evaluate soil and groundwater quality downgradient of the hazardous materials storage area, an area that was identified in the Phase II ESA as having impacts to both soil and groundwater.

4.3.2 Soil Quality Assessment

The soil borings will be advanced using a Geoprobe 7822 DT Track Mounted probe with 4.25" Hollow-stem Auger Drilling. Soil samples will be collected with a Macro-core Sampler using direct push techniques prior to drilling. Soil samples will be collected at 4-ft intervals at each boring location using a Geoprobe® equipped with a split-spoon sampler. Soil type, relative moisture content, color, grain size, and other physical characteristics of the samples will be documented on WDNR soil boring logs. The soil samples will also be examined for obvious signs of contamination (odor, occurrence of free product, or unusual color/texture). A photoionization detector (PID), calibrated to an isobutylene equivalent gas standard, will be used to field screen each sample for the presence of VOCs. Sample intervals will be chosen based on whether the soil exhibits any signs of contamination (e. g. obvious staining, odor, or free product) or emitted organic vapors detected by the PID above background concentrations, or at an interval immediately above the water table. Soil samples collected will be submitted to a WDNR-certified laboratory for chemical analysis.

4.3.3 Groundwater Quality Assessment

Permanent 2" Poly Vinyl Chloride (PVC) groundwater monitoring wells will be completed so that the 10 foot well screen intersects the water table. All groundwater monitoring wells will be developed and purged prior to sample collection in accordance with Ch. NR 141 WAC. Groundwater samples will be collected from the monitoring wells approximately 24 hours after development and submitted to a WDNR-approved laboratory for analysis. Water quality parameters will be measured using a YSI Multi-Meter at each sample location including pH, dissolved oxygen (DO), specific conductivity (SC), and oxidation-reduction potential (ORP).

4.3.4 Hydraulic Conductivity Testing

In-situ hydraulic conductivity testing will be completed at the six new well locations using traditional slug testing or baildown testing techniques. The purpose of hydraulic conductivity testing is to measure the ability of the aquifer to transmit water when subjected to a change in

hydraulic gradient. These data help to interpret results from the wells both in terms of plume delineation and future remedial performance.

4.3.5 Groundwater Sampling

Initially, a single round of groundwater samples will be collected from the monitoring wells. The Site Investigation data will be compared with the data generated during the Phase II ESA where temporary monitoring wells were utilized. Based on the results of the Site Investigation groundwater sampling, additional groundwater monitoring events will be conducted to comply with the Wisconsin Administrative Code NR726.09(2)(e), if required. The water level in each well will be measured using a decontaminated electronic water level meter.

Following the collection of water level measurements, groundwater samples will be collected from the wells using low-flow sampling techniques. Low-flow sampling techniques are used to collect representative water samples in the formation adjacent to the well screen while 1) reducing water turbulence which may unnecessarily volatilize contaminants; 2) reduce turbidity levels that may bias analytical results high; and 3) reduce the volume of water requiring management.

Low-flow sampling will consist of purging the groundwater at a low-flow rate (less than 150 milliliters per minute) until a set of field parameters (dissolved oxygen, temperature, pH, conductivity, oxidation-reduction potential, and turbidity) stabilize within 10 percent for three consecutive readings. Purging will be completed using a Solonist 410 peristaltic pump with dedicated polyethylene tubing, depending on the depth to water. Field parameters will be measured using a calibrated multi-parameter meter. Once the field parameters stabilize, the water sample will be collected. Nitrile gloves will be worn by the sampling personnel and discarded between each sampling location and following any activity that may produce cross-contamination.

The groundwater samples will be collected and submitted for laboratory analysis of VOCs, dissolved RCRA metals (field filtered), and hexavalent chromium. All containers and preservatives will be obtained directly from the analytical laboratory. Immediately after collection, the sample containers will be placed in a cooler with ice until shipment to the appropriate laboratory can be arranged. Standard chain-of-custody procedures will be followed throughout sample collection, storage, and shipment.

4.3.6 Sub-Slab Vapor Sampling

A High Purge Volume (HPV) method will be utilized to collect the vapor samples. Each sub-slab vapor sample will be collected in a 6-Liter Summa canister at each of the three (3) HPV sample locations. The Summa canister are equipped with a flow controller calibrated to a flow rate of 200 mL/min to collect a sample over a period of 30 minutes.

4.3.6.1 High Purge Volume Sub-Slab Vapor Sample Locations

Three (3) HPV sampling locations, as presented on **Figure 4**, will be evenly distributed within the building based on the building layout, physical placement limitations, and with the goal to thoroughly investigate soil vapor conditions beneath the areas of the Millennium Forms facility where VOCs were detected in groundwater samples.

4.3.6.2 High Purge Volume Sub-Slab Vapor Sample Collection

Due to the large size of the industrial building, the horizontal extent of the groundwater plume beneath the Millennium Forms facility, and the required sampling density for passive sampling techniques, TRG will conduct sub-slab vapor sampling using the HPV sampling methodology. Unlike conventional sub-slab sampling (which essentially provides only a “point measurement”), HPV testing allows evaluation of conditions over a broader area through removal of a larger volume of vapor from beneath the slab. This minimizes the risk of failing to identify areas of elevated vapor concentrations that may exist between and beyond probe locations. This total volume of vapor extracted (on the order of thousands of liters) is more representative of vapor conditions than using an array of traditional sub-slab sampling points (*T.A. McAlary, 2010*).

Apparatus and Methods

Two-inch diameter holes will be cored through the concrete at each of the three (3) HPV test locations. The underlying sand and fill materials will be removed to create a small sump to enhance flow. The sub-slab probe will be set in the opening through the concrete and sealed in place using modeling clay. A manifold consisting of a sample port and vacuum gauge will be connected to the HPV sampling probe. A 4-foot section of 2-inch diameter PVC pipe will be extended from this connection to provide a near-linear (consistent) flow regime for measurement of the vapor velocity and flow rate using a TSI VelociCalc/Q-Trak 7575™ Model No. 9565-P Micromanometer. The end of the sampling manifold is connected to a wet/dry vacuum to extract the sub-slab HPV air samples.

The HPV testing consists of removing vapor from beneath the floor slab at flow rates ranging from approximately 100 - 400 standard cubic feet per minute (scfm), for a period of approximately 30 minutes. During testing, the concentration of extracted VOC vapors will be monitored using a PID to provide data that will be used to assess the distribution of vapor between and beyond the probe locations. A second sampling port will be used to obtain periodic vapor screening data to monitor for VOC vapors with the PID.

Each sub-slab vapor sample will be collected in a 6-Liter Summa canister at each of the three (3) HPV sample locations. The Summa canister is equipped with a flow controller calibrated to a flow rate of 200 mL/min to collect a sample over a period of 30 minutes. Following soil gas sample collection, the Summa canisters will be appropriately packaged and shipped under chain-of-custody documentation to a WDNR-certified laboratory for analysis of VOCs using USEPA method TO-15, with reporting limits of approximately 0.5 parts per billion by volume (ppbv).

It is anticipated that leakage of air through discontinuities in the floor slab or from the aquifer material could reduce the radius of influence and dilute the extracted vapor; therefore, an assessment of the amount of leakage will be performed. This was accomplished by collecting and analyzing transient vacuum response data by cycling the extraction vacuum on and off, while recording vacuum response and recovery data at nearby sub-slab communication test points (CTPs) using a pressure transducer data logger. This data is directly analogous to monitoring drawdown versus time at a piezometer during a groundwater pumping test.

Four (4) CTPs will be placed at radial distances of approximately 10 to 30 feet from each HPV probe to monitor induced vacuum, and to assess irregularities in subsurface vapor flow as a result of building footings, equipment pads, and/or utility conduits. CTPs will consist of a piece of ¼-inch Nylaflow™ tubing sealed with modeling clay into a nominal ½-inch diameter hole drilled through the floor slab using a hammer drill. The location of the CTPs will be determined in the field.

Smoke tubes will be used to check the sealed integrity of the HPV and CTP sampling locations and to determine the flow of air from the building through obvious joints and cracks in the floor if present. Two sets of vacuum measurements will be collected during HPV testing from select CTP points using a digital micromanometer with data-logging capabilities. Each set of measurements will consist of a drawdown and recovery cycle resulting from turning the vacuum on for about one to three minutes and off again until the readings return to near-zero. The vacuum monitoring data will be used to assess the total area influenced by the HPV test at each sampling location. After all the testing was complete, the HPV and CTP points were sealed with quick setting swelling concrete.

Mathematical Analysis

Analysis of the vacuum measurement data will be conducted using semi-confined (leaky) aquifer equations (Hantush and Jacob, 1955). Transient (drawdown and recovery) vacuum response data collected during the assessment will be used to calculate the horizontal pneumatic transmissivity of the fill material beneath the floor slab, in addition to the vertical leakage factor for air flowing into the fill layer from above and/or below. The model is based on the following

assumptions: 1) the fill layer below the slab transmits vapor readily; 2) the floor slab above the fill allows a restricted but finite recharge or vertical flow; and, 3) the native soil below the sub-slab fill layer is much less permeable than the fill layer.

This mathematical analysis provides an approximation of the drawdown data that yields an underestimation value for R (Suthersan, 1996). Accordingly, and based on in-field vacuum measurements at the CTP locations, these estimations of R are considered conservative in the context of assessing the potential for vapor intrusion and occupant exposure and therefore the upper extrapolated radius of influence will be utilized as the estimated R .

This method also accounts for the potential for significant amounts of air leaks into the sub-slab material from the floor slab above and native soil below. This expected leakage is determined by the Hantush-Jacob Step Drawdown Test for Solution for Leaky Confined Aquifers (1967). The leakage factor (B) is determined by the following equation using the above calculated R :

$$B = 0.89 \cdot R$$

Where: R = radius of influence in feet
 B = leakage factor ($0.89 R$ – standard value for log extrapolated radius of influence, (Suthersan, 1996))

After calculating B , the proportion of vapor withdrawn from the subsurface as a function of the radius from which the vapors were drawn can be calculated by the following equation (T.A. McAlary, 2010):

$$Q(r)/Q_w = \frac{r}{B} K_1(r/B)$$

Where: r = distance from extraction point (r value utilized in this example is from CTP-1A).
 B = Leakage
 Q_w = discharge from extraction point
 $Q(r)$ = Flow through zone of extraction at distance (r) from extraction well
 K_1 = Modified Bessel function of the second kind of order one of (r/B) - canonical solutions of differential equations (dimensionless).

To account for dilution of the sample due to leakage, percent vapor will be calculated for each of the CTP locations and averaged to determine the overall percent vapor collected at their corresponding HPV sampling locations. The VOC results for each HPV location will then be divided by the average percent vapor collected to calculate a “corrected” sub-slab vapor concentration.

4.3.7 Analytical Parameters

The preceding sections listed the analytical parameters for the sampling activities. The following is a summary of the analytical methods:

Soil:

- RCRA Metals - EPA 6010C/7470
- Hexavalent Chromium – EPA 7196

Groundwater:

- VOCs – EPA 8260C
- Dissolved RCRA Metals – EPA 6010C/7470
- Hexavalent Chromium – EPA 7196
- pH – EPA 9040C

Sub-slab Vapor

- VOCs –EPA TO-15

4.5 Quality Control Samples

The collection of field quality control (QC) samples to ensure the reliability and validity of field and laboratory data will be conducted at the following frequencies:

Field Duplicate	One (1) sample for every 20 samples collected per matrix; Collect two separate samples from the same source and at the same location and time, place the samples in separate containers following the sample preservation procedures, if required. Each will be labeled with a unique sample identifier and submitted for the same analyses.
Trip Blank	Trip blanks will be prepared by the laboratory and submitted with the regular samples to the laboratory. The number of trip blanks will depend on the number and frequency of VOC samples to be collected. The Trip Blank containers will be maintained with the regular sample containers throughout the sampling event and returned to the laboratory with the collected samples. The Trip Blanks will never be opened in the field.

4.5 Survey

Upon completion of the soil borings, monitoring wells, and HPV monitoring points, each location will be surveyed to establish the relative vertical elevation of each based on a local benchmark using GPS (horizontal) and laser level (vertical). These surveying methods will obtain the required accuracy of 1-foot (horizontal) and 0.01 foot (vertical).

4.6 Management of Investigative Derived Waste

Soil cuttings and purge water generated during soil boring installation and groundwater monitoring activities will be containerized in 55-gallon drums and stored on-site near the loading dock ramp. It is anticipated that the waste will be managed by Millennium Forms (a zero-discharge facility) under their existing waste profiles.

4.7 Investigation Reporting

Following receipt of the soil and groundwater analytical results, TRG will prepare a site investigation report. The report will present the procedures followed during the investigation and the results of the field screening and analytical testing. The Site Investigation report will incorporate all relevant existing data. The soil and groundwater data will be compared to their respective Direct Contact and Protection of Groundwater Residual Contaminant Level (RCL) and NR140 groundwater preventive action limits and enforcement standards.

Copies of all soil borings logs, well construction, well development, and borehole abandonment forms, and laboratory analytical reports will be included in appendices.

Please contact me at 414-326-4875 or treese@the-reese-group.com if you have any questions or require additional information regarding our submission.

Sincerely,

THE REESE GROUP, LLC



Christine A Reese, P.G.
President

FIGURES

Figure 1 – Project Location Map

Figure 2 – Detailed Site Map

Figure 3A – Proposed Soil Boring Locations

Figure 3B - Proposed Monitoring Well Locations

Figure 4 – Proposed Vapor Pin Sampling Locations

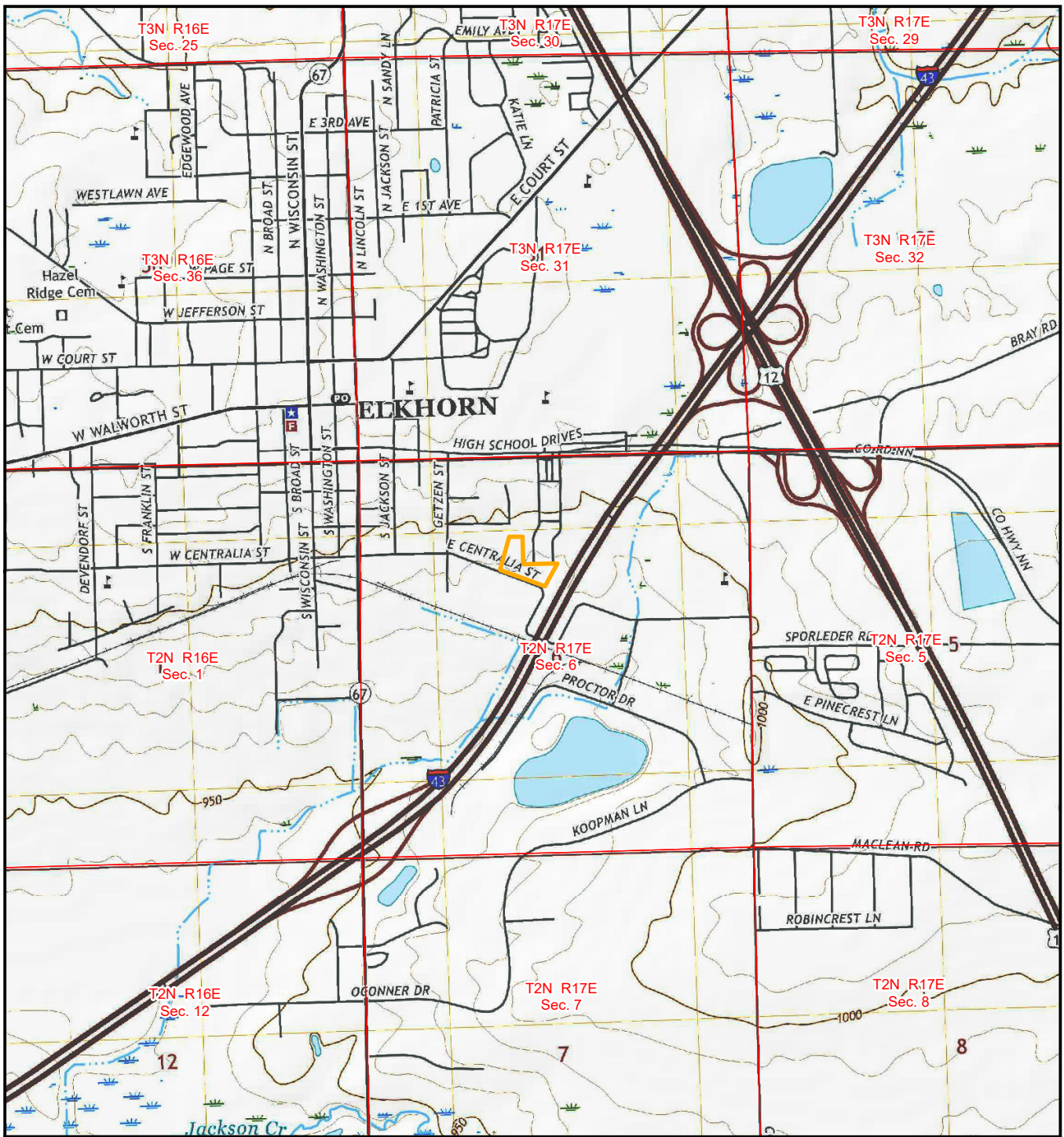
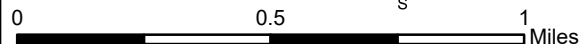


Figure 1 - Project Location

**550 E Centralia St.
Elkhorn, Wisconsin**

- Site Boundary
- Section

1:24,000



Source: Elkhorn, WI 2018
USGS 7.5' series topographic map





Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

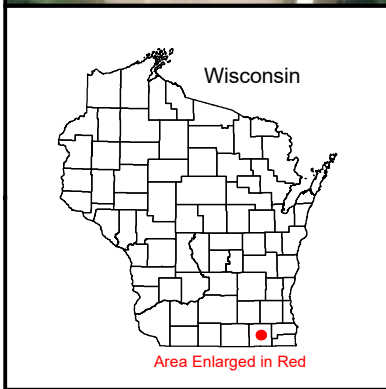
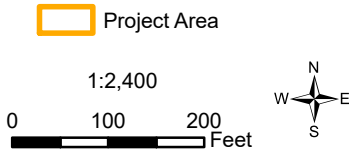
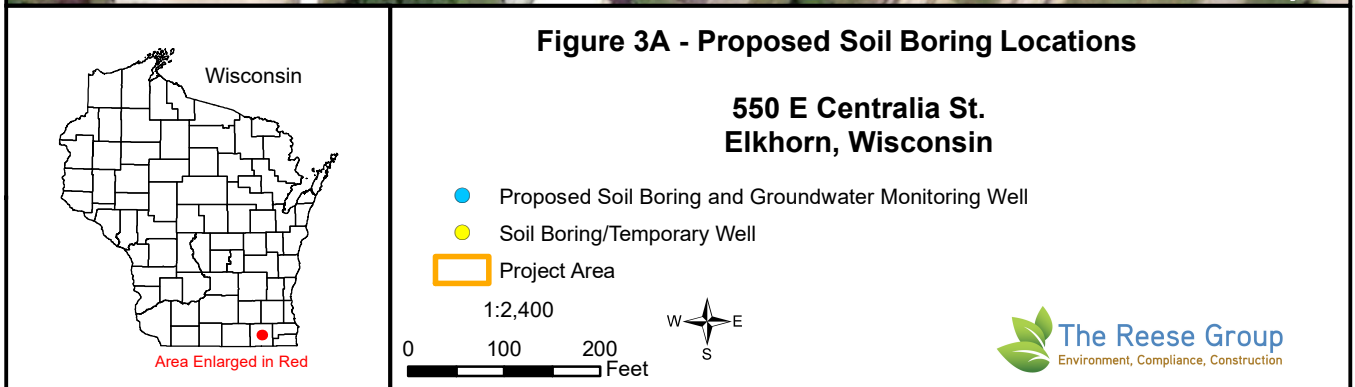
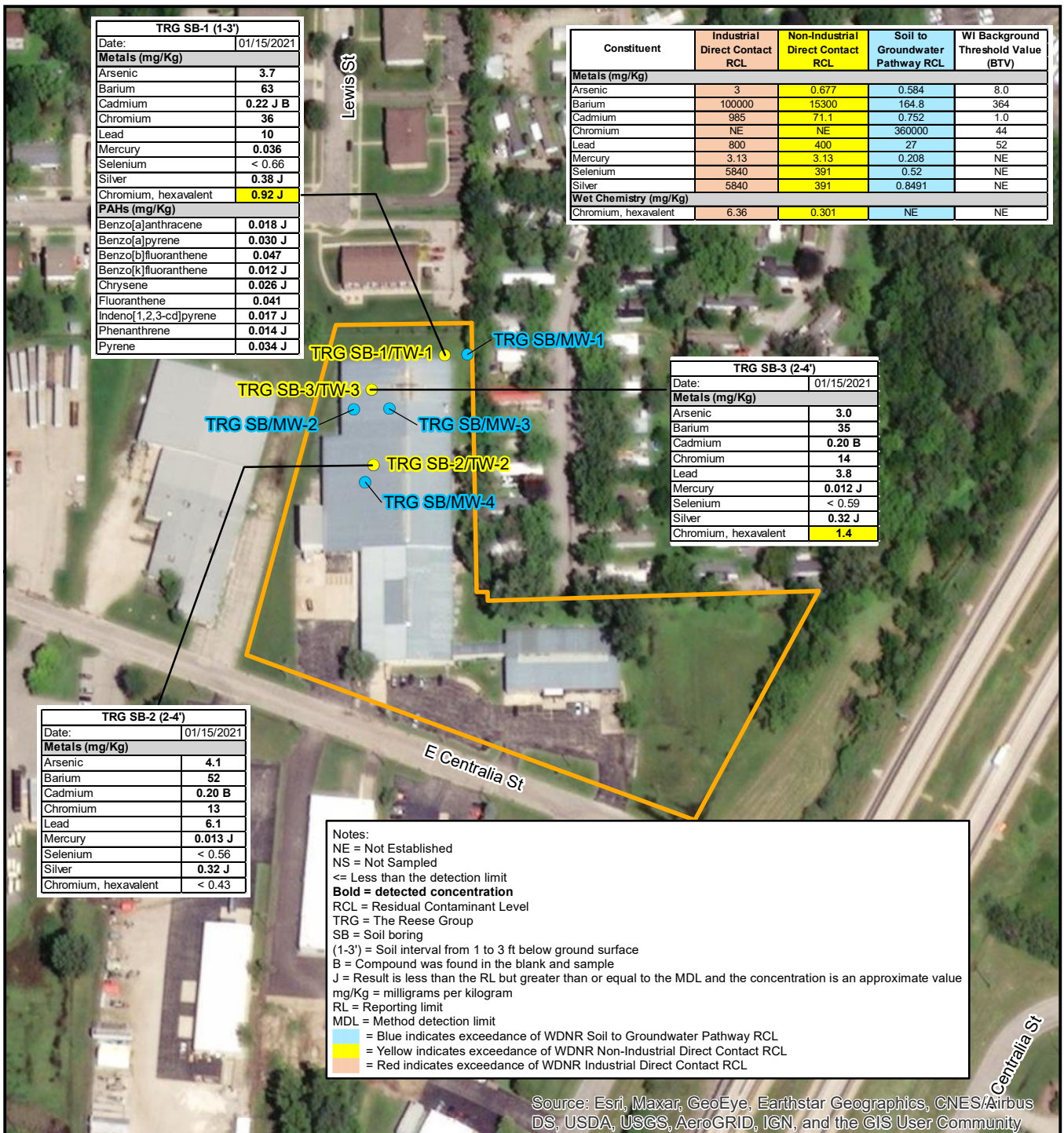
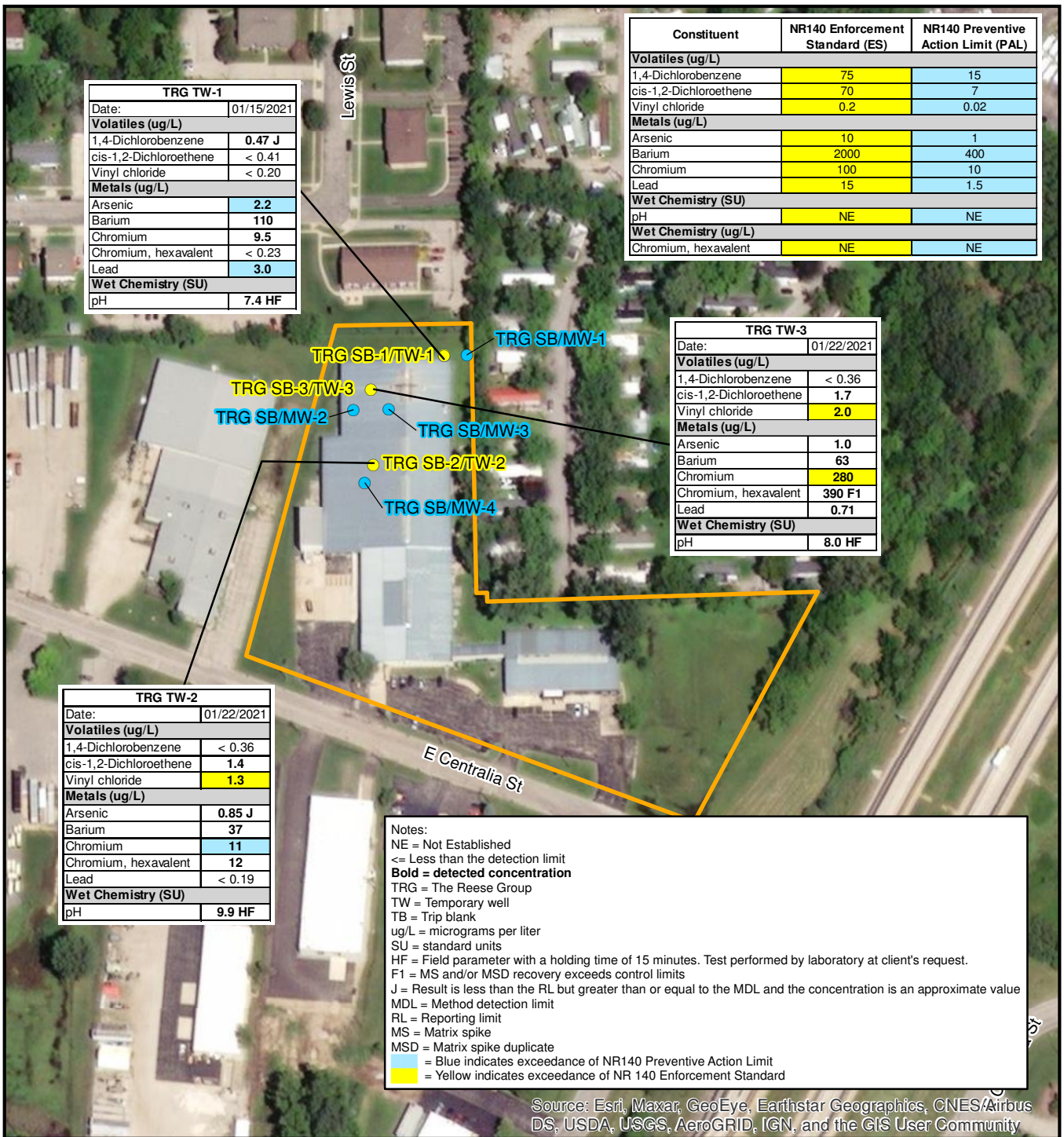


Figure 2 - Detailed Site Map

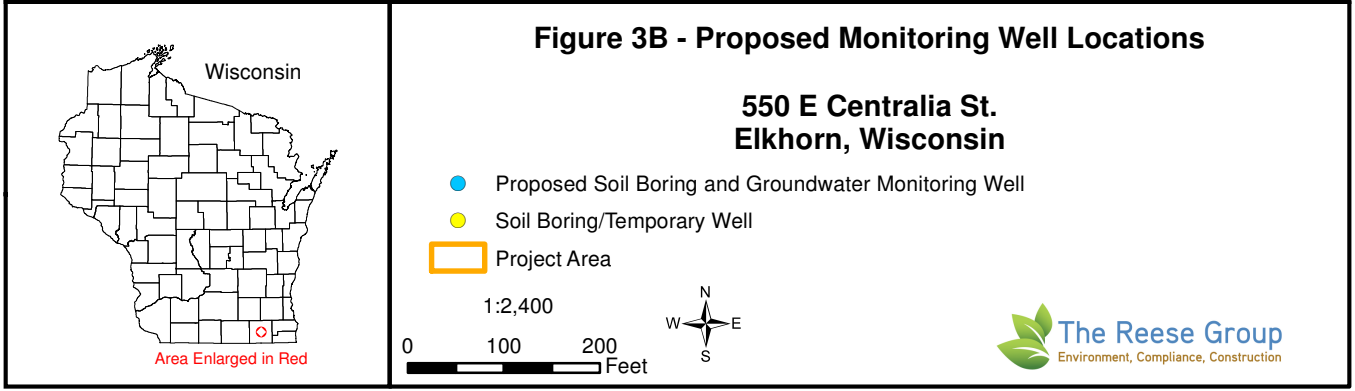
**550 E Centralia St.
Elkhorn, Wisconsin**







Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



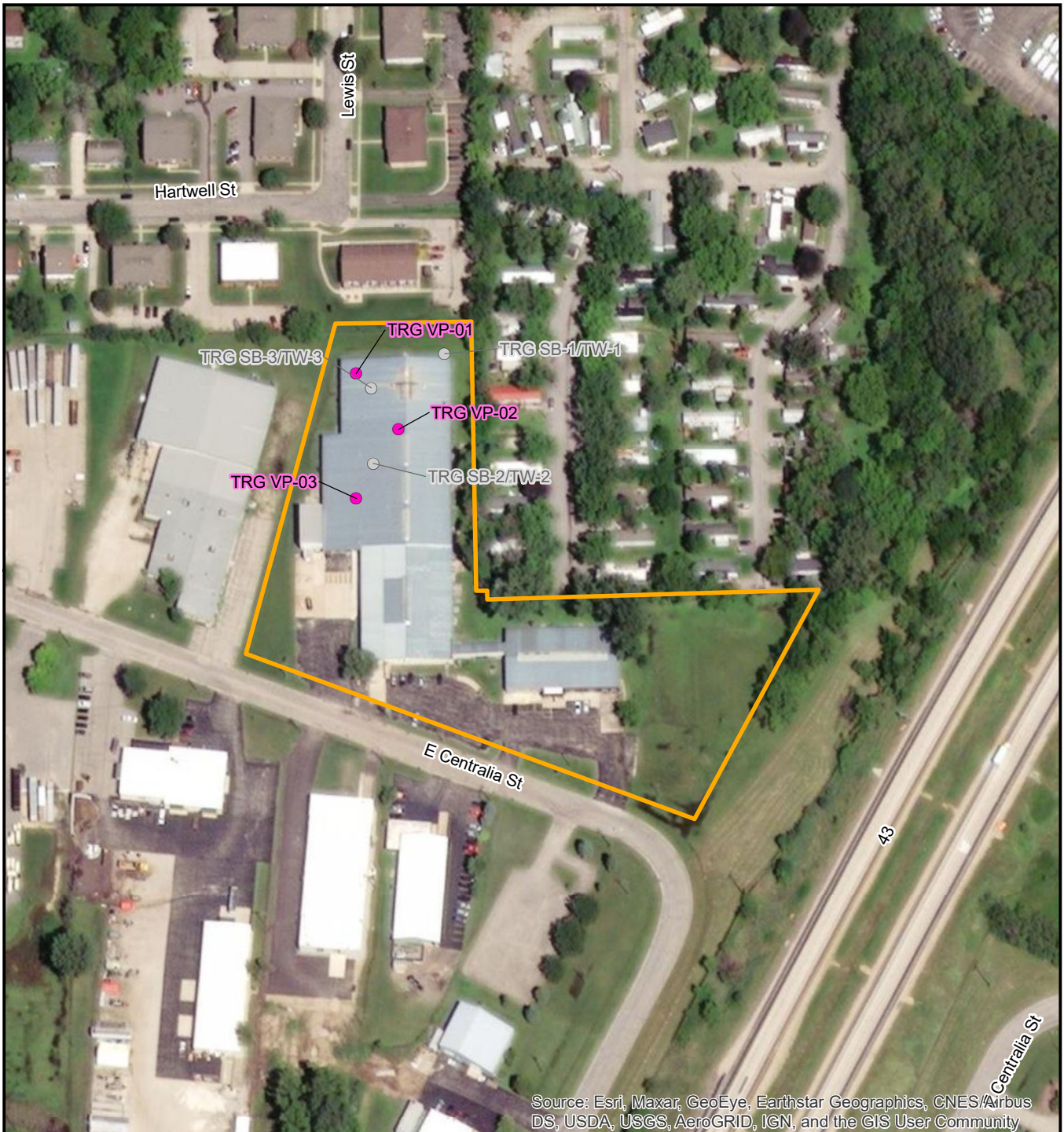


Figure 4 - Proposed Vapor Pin Sample Locations

**550 E Centralia St.
Elkhorn, Wisconsin**

- Existing Soil Boring/Temporary Well (February 2021)
- Proposed Vapor Pin
- ▭ Project Area

1:2,400

0 100 200 Feet



Attachment A

WDNR Certification Page

SIGNED STATEMENT

I, Christine A Reese, hereby certify that I am a registered Professional Geologist in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, 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.

Christine Reese, P.G.

Signature and Title

PG Stamp

