

**State of Wisconsin**  
**DEPARTMENT OF NATURAL RESOURCES**  
Plymouth Service Center  
1155 Pilgrim Road  
Plymouth WI 53073

**Tony Evers, Governor**  
**Preston D. Cole, Secretary**  
Telephone 608-266-2621  
Toll Free 1-888-936-7463  
TTY Access via relay - 711



June 30, 2021

Mr. Doug Kiser  
Komatsu Mining Corp.  
4400 W. National Ave.  
Milwaukee, WI 53214-3684

Building on a Historic Fill Site Exemption Approval  
311 East Greenfield Avenue, Milwaukee, Wisconsin  
BRRTS# 07-41-584289 FID# 241219880

Dear Mr. Kiser:

The Wisconsin Department of Natural Resources (Department) has received your request for a grant of exemption from regulation under Wis. Admin. Code § NR 506.085. The application was submitted on behalf of the Komatsu Mining Corporation (Komatsu) for the former Solvay Coke and Gas Site. Komatsu is working with the Department as well as the former owners and the U.S. Environmental Protection Agency (EPA) to resolve various environmental issues with the site to construct a new manufacturing plant. The site is being tracked under the Bureau of Remediation and Redevelopment Tracking System (BRRTS) activity number 02-41-466662. This Historic Fill Exemption approval is required for the development to proceed. This approval acknowledges that the Department is satisfied that the proposed building design will provide adequate protection from methane gas and volatile organic vapors that are present on site. The Department is issuing this conditional grant of exemption from the prohibitions contained in Wis. Admin. Code § NR 506.085, provided you comply with the conditions of this grant of exemption. This grant of exemption is limited to the proposed development described in your application, a one-story, 410,000 square foot heavy equipment manufacturing facility. If you are considering additional changes beyond those described in the application, a new application must be submitted to the Department for approval.

Please review the information contained in the publication *Development at Historic Fill Sites and Licensed Landfills: Considerations and Potential Problems* PUB-RR-685 to assist you in preventing environmental or safety problems during and after development.

You are reminded that this approval does not relieve you of obligations to meet all other applicable federal, state and local permits, as well as zoning and regulatory requirements including site closure under Wis. Admin. Code ch. NR 726. If you have any questions concerning this letter, please contact Thomas A. Wentland at 608-219-2317.

Sincerely,



Michele R. Norman, Supervisor  
Remediation and Redevelopment Program  
Southeast Region

cc: City of Milwaukee Building Insp.  
KPRG and Associates, Inc.  
Bob Greco – We Energies

BEFORE THE

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES  
CONDITIONAL GRANT OF EXEMPTION  
FOR  
DEVELOPMENT ON A PROPERTY  
WHERE SOLID WASTE HAS BEEN DISPOSED

FINDINGS OF FACT

The Department finds that:

1. KPRG and Associates, Inc. on behalf of Komatsu has submitted a request dated September 4, 2019 with additional information submitted on May 14, 2021 for an exemption from the prohibition in Wis. Admin. Code § NR 506.085.
2. Historically the site was filled with coal tar and waste associated with a manufactured gas plant, foundry sand, and demolition wastes.
3. An operation and maintenance plan, *VAPOR BARRIER and MITIGATION SYSTEM MAINTENANCE PLAN, May 2021*, outlines inspections, monitoring and, if needed, repairs to the vapor mitigation system. The plan is attached to this letter.
4. The site is currently undergoing active remediation under a U.S. EPA Region V (EPA) Administrative Order on Consent including material removal and in-situ soil stabilization (ISS). Materials management will be handled through EPA including guidelines under which the various material types encountered during redevelopment must be handled and documented.
5. The site has an open BRRTS activity number 02-41-466662.
6. If the conditions set forth below are complied with, the development of the property will not result in environmental pollution as defined in Wis. Stat. §§ 289.01(8) and 299.01(4).

CONCLUSIONS OF LAW

1. The Department has the authority under Wis. Admin. Code § NR 500.08(4) to issue an exemption from the prohibition in Wis. Admin. Code § NR 506.085, if the proposed development will not cause environmental pollution as defined in Wis. Stat. §§ 289.01(8) and 299.01(4).
2. The Department has authority to approve a grant of exemption with conditions if the conditions are necessary to ensure compliance with the applicable provisions of Wis. Admin. Code chs. NR 500 to 538, or to assure that environmental pollution will not occur.
3. The conditions set forth below are necessary to ensure compliance with the applicable provisions of Wis. Admin. Code chs. NR 500 to 538, and to assure that environmental pollution will not occur.
4. In accordance with the foregoing, the Department has the authority under Wis. Admin. Code § NR 500.08(4), to issue the following conditional grant of exemption.

## CONDITIONAL GRANT OF EXEMPTION

The Department hereby issues an exemption to Komatsu from the prohibition in Wis. Admin. Code § NR 506.085, for development on a property which contains solid waste as proposed in the submittal received September 4, 2019 with additional information received on May 14, 2021, subject to the following conditions:

1. No action related to the development of the property may be taken which will cause a significant adverse impact on wetlands as provided in Wis. Admin. Code ch. NR 103.
2. No action related to the development of the property may be taken which will cause a significant adverse impact on critical habitat areas, as defined in Wis. Admin. Code § NR 500.03(55).
3. No action related to the development of the property may be taken which will cause a detrimental effect on any surface water, as defined in Wis. Admin. Code § NR 500.03(62).
4. No action related to the development of the property may be taken which will cause a detrimental effect on groundwater, as defined in Wis. Admin. Code § NR 500.03(62), or will cause or exacerbate an attainment or exceedance of any preventive action limit or enforcement standard in Wis. Admin. Code ch. NR 140.
5. No action related to the development of the property may be taken which will cause an emission of any hazardous air contaminant exceeding the limitations for those substances contained in Wis. Admin. Code § NR 445.03.
6. No action related to the development of the property may be taken which will cause an exceedance of a soil clean up standard in Wis. Admin. Code ch. NR 720.
7. No action related to the development of the property may be taken which will cause a discharge of contaminated storm waters or sediment.
8. This grant of exemption should not be construed as a site closure under Wis. Admin. Code ch. NR 726.
9. The development construction activities shall be coordinated with the approved remedial response actions and shall not prevent the completion of the approved remedial response actions.
10. A vapor mitigation system shall be installed as described in the *VAPOR BARRIER and MITIGATION SYSTEM MAINTENANCE PLAN*, May 2021. (Copy attached)
11. The vapor barrier and mitigation system maintenance plan shall be complied with.
12. Solid waste encountered during development shall be disposed of at a licensed solid waste landfill or managed under an approved materials management plan.
13. This exemption shall transfer with changes in property ownership. In accordance with Wis. Stat. § 289.46(2), any person having or acquiring rights of ownership in land where a solid or hazardous waste disposal activity occurred may not undertake any activities on the land which may cause a significant threat to public health, safety or welfare. The Department should be contacted to discuss any proposed changes to avoid activities that could violate the statute.

This grant of exemption is limited to the proposed changes described in your application. If you are considering additional changes beyond those described in the application, a new application must be submitted to the Department for approval. The Department reserves the right to require the submittal of additional information and to modify this grant of exemption at any time, if in the Department's opinion, modifications are necessary. Unless specifically noted, the conditions of this grant of exemption do not supersede or replace any previous conditions of approval for this property.

#### NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed.

For judicial review of a decision pursuant to Wis. Stat. §§ 227.52 and 227.53, you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

Dated: June 30, 2021

DEPARTMENT OF NATURAL RESOURCES  
For the Secretary



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Michele R. Norman, Supervisor  
Remediation & Redevelopment Program  
Southeast Region



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Thomas A. Wentland  
Waste Management Engineer  
Remediation and Redevelopment Program  
Southeast Region

## VAPOR BARRIER and MITIGATION SYSTEM MAINTENANCE PLAN

May 2021

Property Located at:

311 E. Greenfield Avenue  
Milwaukee, WI 53204

DNR BRRTS/Activity #02-41-466662, FID #241219880

### LEGAL DESCRIPTION:

PARTITION LOTS IN NW 1/4 SEC 4-6-22 PART (LOTS 2-5 INCL-7-13 INCL & LOT 17 IN SD SUBD & LOTS 1-2 OF SUBD INTO LOTS OF W 1/2 OF SW 1/4 SEC 4-6-22) COM S LI & 40' E OF SW COR SD NW 1/4 SEC-TH N 333.35'-TH E 50'-TH N 151.42'-TH E 26'-TH N ALG A LI WH IS 116' E OF & PAR TO W LI SD NW 1/4 SEC 1992.43' M/L TO S LI E GREENFIELD AVE-TH E 183.46' TO W LI ROW-TH SELY ALG SD ROW TO A PT 40' NW OF W LI KK RIVER-TH S TO W LI SD RIVER-TH SWLY ALG W LI SD RIVER (651.17'-3.93'-296.93'-354.07'-343.01'-42.79')-TH E 30.75' TH SLY 6'-TH SW 427.24'-TH NW 57.58'-TH SW 44.40'-TH NWLY 232.30'-TH E 47.35'-TH NW 199.62'-TH N 163.01' TO BEG BID #51

TAX KEY: 4639995200

### Introduction

This document is the Maintenance Plan for the manufacturing facility's vapor barrier and methane mitigation system at the above-referenced property in accordance with the requirements of s. NR 724.13 (2), Wis. Adm. Code. The maintenance activities relate to the existing vapor barrier and methane mitigation system, which addresses or occupies the area over the contaminated groundwater plume and identified areas of methane.

More site-specific information about this property/site may be found in:

- The case file in the DNR Southeast office
- At <http://dnr.wi.gov/topic/Brownfields/wrrd.html>, which includes:
  - BRRTS on the Web (DNR's internet based data base of contaminated sites) for the link to a PDF for site-specific information at the time of closure and on continuing obligations;
  - RR Sites Map for a map view of the site, and
- The DNR project manager for Milwaukee County.

It should be noted that this maintenance plan is being prepared prior to constructing the system. Any details provided about the system at this time are proposed and this plan will be revised and/or updated after the systems described have been constructed.

## **D.1. Descriptions:**

### Description of Contamination

Methane was identified above the DNR recommended action levels in the historic fill soil located beneath the proposed manufacturing facility at methane monitoring points MM-2 and MM-5. The DNR has requested the methane mitigation system be expanded to cover monitoring points MM-4 and MM-6. Groundwater contaminated by benzene above the NR 140 Preventive Action Limit (PAL) in contact with part of the building foundation is located at MW-39 at a depth of nine (9) to ten (10) feet below the building floor slab. The proposed building foundation in the location is ten (10) feet below the building floor slab. The location of the methane and groundwater contamination are shown on the attached Figures 1 and 2 respectively.

### Description of the Vapor Barrier and Methane Mitigation System to be Maintained

#### *Vapor Barrier*

The vapor barrier consists of 15-mil multi-layer plastic that is manufactured with high-grade polyolefin resins. The vapor barrier is designed and constructed for use in systems for the control of soil gases. The 15-mil vapor barrier will be installed over the stone layer as close to the floor slab as possible. The wrap will have either sand, an 8 oz geotextile, or a combination of the two placed above and below it. The extent of the vapor barrier is shown on the attached Figure 3 including a cross section that shows the location of the vapor barrier in relation to the concrete floor slab.

#### *Methane Mitigation System*

The methane mitigation system consists of a series of PVC vertical draw points that create a vacuum on the area below the vapor barrier and concrete slab to remove any potential methane vapors. The vertical suction points will be connected to overhead piping and an active fan to place the subsurface under a vacuum. The vertical suction points will penetrate the stone layer below the concrete floor slab to achieve good communication between the subsurface and the vertical suction points. The active fan would discharge into the atmosphere above the roof. The proposed configuration is shown on Figure 4. The vertical gas extraction system will consist of the following components:

- A stone base course located beneath the building concrete floor slab.
- Approximately 29 suction points attached to the building columns that penetrate into the stone layer. The pipes will extend vertically to the ceiling where they are connected to five (5) discharge fans. The vertical piping is anticipated to be 4" diameter PVC, but the immediate portion through the concrete slab will be 3" diameter PVC.
- Waterproof walls, joints, and penetrations of equipment foundations that will be in contact with groundwater.
- Sampling points installed for pressure field extension (PFE) tests after the system has been installed to ensure it is effective.

## Vapor Barrier and Methane Mitigation System Purpose

The vapor barrier and methane mitigation system over the contaminated groundwater and identified methane serve as a barrier to prevent the vapor intrusion of methane and benzene that might otherwise pose a threat to human health. Based on the current use of the property, industrial, the vapor barrier and methane mitigation system should function as intended unless disturbed.

## Annual Inspection

### *Vapor Barrier*

The concrete slab/vapor barrier overlying the contaminated groundwater plume and as depicted on Figure 3 will be inspected quarterly for deterioration, cracks and other potential problems associated with settling of the site subsoil. If settling issues have not been discovered after three (3) years, the inspections will be reduced to once a year. The inspections will be performed by the property owner or their designated representative. The inspections will be performed to evaluate concrete slab movement due to potential subsoil settlement. If the settlement of the concrete slab occurs to a point, where the slab requires repairs then the concrete slab shall be removed and the vapor barrier will be examined for damage. If the vapor barrier is damaged, then it will be repaired based on the manufacturer's recommendations. If the vapor barrier is damaged to a point beyond repair, then that portion of the vapor barrier will be replaced. The replaced piece of vapor barrier will be sealed to the existing portion of the vapor barrier in accordance with the manufacturer's recommendations.

A log of the inspections and any repairs will be maintained by the property owner and is included as D.4, Form 4400-305, Continuing Obligations Inspection and Maintenance Log. The log will include recommendations for necessary repair of any areas where the concrete slab and vapor barrier are damaged and repairs are required. Once repairs are completed, they will be documented in the inspection log. A copy of the maintenance plan and inspection log will be kept at the site for submittal or inspection by Wisconsin Department of Natural Resources (DNR) representatives upon their request.

### *Methane Mitigation System*

The methane mitigation system will be monitored at least once a year during the heating season. The monitoring will consist of observing the vacuum of each fan in the system. The observation will occur at each fan's manometer that is installed on the conveyance pipe on the vacuum side of the fan. The manometer will be fixed to conveyance pipe and will have an accuracy of 0.1 inches of water.

The inspection is anticipated to coincide with the verification of the pressure field. Once the pressure field of the vapor system has been verified, the inspections will be done at least once a year during the heating season.

The Inspection checklist consists of the following items:

- Motor fan/blowers are operating
- Suction draw points remain sealed

- Barrier is in similar condition to baseline conditions
- Conveyance pipe vents are clear
- Conveyance pipes are not damaged, cracked, or blocked
- Vacuum probes are in good condition and remain capped/sealed.

### Maintenance Activities

#### *Concrete Slab/Vapor Barrier*

If problems are noted during the annual inspections or at any other time during the year, repairs will be scheduled as soon as practical. Repairs of the concrete slab can include patching and filling or larger resurfacing or replacing sections of the concrete slab by complete removal and re-pouring concrete. If the concrete slab requires maintenance activities, the underlying vapor barrier will be exposed and inspected for damage. Repairs will be made if damage to the vapor barrier is observed. Specific testing has not occurred to determine a quantifiable amount of settling the vapor barrier can tolerate. However, the vapor barrier material is expected to maintain its integrity under typical settling conditions.

Repairing the vapor barrier will be performed in accordance with the manufacturer's recommendations. At the time of this plan, Stego Industries, LLC is the manufacturer recommended by the construction specifications. The repair procedure for the Stego Industries vapor barrier is included as Attachment 1.

#### *Methane Mitigation System*

If problems are noted during the annual inspections or at any other time during the year, repairs will be scheduled as soon as practical. If any of the fan motors fail to maintain baseline conditions, they will be replaced with a fan having similar specifications to the original fan. Sealing of the vapor barrier and suction draw points will occur as needed to restore to baseline conditions. If vacuum measurements do not meet baseline conditions, troubleshooting will occur to identify any leaks or vent blockage. Repairs will occur to restore the baseline flow.

In some cases, troubleshooting may determine that site conditions may have changed, and a system upgrade may be required to meet baseline conditions. If a system upgrade is needed, Commissioning procedures will be completed to verify performance and establish the new baseline conditions.

In the event the concrete slab/vapor barrier or methane mitigation system overlying the contaminated groundwater plume are altered or replaced, the replacement must be equal to the original. Any replacement will be subject to the same maintenance and inspection guidelines as outlined in this Maintenance Plan unless indicated otherwise by the DNR or its successor.

The property owner, in order to maintain the integrity of the concrete slab/vapor barrier and methane mitigation system, will maintain a copy of this Maintenance Plan at the site and make it available to all interested parties (i.e. on-site employees, contractors, future property owners, etc.) for viewing.



### Prohibition of Activities and Notification of DNR Prior to Actions Affecting a Cover/Barrier

The following activities are prohibited on any portion of the property where the building concrete slab/vapor barrier and methane mitigation system is required as shown on the attached map, unless prior written approval has been obtained from the Wisconsin Department of Natural Resources:

- 1) Removal of the existing barrier;
- 2) Replacement with another barrier;
- 3) Excavating or grading of the land surface;
- 4) Filling on capped or paved areas;
- 5) Plowing for agricultural cultivation;
- 6) Construction or placement of a building or other structure;
- 7) Changing the use or occupancy of the property to a residential exposure setting, which may include certain uses, such as single or multiple family residences, a school, day care, senior center, hospital, or similar residential exposure settings; or
- 8) Changing the construction of a building that has a vapor mitigation system in place.

If removal, replacement or other changes to the building's concrete slab/vapor barrier or methane mitigation system, are considered, the property owner will contact DNR before taking such an action, to determine whether further action may be necessary to protect human health, safety, or welfare or the environment, in accordance with s. NR 727.07, Wis. Adm. Code.

### Amendment or Withdrawal of Maintenance Plan

This Maintenance Plan can be amended or withdrawn by the property owner and its successors with the written approval of DNR.

### Contact Information

May 2021

Site Owner and Operator:     Komatsu Mining Corporation Group  
  4400 West National Avenue  
  Milwaukee, WI 53214  
  414-670-8476

Signature: \_\_\_\_\_

Property Owner:     Doug Kiser  
  Komatsu Mining Corporation Group  
  4400 West National Avenue  
  Milwaukee, WI 53214  
  414-670-8476

Consultant: Joshua D. Davenport, P.E.  
KPRG and Associates, Inc.  
14665 W. Lisbon Road, Suite 1A  
Brookfield, WI 53005  
262-781-0475

DNR: Margaret Brunette  
2300 N. Dr. Martin Luther King, Jr. Drive  
Milwaukee, WI 53212-3128  
262-289-0005

## **D.2 Location Maps**

Location maps that show the following items are included:

- (1) The feature that requires maintenance;
- (2) The location of the features that require maintenance on the source property;
- (3) The extent of the structure or features to be maintained, in relation to other structures or features on the site;
- (4) The extent and type of residual contamination; and
- (5) All property boundaries.

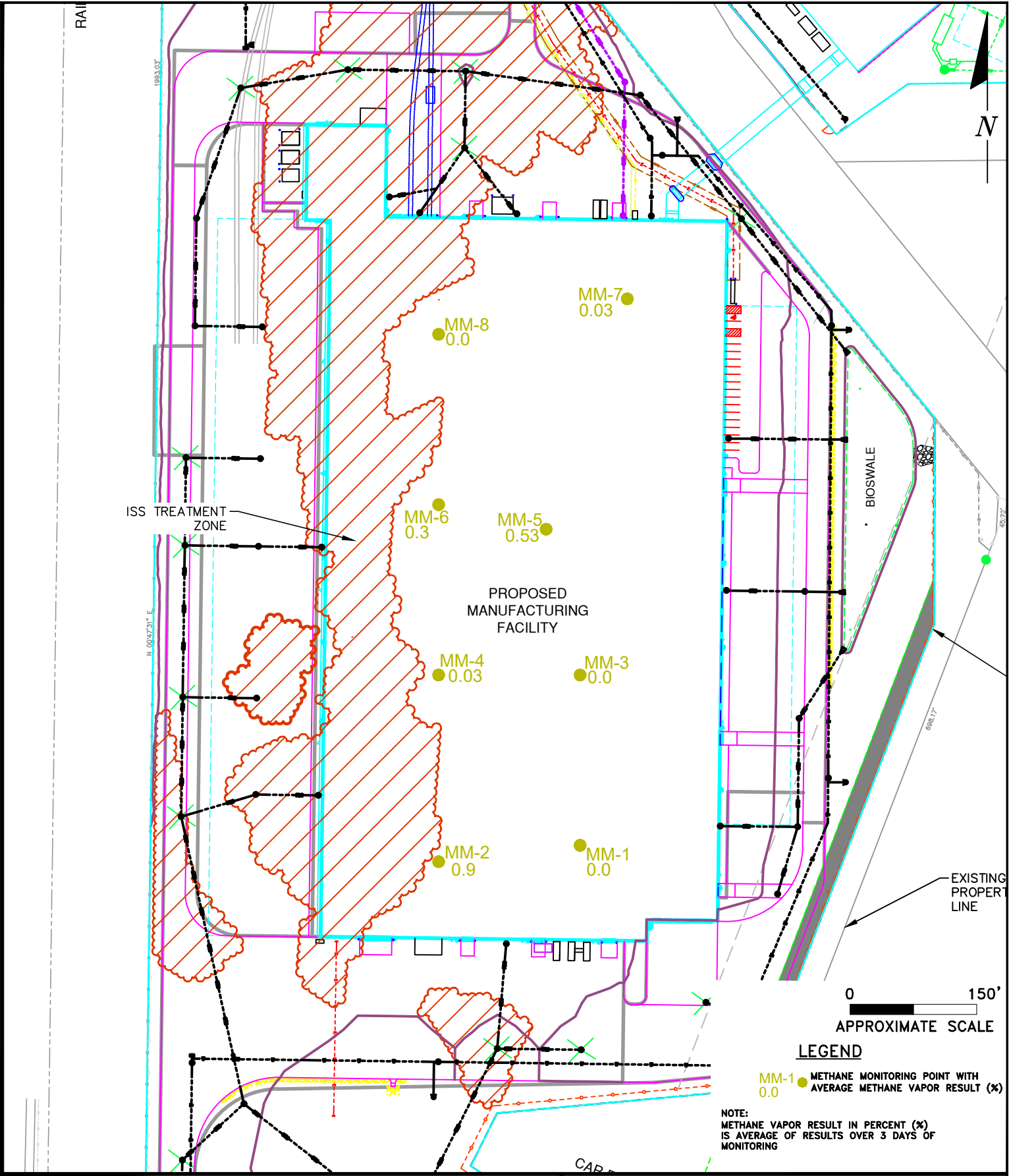
## **D.3 Photographs of Cover/Barrier**

Photographs documenting the condition and extent of the concrete slab/vapor barrier and methane mitigation system at the time of the closure request will be included in this Maintenance Plan. Pertinent features will be visible and discernible. Titles on each photograph, which identifies the site name and location of the feature, and the date on which the photograph was taken will be provided.

## **D.4 Continuing Obligations Inspection and Maintenance Log**

The DNR Fillable Form 4400-305 will be used to document the inspections and maintenance.

## **Figures**



ENVIRONMENTAL CONSULTATION & REMEDIATION

**K P R G**

KPRG and Associates, inc.

14665 West Lisbon Road, Suite 1A Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

**METHANE MONITORING RESULTS**

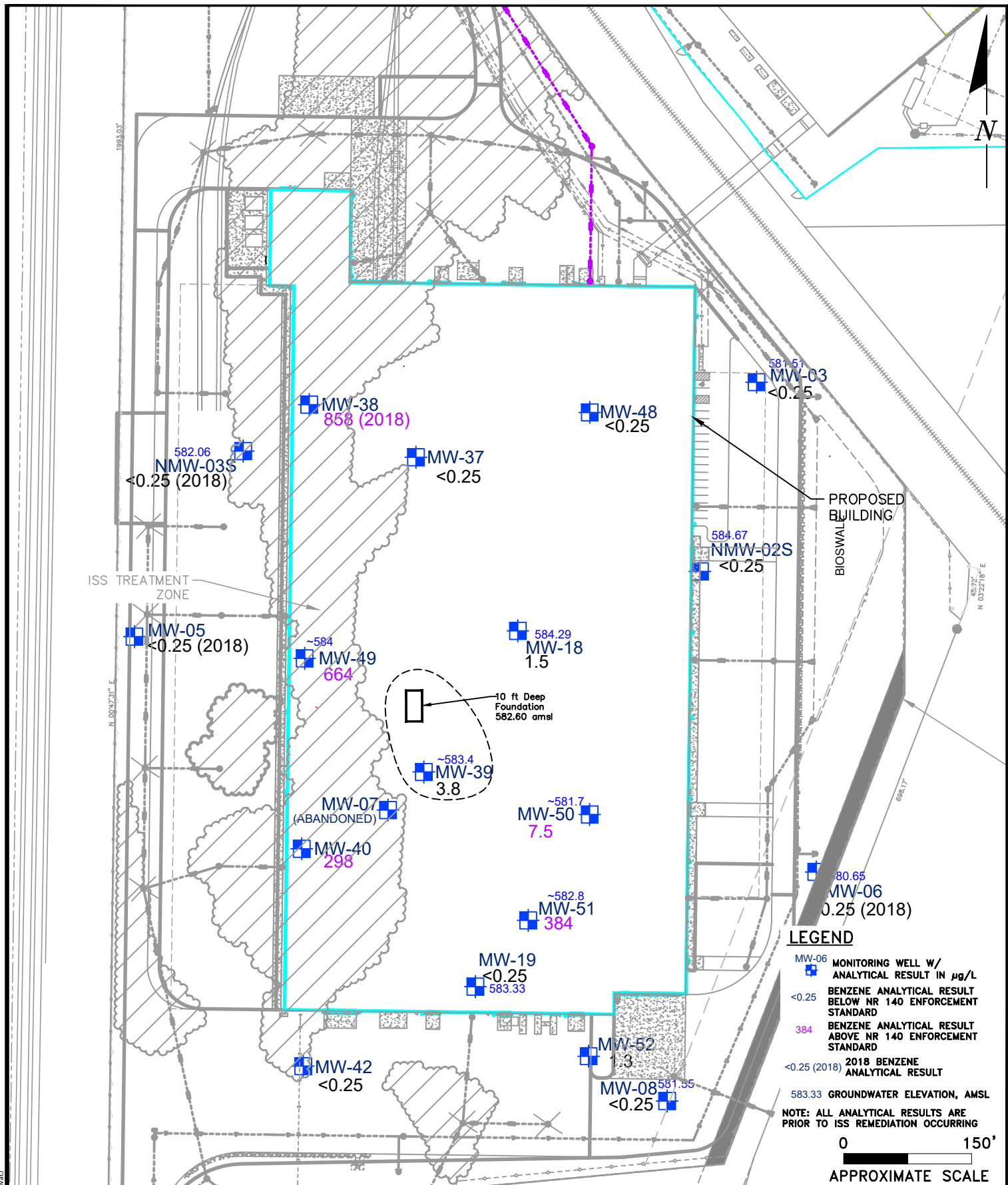
311 E. GREENFIELD AVE  
MILWAUKEE, WISCONSIN

Scale: 1" = 150'

Date: August 26, 2020

KPRG Project No. 17519

FIGURE 1



ENVIRONMENTAL CONSULTATION & REMEDIATION

**K P R G**

KPRG and Associates, inc.

14665 West Lisbon Road, Suite 1A Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

**GROUNDWATER IN CONTACT WITH BUILDING FOUNDATION LOCATION**

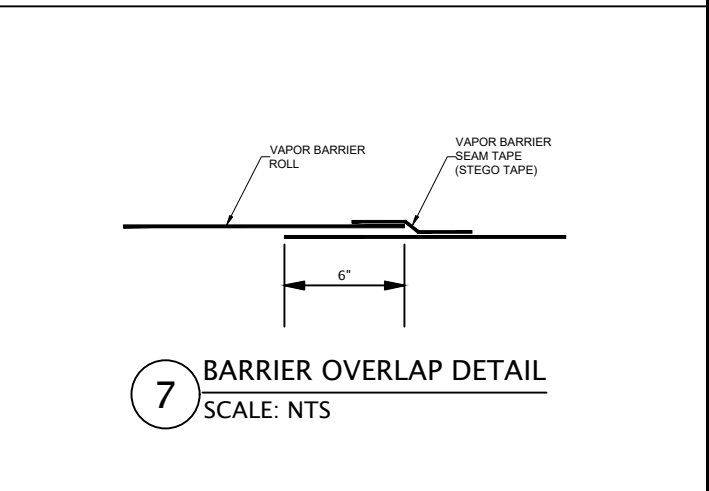
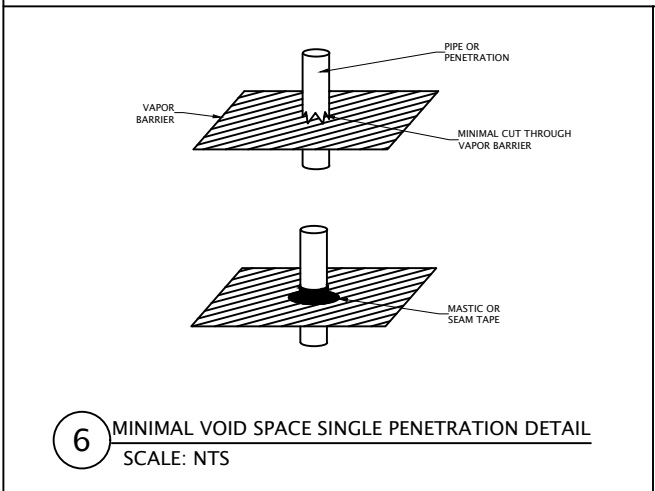
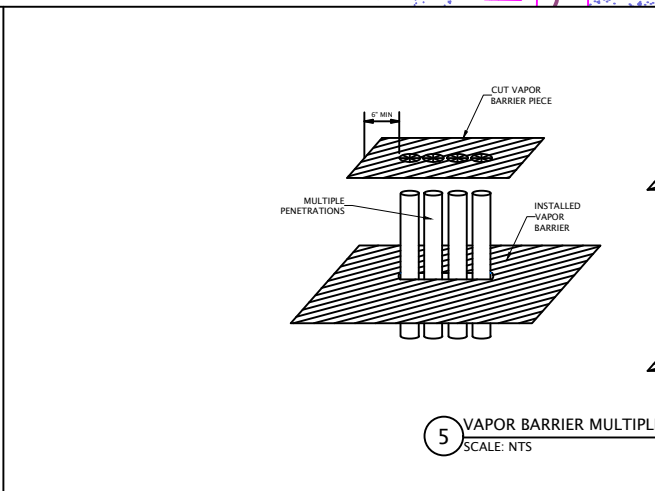
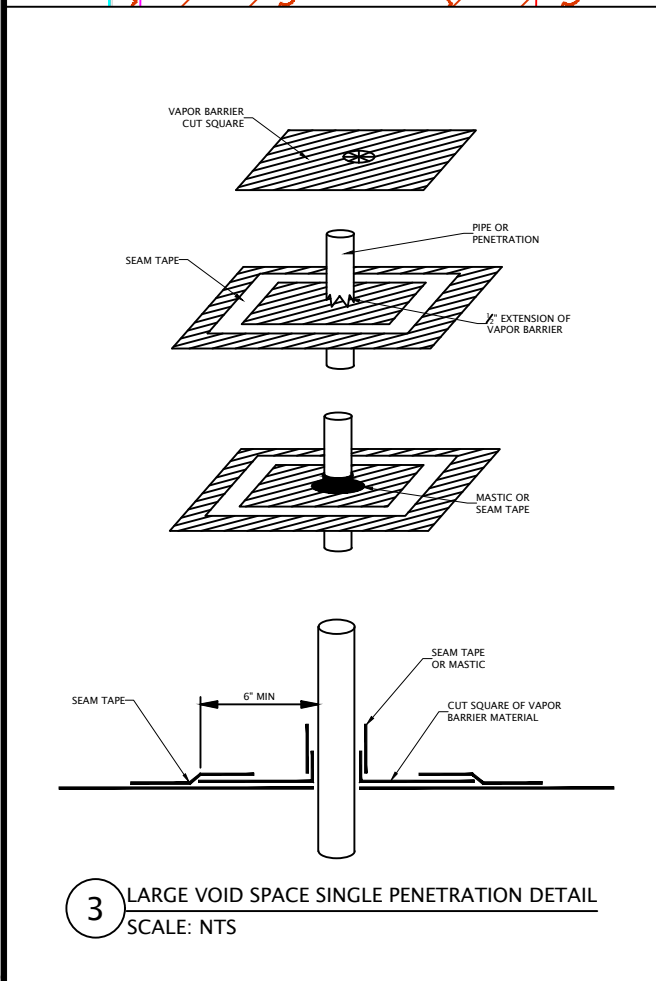
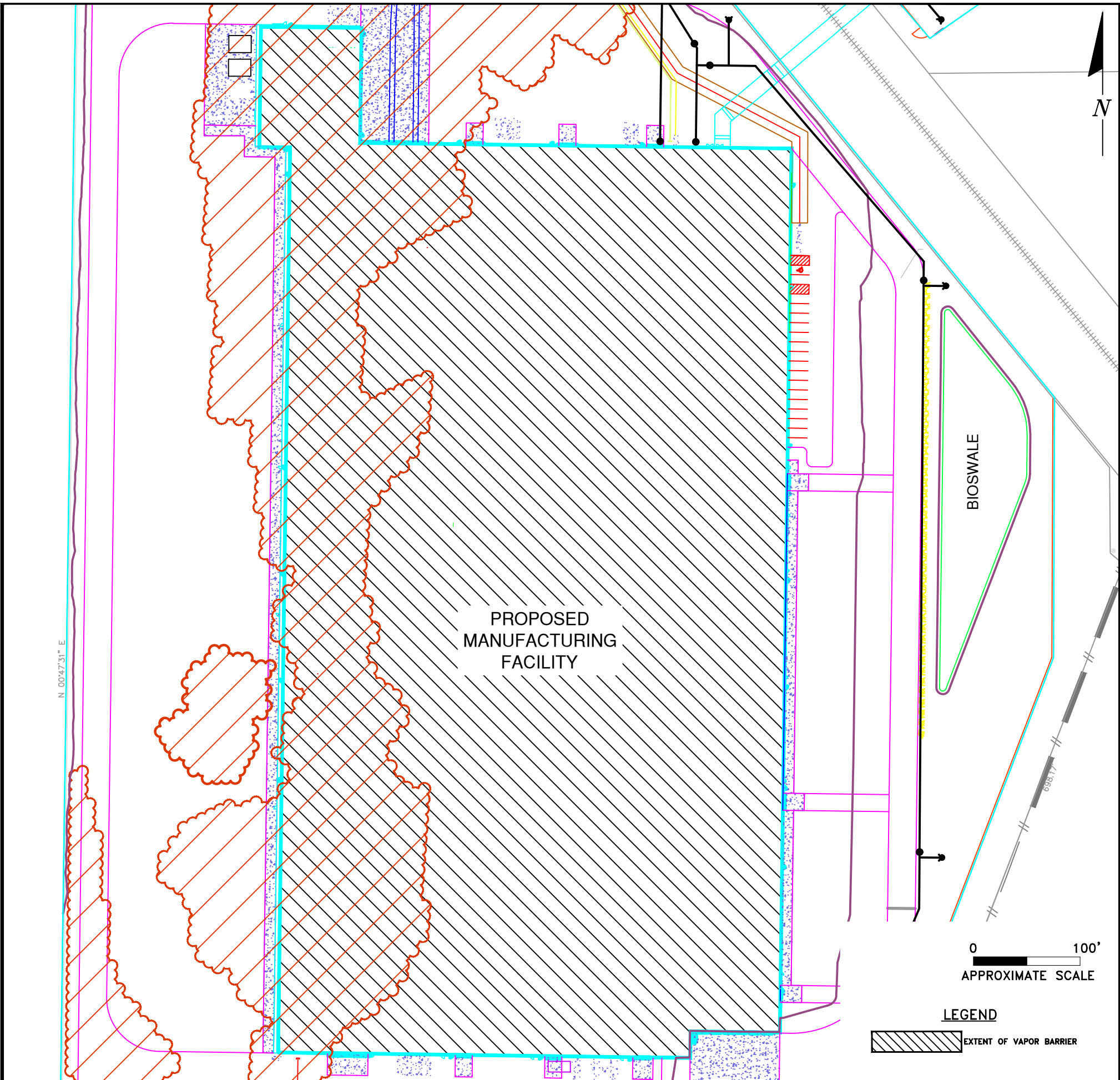
311 E. GREENFIELD AVE  
MILWAUKEE, WISCONSIN

Scale: 1" = 150'

Date: August 26, 2020

KPRG Project No. 17519

FIGURE 2



ENVIRONMENTAL CONSULTATION & REMEDIATION

**K P R G** KPRG and Associates, Inc.

14665 West Lisbon Road, Suite 1A Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478  
414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

**EXTENT OF VAPOR BARRIER**

311 E. GREENFIELD AVE  
MILWAUKEE, WISCONSIN

Scale: 1" = 100' | Date: May 14, 2021

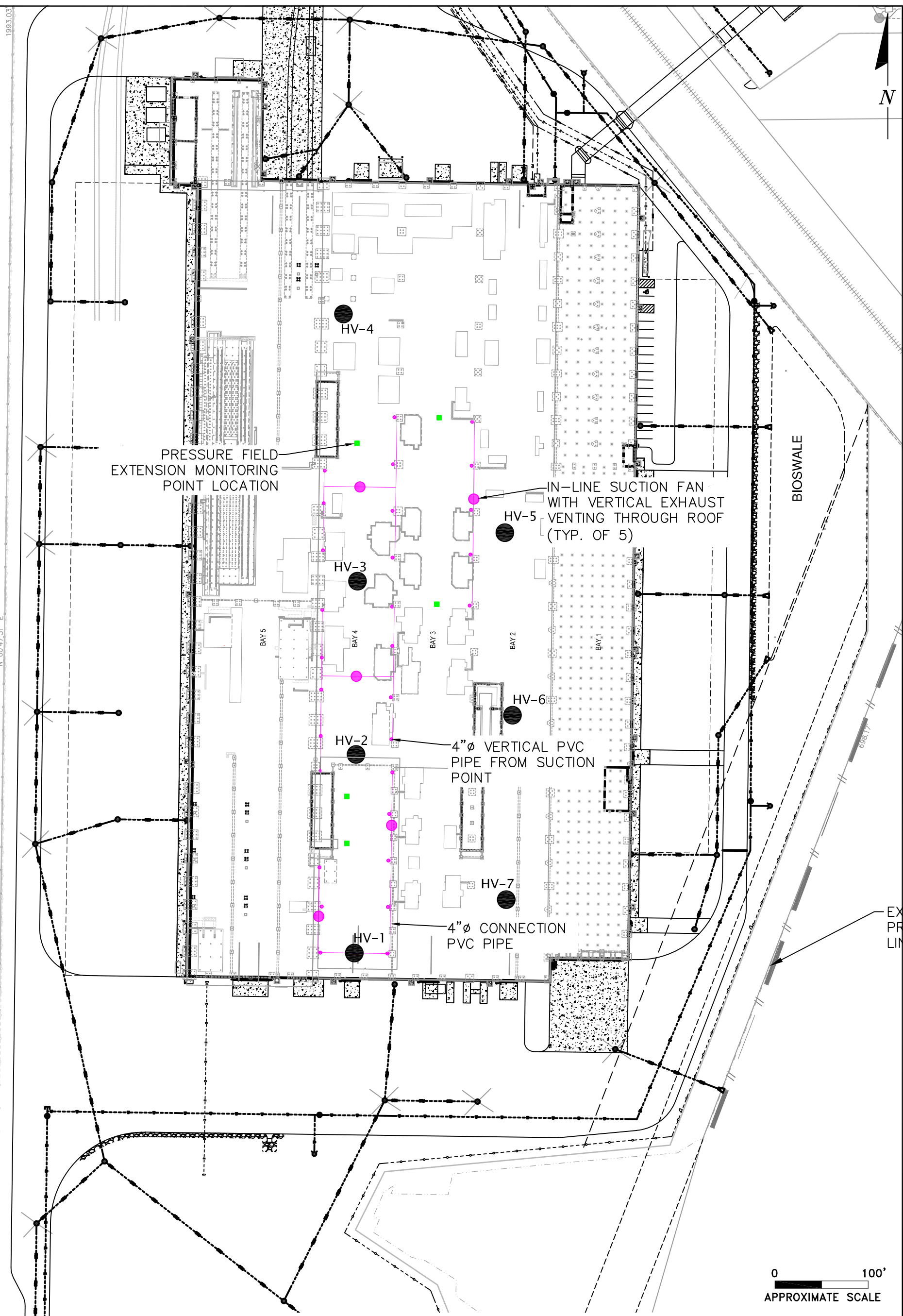
KPRG Project No. 17519 | **FIGURE 3**

W:\projects\komsusu\site map\_rev\_2020\_vert.dwg

1993.03



N. 00°47'31" E.



PRESSURE FIELD  
EXTENSION  
MONITORING  
POINT  
LOCATION

IN-LINE SUCTION FAN  
WITH VERTICAL EXHAUST  
VENTING THROUGH ROOF  
(TYP. OF 5)

BIOSWALE

4"Ø VERTICAL PVC  
PIPE FROM SUCTION  
POINT

4"Ø CONNECTION  
PVC PIPE



**LEGEND**

- 4" SCH 40 PVC PIPE
- 3"Ø VERTICAL SUCTION POINT THROUGH CONCRETE SLAB WITH 4"Ø PVC RISER PIPE
- VERTICAL RISER THROUGH ROOF WITH BLOWER
- HIGH VOLUME SAMPLING POINT
- PRESSURE FIELD EXTENSION MONITORING POINT LOCATION

ENVIRONMENTAL CONSULTATION & REMEDIATION



KPRG and Associates, inc.

14665 West Lisbon Road, Suite 1A Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

**VERTICAL METHANE MITIGATION SYSTEM LAYOUT**

311 E. GREENFIELD AVE  
MILWAUKEE, WISCONSIN

Scale: 1" = 100'

Date: May 14, 2021

KPRG Project No. 17519

FIGURE 4

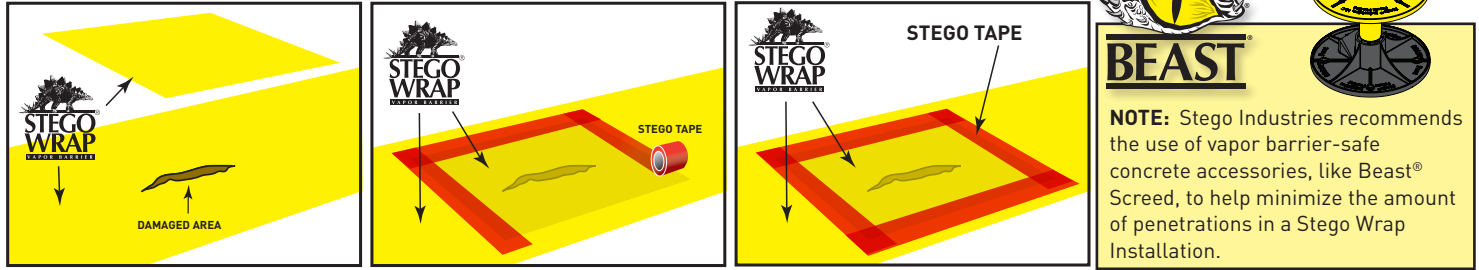
W:\projects\komsu\site map\_rev\_2020\_vert.dwg

## **Attachment 1**



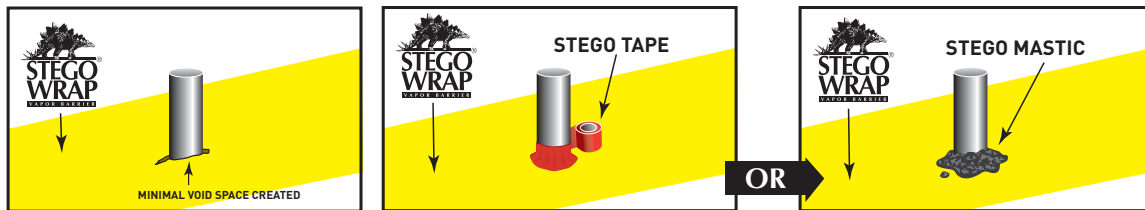
- In the event that Stego Wrap is damaged during or after installation, repairs must be made. For holes, cut a piece of Stego Wrap to a size and shape that covers any damage by a minimum overlap of 6" in all directions. Clean all adhesion areas of dust, dirt, moisture, and frost. Tape down all edges using Stego Tape (See Figure 3).

FIGURE 3: SEALING DAMAGED AREAS



- IMPORTANT: ALL PENETRATIONS MUST BE SEALED.** All pipe, ducting, rebar, wire penetrations and block outs should be sealed using Stego Wrap, Stego Tape and/or Stego Mastic (See Figure 4a). If penetrations are encased in other materials, such as expansive materials like foam, unless otherwise specified, Stego Wrap should be sealed to the underlying penetration directly.

FIGURE 4a: PIPE PENETRATION SEALING



**STEGO WRAP PIPE PENETRATION REPAIR DETAIL:**

- 1: Install Stego Wrap around pipe penetrations by slitting/cutting material as needed. Try to minimize the void space created.
- 2: If Stego Wrap is close to pipe and void space is minimized then seal around pipe penetration with Stego Tape and/or Stego Mastic. (See Figure 4a)
- 3: If detail patch is needed to minimize void space around penetration, then cut a detail patch to a size and shape that creates a 6" overlap on all edges around the void space at the base of the pipe. Stego Pre-Cut Pipe Boots are also available to speed up the installation.
- 4: Cut an "X" the size of the pipe diameter in the center of the pipe boot and slide tightly over pipe.
- 5: Tape down all sides of the pipe boot with Stego Tape.
- 6: Seal around the base of the pipe using Stego Tape and/or Stego Mastic. (See Figure 4b)

FIGURE 4b: DETAIL PATCH FOR PIPE PENETRATION SEALING

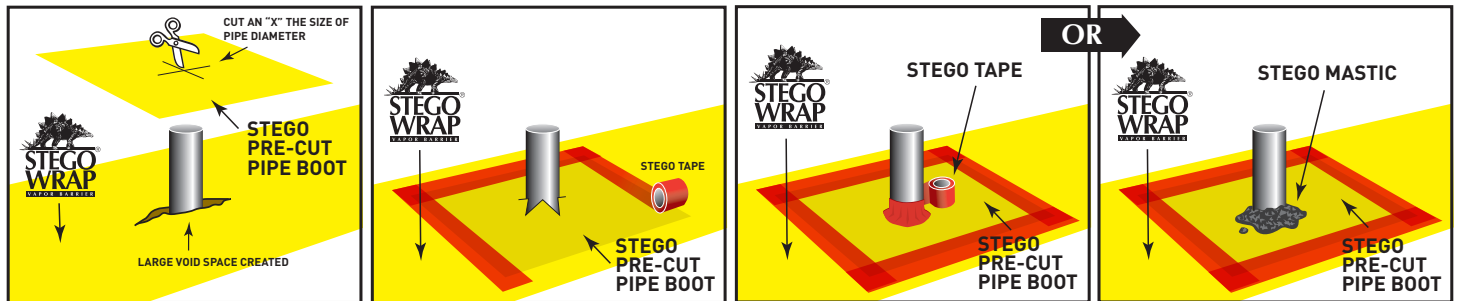
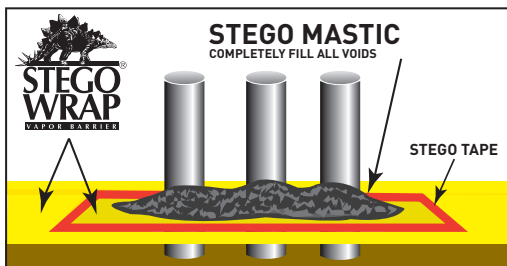


FIGURE 5: MULTIPLE PIPE PENETRATION SEALING



**MULTIPLE PIPE PENETRATION SEALING:**

Multiple pipe penetrations in close proximity and very small pipes may be sealed using Stego Wrap and Stego Mastic for ease of installation (See Figure 5).

**NOTE:** Stego Industries, LLC's ("Stego") installation instructions are based on ASTM E1643 - *Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs*. These instructions are meant to be used as a guide, and do not take into account specific job site situations. Consult local building codes and regulations along with the building owner or owner's representative before proceeding. If you have any questions regarding the above mentioned installation instructions or Stego products, please call us at 877-464-7834 for technical assistance. While Stego employees and representatives may provide technical assistance regarding the utility of a specific installation practice or Stego product, they are not authorized to make final design decisions.

**D4.Inspection Form 44-305**

**Directions:** In accordance with s. NR 727.05 (1) (b) 3., Wis. Adm. Code, use of this form for documenting the inspections and maintenance of certain continuing obligations is required. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Public Records law [ss. 19.31-19.39, Wis. Stats.]. When using this form, identify the condition that is being inspected. See the closure approval letter for this site for requirements regarding the submittal of this form to the Department of Natural Resources. A copy of this inspection log is required to be maintained either on the property, or at a location specified in the closure approval letter. Do NOT delete previous inspection results. This form was developed to provide a continuous history of site inspection results. The Department of Natural Resources project manager is identified in the closure letter. The project manager may also be identified from the database, BRRTS on the Web, at <http://dnr.wi.gov/botw/SetUpBasicSearchForm.do>, by searching for the site using the BRRTS ID number, and then looking in the "Who" section.

Activity (Site) Name	BRRTS No.
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Inspections are required to be conducted (see closure approval letter): <input type="radio"/> annually <input type="radio"/> semi-annually <input type="radio"/> other – specify _____	When submittal of this form is required, submit the form electronically to the DNR project manager. An electronic version of this filled out form, or a scanned version may be sent to the following email address (see closure approval letter):
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Inspection Date	Inspector Name	Item	Describe the condition of the item that is being inspected	Recommendations for repair or maintenance	Previous recommendations implemented?	Photographs taken and attached?
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier for soil <input type="checkbox"/> sediment cap <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier for soil <input type="checkbox"/> sediment cap <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier for soil <input type="checkbox"/> sediment cap <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier for soil <input type="checkbox"/> sediment cap <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier for soil <input type="checkbox"/> sediment cap <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier for soil <input type="checkbox"/> sediment cap <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N

**Continuing Obligations Inspection and Maintenance Log**

Form 4400-305 (R 7/20)

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BRRTS No.

Activity (Site) Name

{Click to Add/Edit Image}

Date added:

Title:

{Click to Add/Edit Image}

Date added:

Title: