

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

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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 Beaster	First Karl	MI	Organization/ Business Name Enbridge Energy, Limited Partnership (Responsible Party)
Mailing Address 11 East Superior Street - Suite 125			City Duluth
			State MN
			ZIP Code 55802
Phone # (include area code) (715) 718-1040	Fax # (include area code)	Email karl.beaster@enbridge.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:

Enbridge Energy, LP is the Responsible Party but not the current property owner. Enbridge has entered into a purchase agreement that is set to close at the end of May 2021.

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

Select if same as requester

Contact Last Name Beaster	First Karl	MI	Organization/ Business Name Enbridge Energy, Limited Partnership (Responsible Party)
Mailing Address 11 East Superior Street - Suite 125			City Duluth
			State MN
			ZIP Code 55802
Phone # (include area code) (715) 718-1040	Fax # (include area code)	Email karl.beaster@enbridge.com	

Environmental Consultant (if applicable)

Contact Last Name Huff	First Tim	MI	Organization/ Business Name WSP USA Inc.
Mailing Address 5957 McKee Road, Suite 7			City Madison
			State WI
			ZIP Code 53719
Phone # (include area code) (314) 206-4212	Fax # (include area code)	Email tim.huff@wsp.com	

Property Owner (if different from requester)

Contact Last Name Overson	First Dale and Judith	MI	Organization/ Business Name
Mailing Address 21860 N Farthington Court			City Deerpark
			State IL
			ZIP Code 60010
Phone # (include area code)	Fax # (include area code)	Email	

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Section 2. Property Information

Property Name Enbridge Line 13 Blackhawk Valve		FID No. (if known)	
BRRTS No. (if known) 02-28-586199	Parcel Identification Number 016-0514-0824-003		
Street Address Blackhawk Island Road	City Fort Atkinson	State WI	ZIP Code 53538
County Jefferson	Municipality where the Property is located <input checked="" type="radio"/> City <input type="radio"/> Town <input type="radio"/> Village of Fort Atkinson	Property is composed of: <input checked="" type="radio"/> Single tax parcel <input type="radio"/> Multiple tax parcels	Property Size Acres 68

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: 06/04/2021

Reason: Planned implementation of interim action beginning in June 2021.

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

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).

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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/Igu.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

- 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: Interim Action 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: _____
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**

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May 18, 2021

Signature

Date Signed

Senior Environmental Advisor

(715) 718-1040

Title

Telephone Number (include area code)

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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

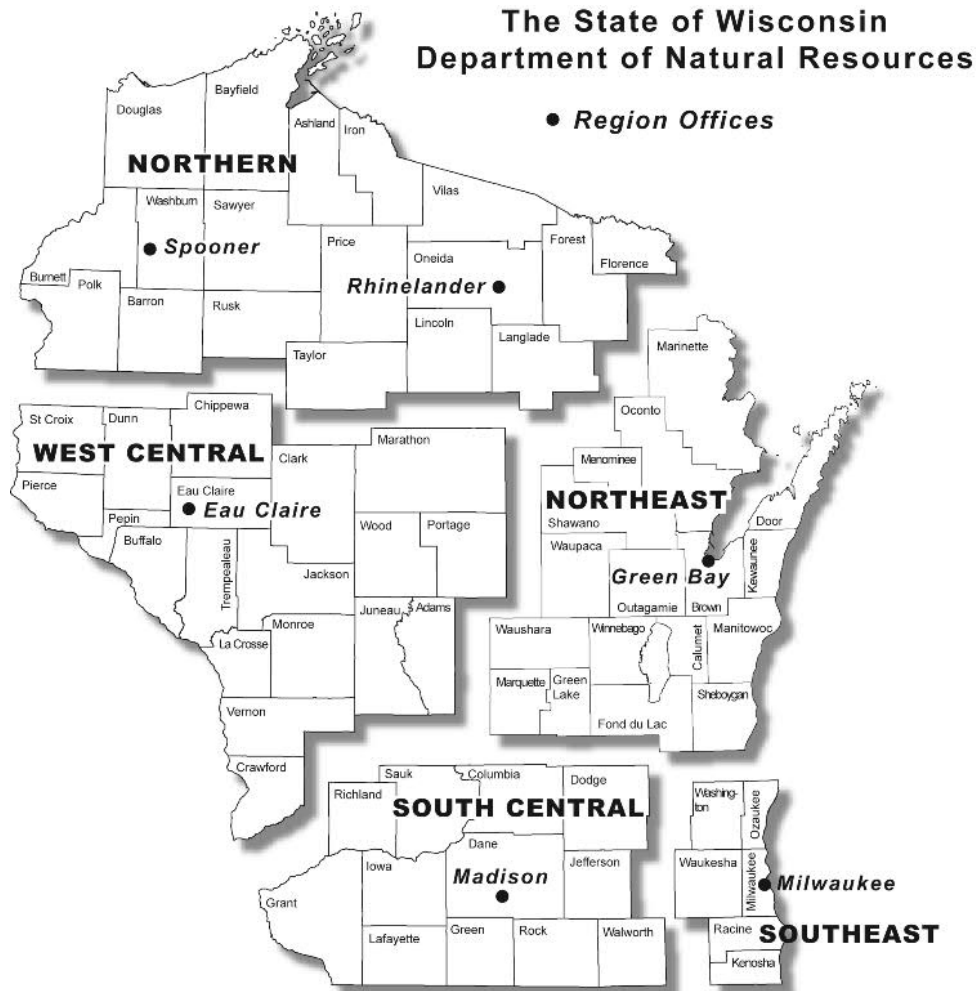
Attn: RR Program Assistant
Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg WI 53711

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		



**ENBRIDGE LINE 13, MP 312
VALVE SITE
(BRRTS# 02-28-586199)
INTERIM ACTION WORK PLAN**

ENBRIDGE ENERGY, LIMITED PARTNERSHIP

PROJECT NO.: 31401967.705
DATE: MAY 2021

WSP USA, INC.
5957 MCKEE ROAD, SUITE 7
MADISON, WI 53719

WSP.COM

CERTIFICATION

Interim Action Work Plan
Enbridge Line 13 MP 312 Valve Site
Blackhawk Island Road
Fort Atkinson, Wisconsin
BRRTS Number: 02-28-586199

I, Matthew Peramaki, hereby certify that I am a registered professional engineer 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 information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Matthew Peramaki

Matthew Peramaki, P.E.
Assistant Vice President, Wisconsin P.E. #31636-006

5/14/21

Date





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FIGURES

FIGURE 1	SITE LOCATION MAP
FIGURE 2	SITE LAYOUT
FIGURE 3	EXCAVATION EXTENTS AND SAMPLE LOCATIONS
FIGURE 4	SOIL EXCAVATION PROFILE VIEW
FIGURE 5	SITE INFRASTRUCTURE DETAILS
FIGURE 6	PROPOSED SOIL BORING LOCATIONS
FIGURE 7	PASSIVE BIOVENTING SYSTEM SCHEMATIC
FIGURE 8	PASSIVE BIOVENTING PIPING LAYOUT

1 INTRODUCTION

On behalf of Enbridge Energy, Limited Partnership (Enbridge), WSP USA, Inc. (WSP), has prepared this Interim Action Work Plan (Work Plan) for the Enbridge Line 13, MP 312 Valve Site near Fort Atkinson, Wisconsin (Site; **Figure 1**). Soil and groundwater assessment and remediation is being conducted at the Site under the oversight of the Wisconsin Department of Natural Resources (WDNR) Remediation and Redevelopment Program (BRRTS Number: 02-28-586199).

Enbridge has submitted to the WDNR a Supplemental Site Investigation (SSI) Work Plan under separate cover, which presents a Site investigation approach that contemporaneously utilizes a variety of innovative soil characterization tools and conventional sampling methods with an onsite mobile laboratory, to rapidly complete the vertical and lateral delineation of soil impacts. This approach will allow the rapid initiation of Interim Action activities to begin the removal of diluent impacts in the source area of the release.

Some Interim Action activities are proposed to be conducted in conjunction with soil investigation activities described in the SSI Work Plan. Those activities will include conversion of select soil borings to vadose zone remediation wells, with the possible installation of subsurface or above grade piping to connect the wells.

These actions demonstrate that Enbridge is committed to moving the Site toward remedial action as quickly as practicable and prevent unacceptable risks to human health and the environment. This Work Plan describes the proposed Interim Action activities.

The proposed Interim Action includes the installation of passive bioventing wells in the source area of the Site, based on the results of the source area soil investigation. It is proposed that small wind turbines will be installed on the wells to mitigate hydrocarbon impacts directly by removing hydrocarbon vapors, promoting the volatilization of hydrocarbons adsorbed onto subsurface soils, and by drawing fresh air into the subsurface, to promote further biological degradation of hydrocarbons.

The Site Information and Site Setting have been previously presented in the SSI Work Plan and can be referenced there.

1.1 SITE HISTORY AND INTERIM ACTION OBJECTIVES

1.1.1 INCIDENT DESCRIPTION AND INITIAL RESPONSE

On April 26, 2019 during a routine Site inspection by an Enbridge employee, a personal gas monitor alarmed. As outlined in the Interim Action and Site Investigation Report (IASIR), dated January 28, 2021, Enbridge and its contractors conducted response activities to identify the source of the release and remediate the adjacent soil impacts. Enbridge identified the source of the release as a valve leak on Line 13, which transports diluent.

Enbridge and its contractors conducted three excavation events (May 15-17, July 30-August 2, and October 9, 2019) to remediate the soil impacts to the extent feasible. Soil samples collected at the completion of the final excavation activities indicated that some soil impacted by the diluent remained in the sidewalls of the final excavation. However, additional excavation to remove this impacted soil was deemed not feasible due to existing Site infrastructure. **Figure 2** provides the site layout, and **Figure 3** shows the extent of soil excavation.

On July 21, 2020, one soil boring (B-1/TW-01) was advanced near the release location (**Figure 2**) to a depth of approximately 35 feet below ground surface (bgs) to collect soil and groundwater samples for laboratory analysis to further assess the remaining impacts. B-1 soil exhibited field-measured headspace readings up to 401 ppm. The laboratory results from those samples indicated the benzene concentrations exceeded the WDNR Generic Residual Contaminant Level (RCL) for the soil-to-groundwater pathway in the soil, and the Wisconsin Administrative Code (WAC) Chapter NR 140 Enforcement Standard (ES) in the groundwater.

The soil excavation extent and soil confirmation sample locations are shown in **Figure 3**. **Figure 4** shows the profile across the release location, subsurface infrastructure and the release location, and the approximate elevation and extent of the final excavation. The above-ground structures at the Site consist of four valves and two valve control buildings, as shown on **Figure 5**.

1.1.2 INTERIM ACTION OBJECTIVES

Enbridge desires to take additional action at the Site, to the extent allowable under applicable WDNR statutes and regulations, to remove diluent impacts from the source area under an Interim Action. The purposes of the Interim Action are to:

1. Begin additional removal of residual contaminant mass from the soil source area as soon as possible;
 2. Reduce, as soon as possible, the migration of impacts from the soil source area to groundwater underlying the source area, thereby reducing contaminant concentrations in groundwater beneath the source area and reducing the risk of contaminant plume expansion; and
 3. Potentially reduce the time required to remediate the groundwater plume during implementation of a WDNR-approved remedy under a Remedial Action Plan (RAP).
-

1.1.3 REGULATORY SUBMITTAL PURPOSE AND SITE REGULATORY STATUS

The purpose of this Interim Action Work Plan is to notify the WDNR of Enbridge's intention to implement interim actions at this Site. These actions are designed per the Wisconsin State Legislature Administrative Code, Division of Natural Resources, Chapter 708, Chapter 724, prior publication Pub-rr-185 and others. The interim actions are proposed to control and reduce the size of the impacted area following completion of the SSI. These interim actions will allow the hydrocarbon removal process to begin as quickly as possible and in a manner that will be protective of the human health and the environment.

Activities completed at the Site in April and May 2021 included groundwater sampling at Site monitoring wells and offsite potable wells, updating the conceptual site model, and preparing/submitting an SSI Work Plan. Once the SSI has been completed, a remedial action options evaluation will be conducted, including evaluating the performance of the interim action system for technology efficacy and potential design parameter derivation. It is highly likely that aside from beginning to mitigate the identified impacts, portions of the interim action system will be used for the final remediation program to be implemented under a WDNR-approved Remedial Action Plan.

Information contained in this Work Plan includes a description of the interim action system, discussion of how the system will function, justification for why it should be implemented, and how the system will provide value to the remediation program as the Site transitions into the longer-term/final remedial program.

2 INTERIM ACTION

2.1 INTERIM ACTION SELECTION

The proposed Interim Action is passive bioventing. In passive bioventing, barometric pressure or non-motorized wind turbines create vacuum in subsurface wells that are screened in the impacted portion of the vadose zone, pulling soil vapor from the soil. Even though some volatile compounds are removed by volatilization, bioventing relies primarily on biological degradation to remove petroleum hydrocarbons. The petroleum hydrocarbon compounds within diluent are amenable to biodegradation.

Passive bioventing was selected as the Interim Action based on the following factors:

- Opportunity to take advantage of the high aerobic biodegradability and volatility of the diluent,
 - the depth to water is in excess of 20 feet,
 - the presence of a low permeability soil layer near the ground surface,
 - the air permitting exemption specified in [NR 407.03\(1\)\(sm\)2., Wis. Adm. Code](#),
 - and the fact that, as the Site transitions to a longer-term remedial program, this passive system could readily be converted to an active remediation (e.g. soil vapor extraction) system in the future, if warranted by the SSI results.
-

2.2 INTERIM ACTION PROCESS

The primary difference between passive bioventing and active remediation techniques, like soil-vapor extraction, is the airflow rate. Because bioventing attempts to reduce the mass of contaminant by biodegradation (not physical extraction), lower airflow rates are used, reducing the volatilization of the contaminants. Reducing the volatilization rate reduces the mass of volatile contaminant that will be emitted to the atmosphere. When the wind is not blowing, barometric pumping (i.e. changes in atmospheric pressure) can also be used to supply oxygen to the subsurface, assisting aerobic biodegradation. The emphasis on biodegradation, instead of physical removal, greatly reduces emission rates and creates regulatory options for rapid implementation of this remediation option.

3 SYSTEM DESCRIPTION

3.1 INSTALLATION OF REMEDIATION WELLS IN SOURCE AREA

In an effort to begin removal of contaminant mass from the soil source area as soon as possible, passive bioventing wells will be installed in the vadose zone within the source area as part of the source area investigation described in the SSI Work Plan. **Figure 6** shows conceptual locations for six passive bioventing wells, although the total number and placement will be dependent upon investigation results. The wells will be installed into and through the impacted vadose zone and screened vertically to match the vertical contamination profile. The remediation wells screened intervals will be determined in the field, pending investigation results.

As described in the SSI Work Plan, the nature and extent of the remaining source area soil impacts will be delineated both vertically and laterally using high-resolution site characterization (HRSC) in-situ direct sensing methods with confirmation soil sampling and laboratory analysis to complete the delineation of the extent and magnitude of residual source area impacts.

The remediation well vadose zone screened intervals will be determined based on the HRSC and results of field screening using a photoionization detector (PID), visual examination of the soil cores, and the laboratory results obtained from direct push drilling and sampling activities. The passive bioventing wells will be installed at the location of select source area soil borings that exhibit significant diluent impacts in soil.

3.2 WELL CONSTRUCTION

At the selected passive bioventing well locations, a direct-push or hollow-stem auger drilling rig equipped with 4.25-inch inner-diameter hollow-stem auger drill tooling will be used to advance the borehole to the target depth. Each passive bioventing well will be constructed in the borehole using a 2-inch-inner diameter, flush-threaded, Schedule 40 PVC casing, with an anticipated screen length of 10 feet. It is expected that the base of the well screen will vary between approximately 15 and 25 feet bgs. In this way, the variable remediation well screens will allow the maximum exposure to residual hydrocarbons across the entire impacted vadose zone.

After each well casing has been assembled and placed in the borehole, the annular space will be backfilled with a clean sand filter pack installed to a depth of approximately one foot above the top of the screen with a fine sand seal above the filter pack. A bentonite chip seal with a minimum thickness of 3 feet will be placed in the annular space atop the sand pack and hydrated with potable water. The remaining annular space will be sealed with a bentonite chip seal or bentonite-cement slurry grout after the bentonite seal has been fully hydrated. Surface completion for passive bioventing wells will be completed at grade as shown in **Figure 7**.

3.3 PIPING, MANIFOLD, AND STACK CONSTRUCTION

The wells will be piped in the subsurface to the facility fence line where the piping will be manifolded aboveground with 2-inch and 4-inch PVC piping. The manifold will be connected to a 4-inch PVC stack supported by a post or the facility fence. The number of manifolds/stacks will be determined in the field, based on the number and location of remediation wells installed. The stack(s) will be completed with a wind turbine(s) which will utilize wind to spin the turbine(s), creating a vacuum in the pipes and wells. **Figure 8** presents a conceptual plan view of system piping layout.

Each stack will be fitted with a ¼-inch tap for vacuum measurements and air sample collection; and a self-averaging pitot tube to measure air flow.

3.4 AIR MONITORING PLAN

Regulations [NR 406.04\(1\)\(m\)2., Wis. Adm. Code](#), and [NR 407.03\(1\)\(sm\)2., Wis. Adm. Code](#) apply to negative pressure venting of contaminated soil, and allow exemptions from construction and operating air permitting, provided the remediation is completed within three months (construction permit) or 18 months (operating permit), or the potential to emit volatile organic compounds from the remediation site is at a rate of not more than 5.7 pounds per hour, nor benzene (considered limiting Hazardous Air Contaminant) emissions greater than 228 pounds per year (NR 445.07 Table A), considering emission control devices. Based on the passive nature of the system, it is not expected that the potential to emit for VOC or benzene emission from the passive bioventing system will near or exceed these criteria.

However, in order to ensure that the interim action system does not violate the above referenced exemption criteria, regular monitoring of the volumetric flowrate and sampling of the recovered vapors will be conducted to calculate the VOC and benzene emissions.

Air monitoring of the passive bioventing system will include routine monitoring of each stack for:

- air flow and vacuum measurements,
- VOC field screening,
- Vapor sample collection for laboratory analysis.

Monitoring data will be collected once each day for the first three days of operation, weekly for the next three weeks, and monthly thereafter. Monitoring data will be used to estimate remediation effectiveness and quantify the amount of recovered hydrocarbons and compliance with WDNR air permitting exemption criteria.

3.5 HEALTH AND SAFETY PROCEDURES

All field activities conducted in connection with this work plan will be conducted in accordance with the site-specific Health and Safety Plan (HASP), which was prepared in accordance with Occupational Safety and Health Administration (OSHA) 29 Code of Federal Regulations (CFR) 1910.120 and 40 CFR 311. The HASP provides information on the objectives, project organization, specific procedures that will be required for activities conducted during the field work, and a Job Hazard Analysis (JHA) or Field Level Hazard Assessment (FLHA) for each work step. This includes activities conducted by WSP personnel. Subcontractor will be required to prepare their own HASP and provide employees trained pursuant to the OSHA requirements. All WSP personnel and subcontractors are required to review the HASP before beginning work and a safety meeting is held before the beginning of each work shift.

4 SCHEDULE

Field activities will be scheduled upon receiving approval of the SSI Work Plan and the Interim Action Work Plan from the WDNR and execution of any required access agreements, permits, or notifications. WSP will provide at least one week's notice to WDNR prior to mobilization for field activities, which are estimated to require approximately two weeks to complete.

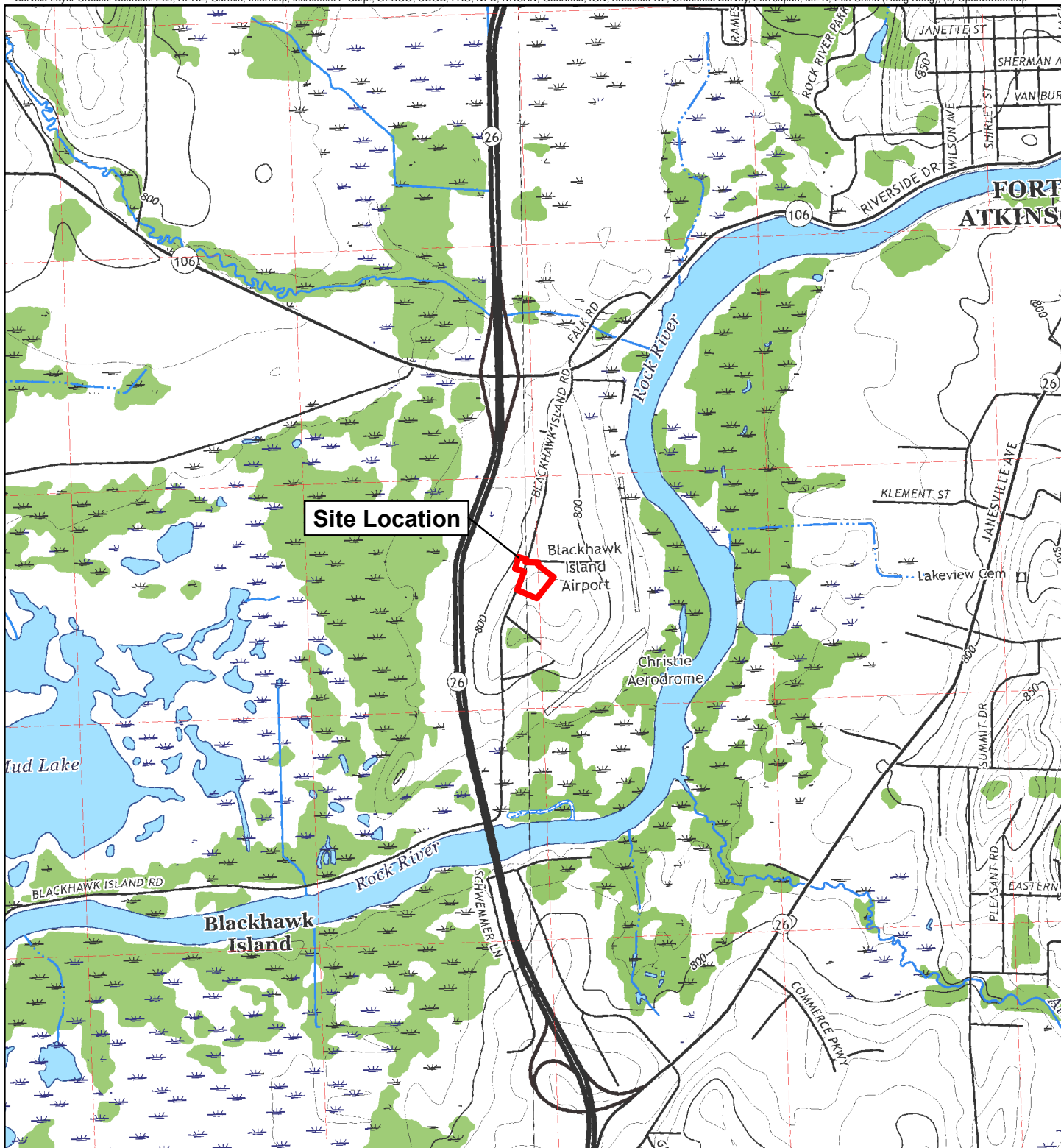
5 ACRONYM LIST

AMSL	above mean sea level
BGS	below ground surface
BTEX	benzene, toluene, ethylbenzene, xylenes
CFR	Code of Federal Regulations
CVOC	chlorinated volatile organic compound
DO	dissolved oxygen
DOI	dissolved oxygen injection
DPT	direct-push technology
EC	electrical conductivity
ES	Enforcement Standard
GRO	gasoline range organics
HASP	health and safety plan
HRSC	high-resolution site characterization
IAP	Interim Action Plan
IASIR	Interim Action and Site Investigation Report
IDW	investigation-derived waste
MDL	method detection limit
MIP	membrane interface probe
MTBE	methyl-tert butyl ether
NTU	nephelometric turbidity units
OSHA	Occupational Safety and Health Administration
OIP	optical image profiler
ORP	oxidation reduction potential
PAL	Preventative Action Limit
PID	photoionization detector
ppm	parts per million
PVC	polyvinyl chloride
RAP	Remedial Action Plan
RP	Responsible Party
SOP	standard operating procedure
TCE	trichloroethene
TMB	trimethylbenzene
TPH	total petroleum hydrocarbons

USGS U.S. Geological Survey
UVOST ultra-violet optical screening tool
VOC volatile organic compound
WAC Wisconsin Administrative Code
WDNR Wisconsin Department of Natural Resources

FIGURES



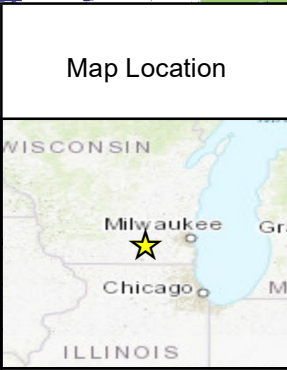


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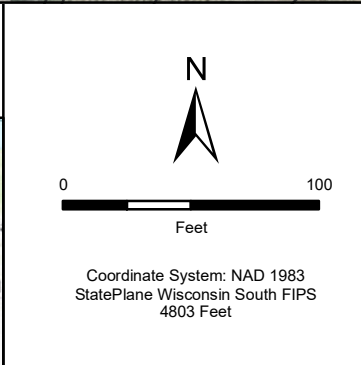
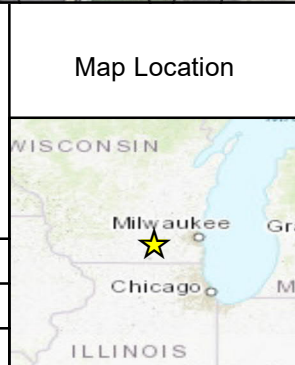
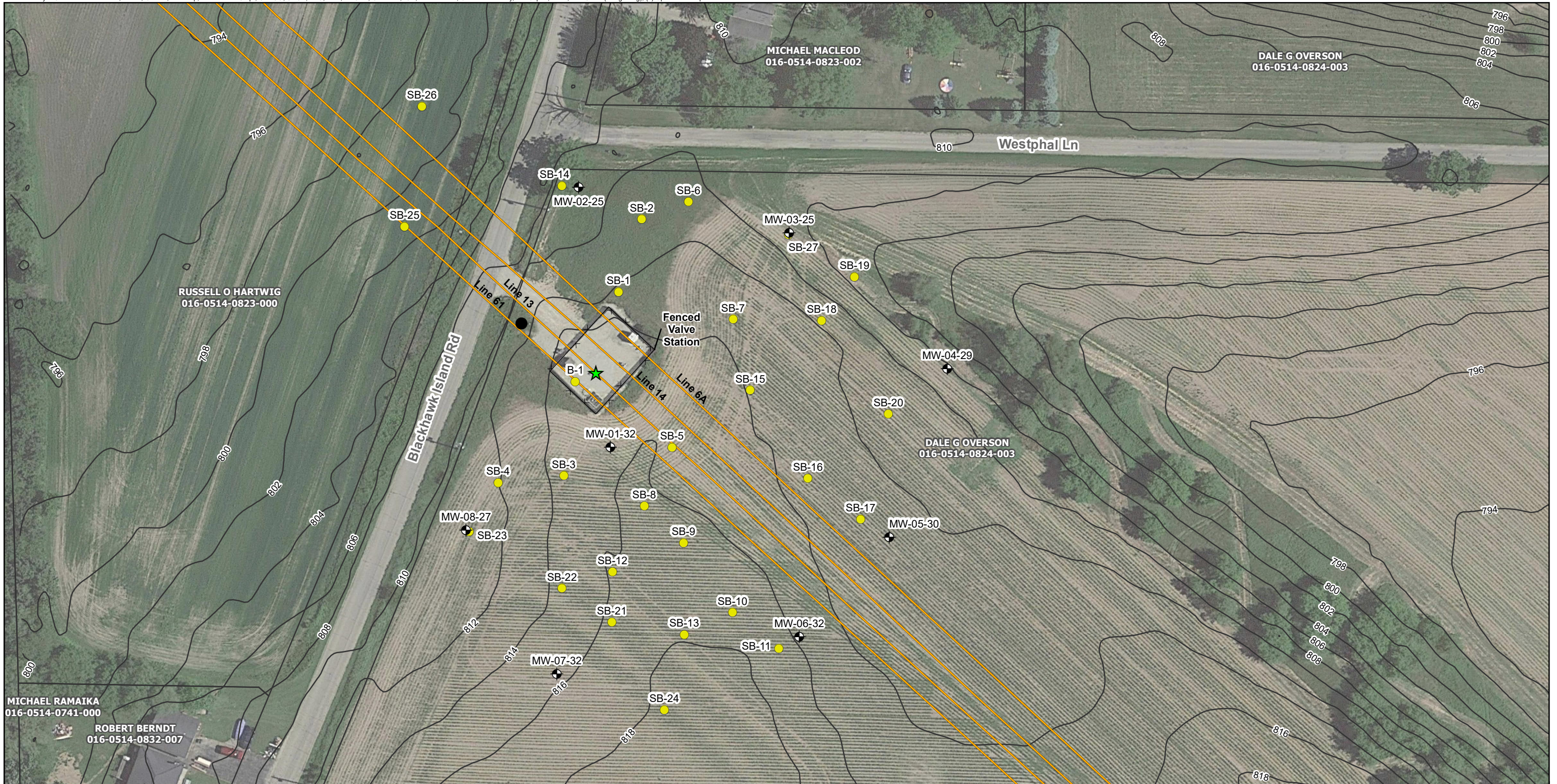
Coordinate System: NAD 1983 StatePlane
Wisconsin South FIPS 4803 Feet

Source: USGS US Topo 7.5-minute maps for
Busseyville and Fort Atkinson, WI 2018

FIGURE 1
SITE LOCATION MAP

FORT ATKINSON VALVE STATION
LINE 13 MP 312

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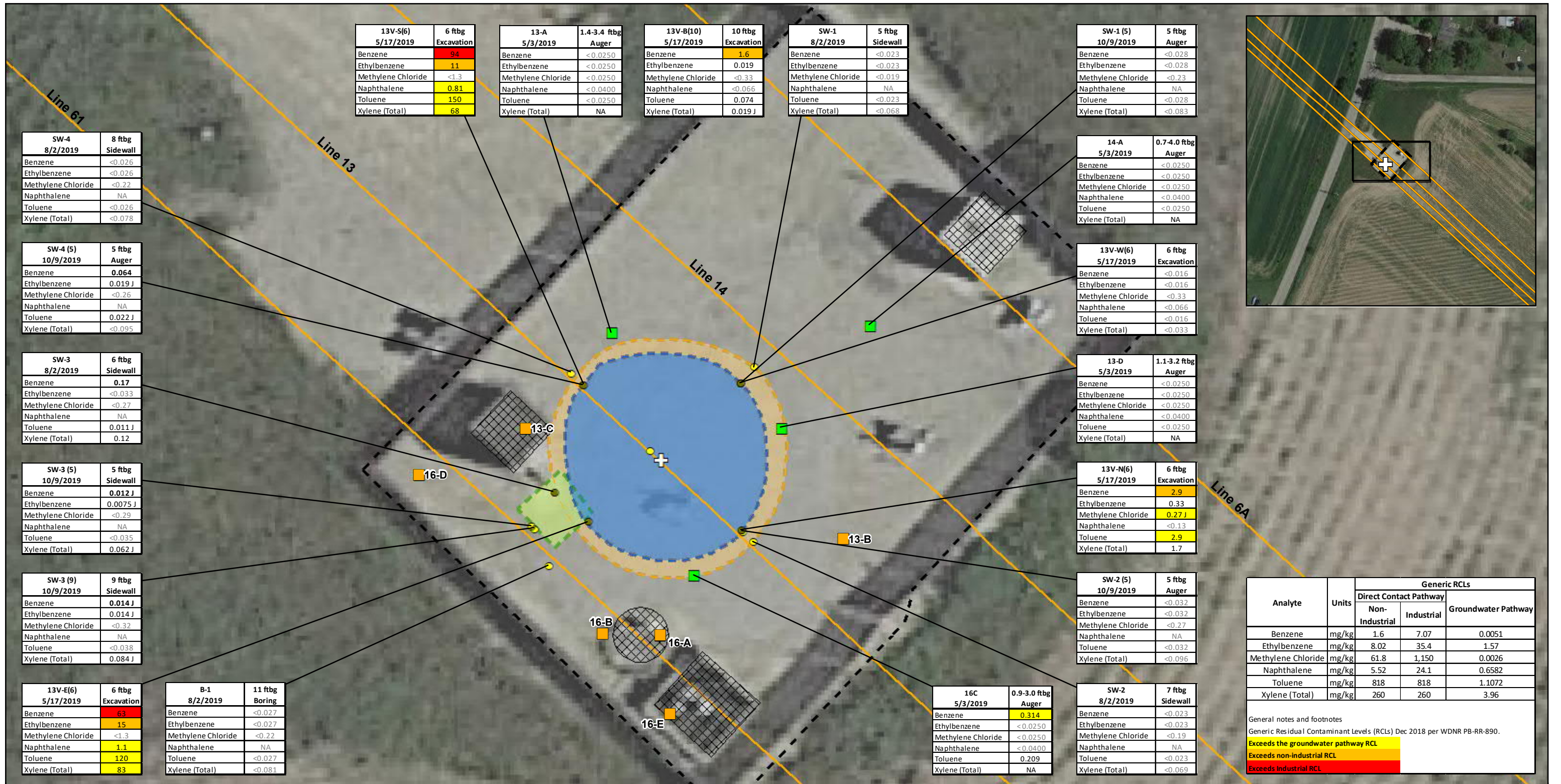
Legend

- ★ Approximate Release Location
- ⊕ Potable Well (WDNR Unique Well Number, if known)
- Elevation Survey Benchmark
- ⊕ Existing Monitoring Well
- Sept 2020 Soil Boring / Temporary Well
- Enbridge Pipeline
- 2 Foot Topographic Contours
- ⊞ Fenced Valve Site
- Property Parcels

FIGURE 2
SITE LAYOUT

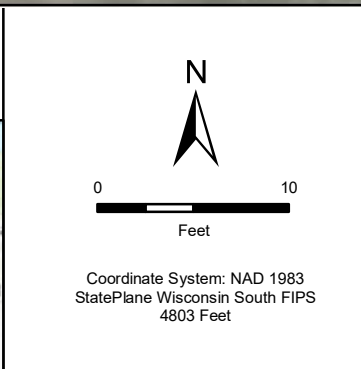
LINE 13 MP 312 VALVE SITE
 FORT ATKINSON, WISCONSIN

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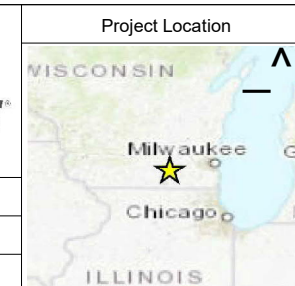
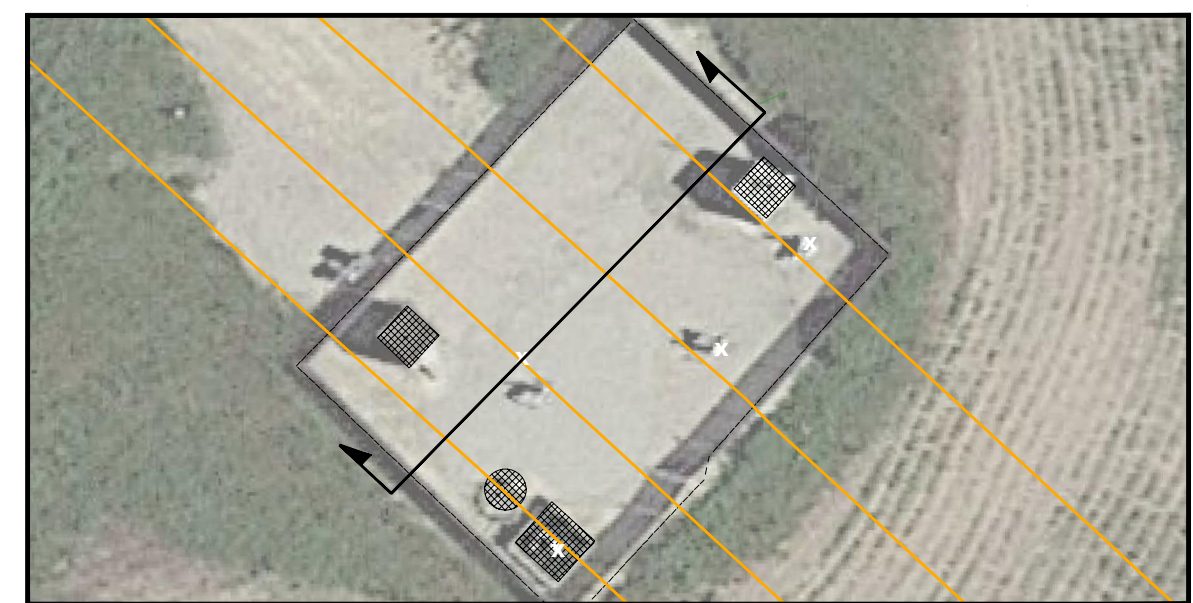
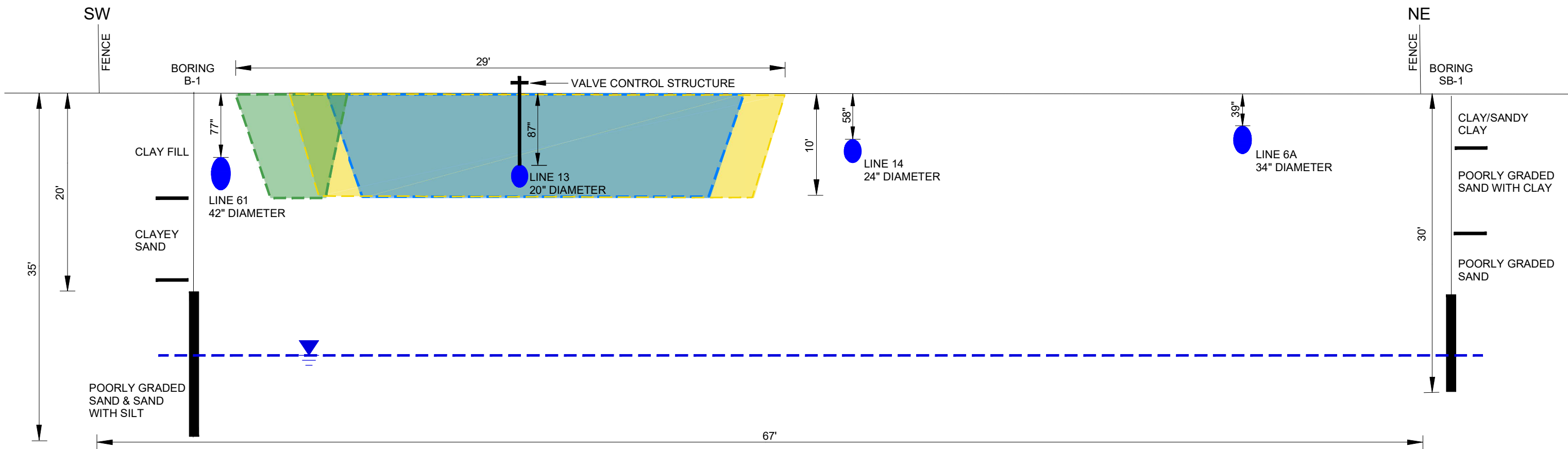
- Legend**
- Line 13 Valve
 - Soil Excavation Confirmation Sample (Soil Remaining)
 - Soil Excavation Confirmation Sample (Soil Removed)
 - Soil Gas PID Screening Location
 - Soil Gas Sample Location
 - Enbridge Pipeline
 - Site Features
 - Site Fence
- Excavation Limits**
- Excavation 1 - May 17, 2019
 - Excavation 2 - August 2, 2019
 - Excavation 3 - October 9, 2019

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

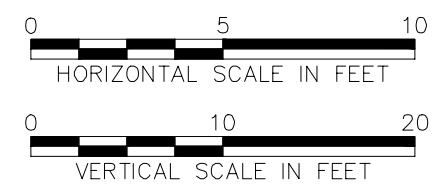
FIGURE 3
 EXCAVATION EXTENTS AND
 SAMPLE LOCATIONS

LINE 13 MP 312 VALVE SITE
 FORT ATKINSON, WISCONSIN

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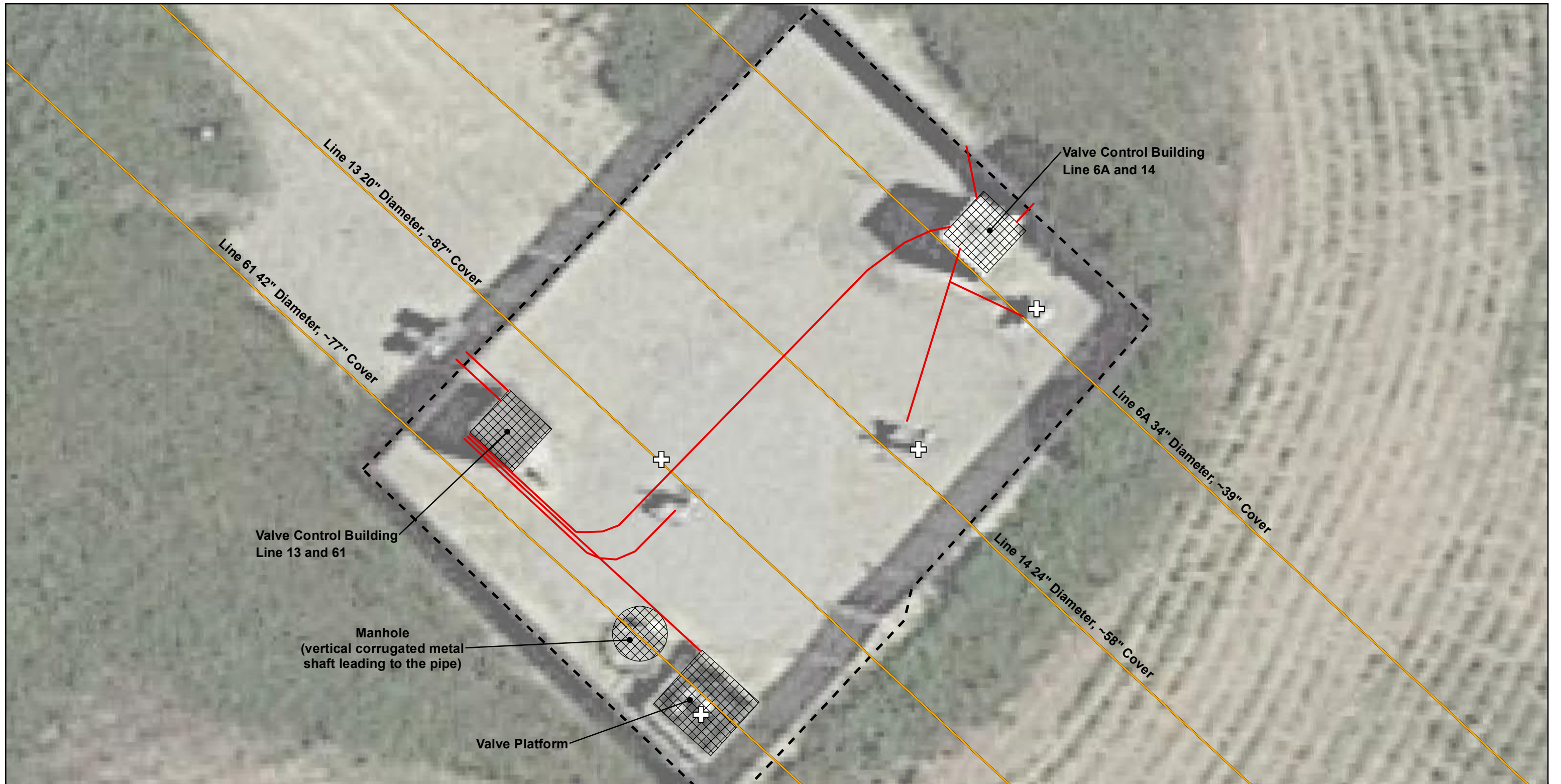


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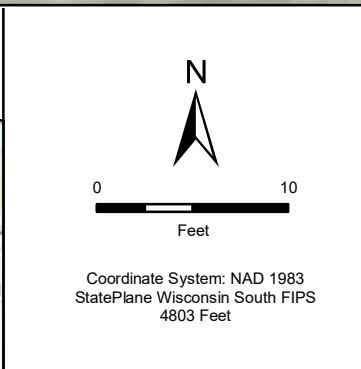
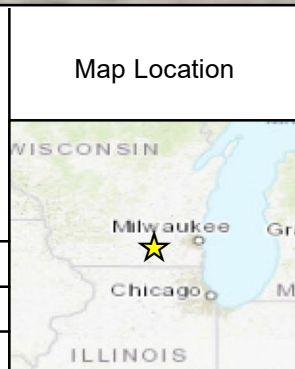
- Excavation Limits**
- █ Excavation 1 - May, 17, 2019
 - █ Excavation 2 - August 2, 2019
 - █ Excavation 3 - October 9, 2019

FIGURE 4
 SOIL EXCAVATION
 PROFILE VIEWS
 LINE 13 MP 312 VALVE SITE
 FORT ATKINSON, WISCONSIN
 ENBRIDGE ENERGY
 LIMITED PARTNERSHIP



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 Approved: WSP 4/20/2021
 Project #: 31401967.705



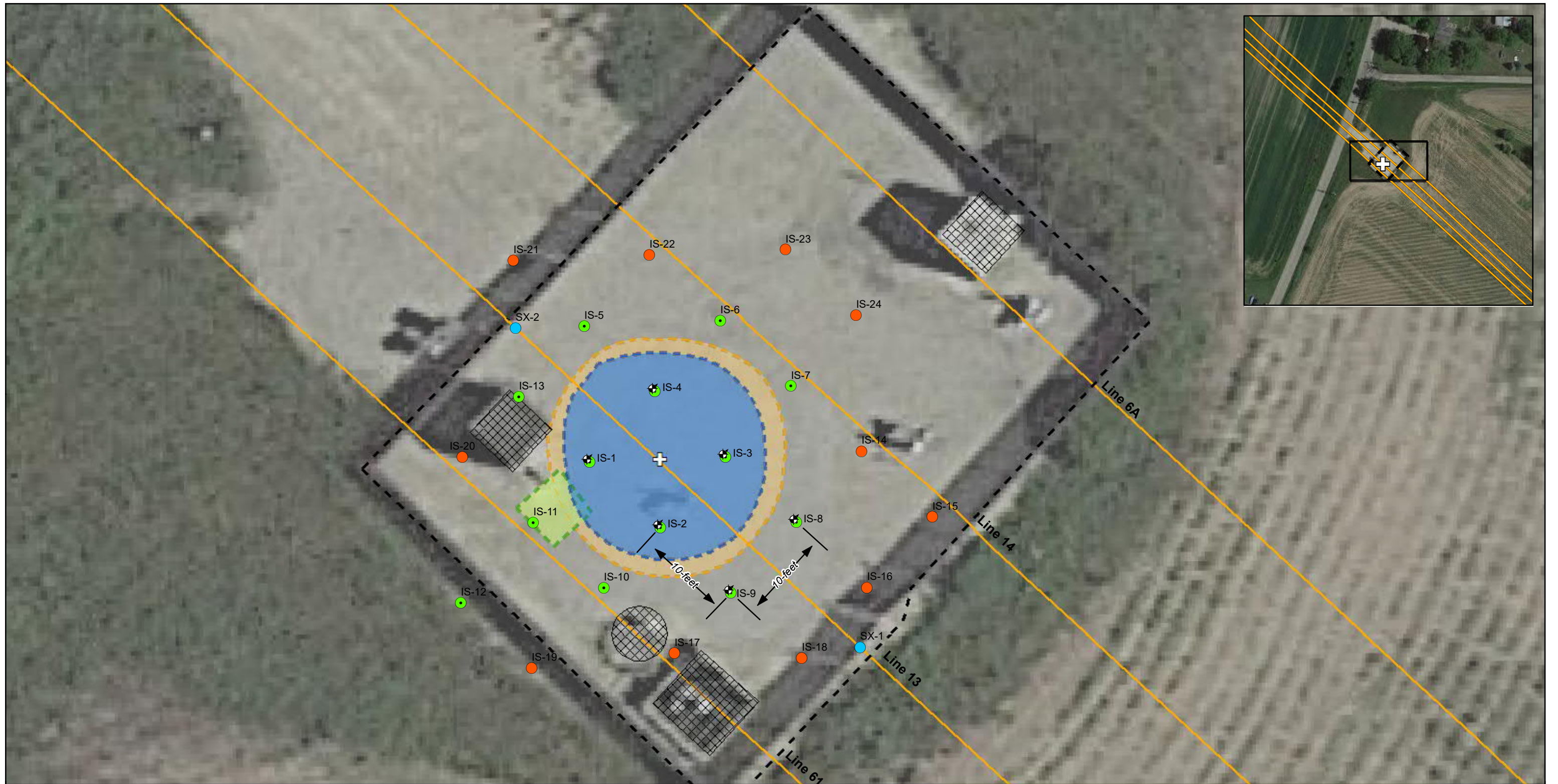
- Legend**
- Pipeline Valves
 - Electric Utilities (Based on best available information)
 - Enbridge Pipeline w/Diameter & Approximate Depth to Cover
 - Site Features
 - Site Fence

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

FIGURE 5
 SITE INFRASTRUCTURE DETAILS

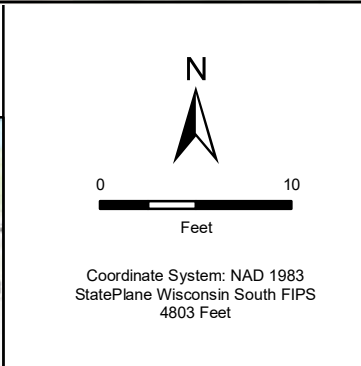
LINE 13 MP 312 VALVE SITE
 FORT ATKINSON, WISCONSIN

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 Approved: WSP 5/4/2021
 Project #: 31401967.705

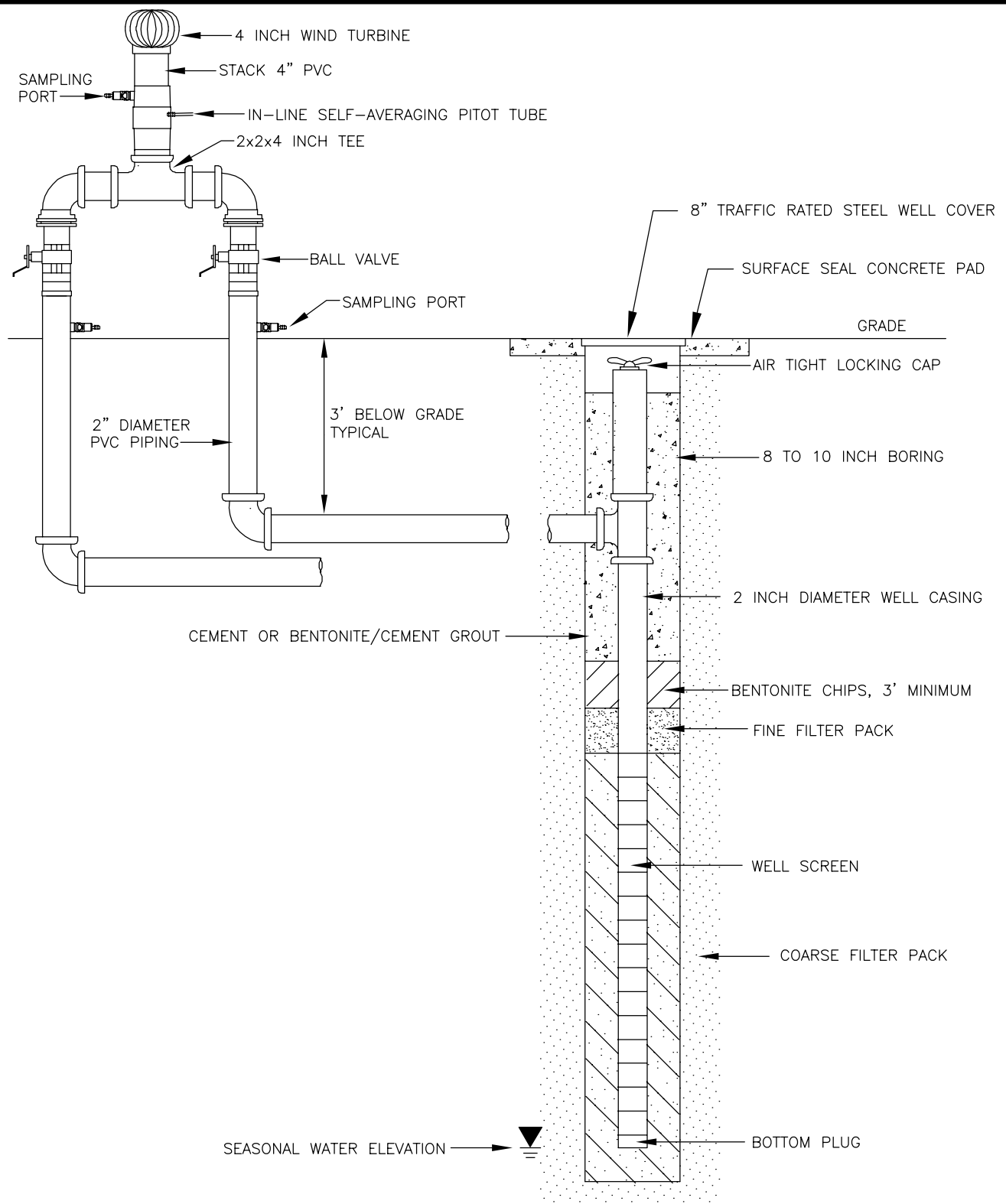


- Legend**
- ⊕ Line 13 Valve
 - Proposed In-Situ UVOST-MIP Boring Location (Contingency)
 - Proposed In-Situ UVOST-MIP Boring Location (Primary)
 - ⊕ Conceptual Passive Bioventing Well Location (Actual Locations to be determined based on results of site investigation)
 - Proposed Pipeline Bedding Soil Sample
 - Enbridge Pipeline
 - ⊗ Site Features
 - - Site Fence
 - Excavation Limits**
 - Excavation 1 - May 17, 2019
 - Excavation 2 - August 2, 2019
 - Excavation 3 - October 9, 2019

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

FIGURE 6
PROPOSED SOIL BORING LOCATIONS
 LINE 13 MP 312 VALVE SITE
 FORT ATKINSON, WISCONSIN
 ENBRIDGE ENERGY
 LIMITED PARTNERSHIP

DWG Name: 314MN1967.705-003
 Checked: Approved:
 Drawn By: LS 5/3/2021
 A



- NOTES:
1. TOTAL DEPTHS OF WELLS ARE PLANNED TO ALTERNATING AT DEPTHS OF 20 TO 30 FEET BELOW SURFACE GRADE, PENDING FIELD RESULTS.
 2. ALL WELLS WILL BE CONSTRUCTED TO INCLUDE 10' OF SCREEN, AND 11' OF SANDPACK. DEVIATIONS MAY BE CONDUCTED AS APPROPRIATE BASED ON FIELD CONDITIONS.
 3. ALL WELLS WILL HAVE 1' FINE SAND FILTER PACK AND 1' BENTONITE SEAL.
 4. WELLS WILL BE CONSTRUCTED OF SCHEDULE 40 PVC, USING EITHER 10 SLOT OR 20 SLOT SCREEN, PENDING SUBSURFACE CONDITIONS.
 5. CONCEPTUAL DRAWING, NOT FOR CONSTRUCTION.

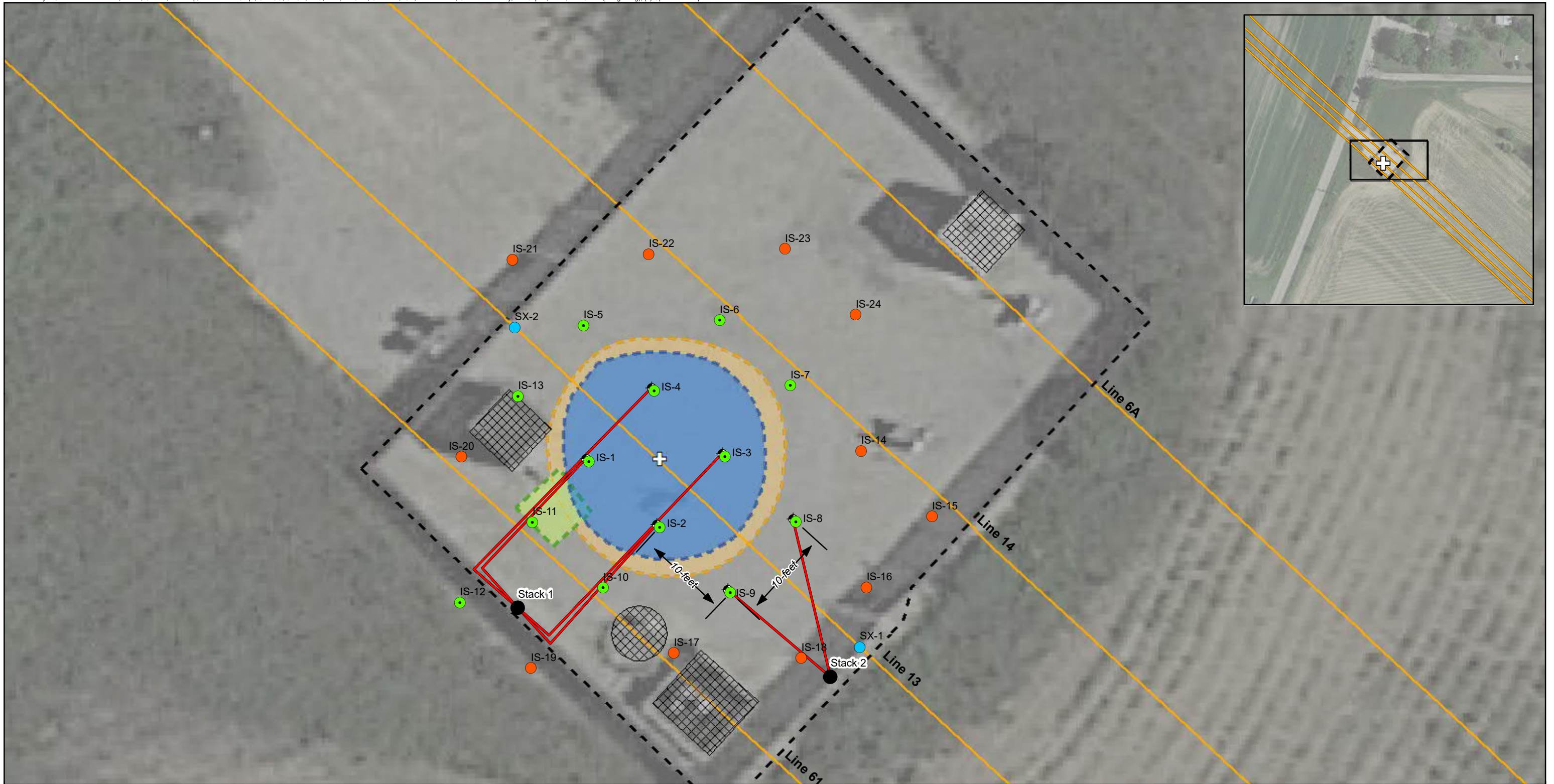
NOT TO SCALE

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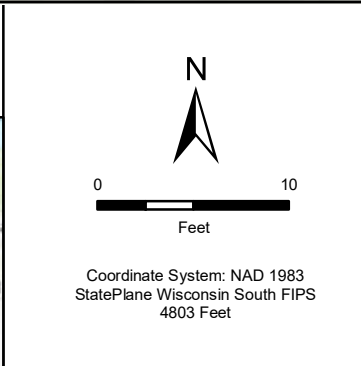
Figure 7
 PASSIVE BIOVENTING
 SYSTEM SCHEMATIC

LINE 13 MP 312 VALVE SITE
 FORT ATKINSON, WISCONSIN
 PREPARED FOR
 ENBRIDGE ENERGY LIMITED PARTNERSHIP
 DULUTH, MINNESOTA



ENBRIDGE

Drawn: WSP 5/4/2021
 Approved: WSP 5/4/2021
 Project #: 31401967.705



Legend

- Line 13 Valve
- Proposed Pipeline Bedding Soil Sample
- Proposed In-Situ UVOST-MIP Boring Location (Contingency)
- Proposed In-Situ UVOST-MIP Boring Location (Primary)
- Conceptual Passive Bioventing Well Location
- Conceptual Passive Bioventing Stack Location
- Conceptual Passive Bioventing Piping
- Enbridge Pipeline
- Site Features
- Site Fence
- Excavation Limits**
- Excavation 1 - May 17, 2019
- Excavation 2 - August 2, 2019
- Excavation 3 - October 9, 2019

Actual Locations to be determined based on results of site investigation

FIGURE 8
 PASSIVE BIOVENTING
 PIPING LAYOUT

LINE 13 MP 312 VALVE SITE FORT
 ATKINSON, WISCONSIN

ENBRIDGE ENERGY LIMITED
 PARTNERSHIP