REMEDIAL ACTION PLAN

John Deere Horicon Works
North Yard Vault
Horicon, Wisconsin

BRRTS #02-14537743

HYDE ENVIRONMENTAL, INC.

REMEDIAL ACTION PLAN

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BRRTS #02-14537743

Prepared For:

John Deere Horicon Works
300 N. Vine Street
Horicon, Wisconsin

Prepared By:

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July 14, 2017

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY 1

2.0 SITE BACKGROUND 3

2.1 Responsible Party and Site Location 3

2.2 Remedial Action Objectives 3

2.3 Site Description 3

2.4 Site History 4

2.5 Geology 5

2.6 Hydrogeology 5

3.0 DESCRIPTION OF REMEDIAL ACTION 7

3.1 Overview 7

3.2 Soil Cleanup Goals 7

3.3 Site Preparation 7

3.4 Contaminated Soil Removal 8

3.5 Soil Sampling 8

3.6 Excavation Dewatering and Liquid Phase Hydrocarbon Handling 9

4.0 SITE RESTORATION 10

5.0 POST-EXCAVATION CARE 11

6.0 SCHEDULE 12

7.0 REMEDIAL ACTION REPORT 13

TABLE OF CONTENTS (Continued)

FIGURES

1. Site Location Map
2. Proposed Excavation Areas & Site Utilities

TABLE

1. Remedial Action Schedule

APPENDIX

A. Health and Safety Plan

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

	July 14, 2017
James C. Lindemann, PG, PH, CHMM	**Date**

REMEDIAL ACTION PLAN

John Deere Horicon Works
North Yard Vault
Horicon, Wisconsin

1.0 EXECUTIVE SUMMARY

This plan presents the proposed remedial activities to remove petroleum-contaminated soil from the North Yard Vault area at the John Deere Horicon Works (JDHW) facility in Horicon, Wisconsin. The area of investigation is located at the north facility gate, near the terminus of North Vine Street, and predominantly consists of concrete- and asphalt-covered areas adjacent to Building S2. The North Yard Vault is an extremely active area, and once housed an underground vault containing a 300-gallon aviation gasoline tank, a 550-gallon unleaded gasoline tank, a 550-gallon #1 diesel tank, and a 300-gallon #2 diesel tank, along with associated fuel dispensers and underground piping and vents.

Investigative work completed since 2004 included the installation of one recovery well, seven monitoring wells and 32 soil borings.

The objective of the remediation is to remove accessible petroleum-contaminated soil that exceeds the NR720 Soil-to-Groundwater Residual Contaminant Levels (RCLs). This goal is expected to be accomplished by the removal and disposal of approximately 900 cubic yards (cy) of soil to a maximum depth of 10 feet.

The geology of the Horicon area consists of glacial deposits overlying Ordovician bedrock. Groundwater in the Horicon area is mapped as less than 10 feet deep. Water is supplied to the City of Horicon residents and JDHW by three municipal wells. The materials identified in borings drilled near the former tanks and fuel dispensing area consisted of fill overlying native deposits. The fill generally included concrete and/or asphalt pavement overlying silty clay, sand and gravel, foundry sand, and crushed limestone fill. The native deposits consisted of silt, clay and sand. Fill was identified to approximate depths between 4 and 6 feet deep. The water table on site is shallow, as groundwater has been measured within three feet of the ground surface and flows to the northwest.

Site preparation for remediation includes the installation and maintenance of sediment and erosion controls; demolition and removal of concrete and asphalt pavement; and abandonment of three wells (MW-2, MW-5 and RW-1). Approximately 900 cubic yards (1,350 tons) of soil is anticipated to be removed and sent to a solid waste facility for disposal. The excavation is expected to extend to approximately 10 feet deep. Groundwater and/or precipitation removed from the excavation will be pumped directly to the City of Horicon water treatment plant. Liquid-phase hydrocarbons (LPH), if present, will be removed by petroleum-absorbent recovery mats and/or a vacuum truck.

Soil samples will be collected from the completed excavation to document the absence/presence of petroleum impacts in soil. The samples will be analyzed by a

Wisconsin-certified laboratory for petroleum volatile organic compounds (PVOCs), polynuclear aromatic hydrocarbons (PAHs) and total lead. Post-excavation groundwater monitoring will include sampling of the five monitoring wells surrounding the excavation for four quarterly events. The groundwater will be analyzed for PVOCs, and any additional compounds identified to exceed the soil to groundwater RCLs, in the post-excavation sampling.

A Remedial Action Report (RAP) will be submitted at the conclusion of the remedial activities, providing details of the remedial actions, and to provide documents concerning the disposal of contaminated soil and any impacted groundwater.

2.0 SITE BACKGROUND

2.1 Responsible Party and Site Location

The JDHW facility is located in Horicon, Wisconsin at 300 N. Vine Street. It is located in the SE quarter of the NW quarter of Section 6, Township 11 North, Range 16 East, in Dodge County (Figure 1).

The responsible party contact is:

Dan Ketter
John Deere Horicon Works
300 N. Vine Street
Horicon, Wisconsin 53032
Phone: 920-485-4411

The consultant contact is:

James Lindemann
Hyde Environmental, Inc.
W175N11163 Stonewood Drive, St. 110
Germantown, Wisconsin 53022
Phone: 262-250-1226

2.2 Remedial Action Objectives

The remedial objective is to remove accessible petroleum-contaminated soil that exceeds the Wisconsin s. NR720 Remedial Contaminant Limits (RCLs) for petroleum from the North Yard Vault area, with the ultimate goal of the removal to eliminate further degradation of groundwater.

2.3 Site Description

The site consists of a predominantly pavement-covered area outside and north of Building S2 (Figure 2). The proposed remediation area is the main gate for trucks hauling products to and from the facility and serves as an entrance/exit for plant workers. The remedial activities will be combined with a planned upgrade of the facility's fire suppression system. The area of the property to be remediated is protected from direct public access by a fence, and the general area is protected by 24-hour security. The northern portion of the John Deere Horicon works property is the location of a historic landfill site closed following remediation in 2004 (BRRTS 02-14-533593). Maps illustrating the extent of the historic landfill suggest that landfill materials (foundry sand, caustic stripping solutions, paint waste and/or foundry waste) may be encountered during excavation, although no wastes aside from foundry sand have been observed in this area during the investigation.

2.4 Site History

A fuel tank system has been in operation in the North Yard Vault area since at least 1976. The underground storage tanks (USTs) were used as part of the experimental engineering testing activities performed in adjacent Building S2. In October 1988, an UST system consisting of four USTs and an equal number of fuel dispensers was removed from the North Yard Vault area. The tanks consisted of a 2,000-gallon No. 1 diesel tank, a 2,000-gallon No. 2 diesel tank, a 2,000-gallon unleaded gas tank and a 550-gallon aviation gasoline tank. The tanks and dispensers were located just north of Building S-2, between the building and access road into the facility. According to a consultant's report titled *Underground Storage Tank Closure and Impact Assessment, John Deere Horicon Works*, "The underground petroleum fuel storage system has released petroleum fuels into soil and groundwater through leakage from the aviation fuel tank and, possibly, from general overfillage during bulk product delivery around all of the tanks." (Northern Environmental Technologies, Inc., October 20, 1988). A remediation system was subsequently installed that included two 4-inch-diameter recovery wells. Groundwater was pumped from the wells from May 1989 until August 1995. The incident was closed by the Wisconsin Department of Natural Resources (WDNR) in June 1997 with a Preventive Action Limit (PAL) exemption for benzene.

Soon after the UST system was removed in 1988, a replacement tank-in-vault system was installed. The replacement system consisted of four storage tanks located in an underground concrete vault and associated petroleum dispensers located adjacent, to the north. The tanks installed in the vault included a 300-gallon aviation gasoline tank, a 550-gallon unleaded gasoline tank, a 550-gallon #1 diesel tank, and a 300-gallon #2 diesel tank.

In October 2004, the vault system was removed. Soil samples collected beneath dispensers and piping, following the tank removal, contained concentrations of gasoline range organics (GROs), diesel range organics (DROs), and PVOCs exceeding state soil standards. The highest petroleum concentrations in soil were identified in samples beneath the former gasoline dispensers.

Seven site monitoring wells and one recovery well have been installed north of the former tank system since 2004. They included wells MW-1 through MW-4 and RW-1 (July 2005), wells MW-5 and MW-6 (November 2009), and well MW-7 (October 2015). Groundwater samples have been collected periodically from site wells since 2005. Wells MW-2 and MW-5 have consistently been identified to contain fuel-related compounds exceeding Wisconsin groundwater Enforcement Standards (ESs) for benzene, ethylbenzene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene and naphthalene.

The work completed at the North Yard Vault area, from 2004 to date, is summarized as follows:

- October 10, 2004 – Release reported to WDNR
- November 2004 – Site Assessment Report to WDNR
- December 20, 2004 – WDNR requests site investigation
- February 2005 – Site Investigation Work Plan to WDNR
- April 22, 2005 – Six borings completed (GP-1 to GP-6)
- July 9, 2005 – Three borings (SB-7 to SB-9) and four wells (MW-1 to MW-4) completed
- August 2005 – Groundwater sampling initiated
- September 30, 2009 – Closure Request and GIS Registry
- November 20, 2009 – WDNR Closure denial
- February 2010 – Wells MW-5 and MW-6 installed
- October 2010 – Tank vault reconfigured by Deere
- November 2010 – Three borings (GP-1P to GP-3P) installed adjacent to Building S2
- July 16, 2012 – WDNR Site Status Request
- August 2012 – Update Report to WDNR
- December 2012 – 10 borings (B-1 to B-10) completed
- February 2013 – Update Report to WDNR
- January 2015 – June and September Groundwater Monitoring Report
- October 2015 – Additional Site Investigation (HB101 to HB107, MW-7)
- February 2016 – July 2015 Groundwater Monitoring Report

2.5 Geology

The geology of the Horicon area consists of glacial deposits overlying Ordovician bedrock of the Galena, Decorah, and Platteville Formations (Devaul et al., 1983). The unconsolidated deposits in the Horicon area consist of pitted outwash and other ice contact deposits. The bedrock is mapped as Ordovician cherty dolomite. The depth to bedrock near the Site is estimated to be less than 50 feet.

The materials identified in borings drilled near the former tanks and fuel dispensing area consisted of fill overlying native deposits. The fill generally included concrete and/or asphalt pavement overlying silty clay, sand and gravel, foundry sand, and crushed limestone fill. The native deposits consisted of silt, clay and sand. Fill was identified to approximate depths between 4 and 6 feet.

2.6 Hydrogeology

The depth to groundwater in the Horicon area is mapped as less than 10 feet deep (Devaul et al., 1983). Groundwater is expected to flow away from areas of higher elevation toward lowlands. Water is supplied to the City of Horicon residents and the JDHW by three municipal supply wells. For security reasons, the locations of the wells were not disclosed.

The water table on site is shallow, as groundwater has been measured within three feet of the ground surface. The groundwater flow direction is predominantly northwesterly (toward the nearby Rock River) at an approximate horizontal gradient of 0.006 ft/ft. The Rock River is located approximately 750 feet west of the North Yard Vault area.

3.0 DESCRIPTION OF REMEDIAL ACTION

3.1 Overview

The selected and preferred remedial action is the removal of petroleum-contaminated soil by excavating. The soil will be treated in a bio-pile at a nearby landfill. Pertinent associated remedial activities will include stripping pavement (asphalt and concrete) and surface gravel, and removing accessible petroleum-contaminated soil to an approximate depth of 10 feet. The estimated volume of accessible soil exceeding the RCLs is 900 cy (1,350 tons).

Additional work on site in the area of remediation will include the excavation of soil for the installation of a water line used for fire suppression. The water line will extend under the footing of the north side of Building S2 and through a portion of the area to be remediated. The proposed location for the water line is presented in the attached Figure 2. It is likely that additional petroleum-contaminated soil will be encountered while excavating near Building S2. The soil will be handled in the exact same manner as the other petroleum-contaminated soil identified on site. A Health and Safety Plan (HASP) related to the proposed work described below is included as Appendix A.

Soil samples will be collected from the excavation, at the conclusion of work, to document the remaining petroleum impacts, if any.

3.2 Soil Cleanup Goals

While the ultimate goal of the proposed remedial actions is to remove soil exceeding the Wisconsin s. NR720 RCLs for petroleum (PVOCs, PAHs and lead), the practical goal is to remove enough soil to prevent further degradation of groundwater.

The soil contamination is located between a building (S2), a security guard building, and a concrete loading dock. Several other impediments are in-place including, but not limited to, an aboveground storage tank system, piping and dike; electrical transformers; buried fire protection piping; sanitary sewer; and buried high voltage electrical conduits.

3.3 Site Preparation

The John Deere Horicon facility is an operating manufacturing plant with hundreds of employees. The area of concern is located within a main entrance for workers and equipment and raw products to enter the facility, and for finished products to exit the facility. The work must be completed during a single week, during which the facility is not operating.

Site preparation includes the installation and maintenance of sediment and erosion control, including straw bale barriers, ditch checks and sediment traps. The local storm sewers will be covered so that sediment cannot reach the Rock River for the duration of the project.

Concrete sidewalk, asphalt road pavement and areas with vegetation will be removed ahead of contaminated soil removal. Concrete and asphalt debris will be disposed at nearby recycling facilities. The proposed excavation areas, as based on the most recent soil data, are presented in Figure 2.

Monitoring wells MW-2 and MW-5 and recovery well RW-1 will be removed as part of the planned excavations. The wells will be abandoned according to Ch. NR141 well code by filling with bentonite chips prior to excavating, to insure that portions of wells are not left open below the surface. Well abandonment forms will be included with the Remedial Action Report.

3.4 Contaminated Soil Removal

The extent of the proposed excavation area has been determined by previous soil investigation activities, but may change, based on in-field conditions. The proposed excavation areas are defined by the concentrations of petroleum impacts exceeding the NR 720 RCLs and by site restrictions such as buildings, utilities and water bodies. Approximately 900 cy (in place) (1,350 tons) of soil is anticipated to be removed and sent to a solid waste facility for treatment. Based on current site conditions, the excavation is expected to extend to between approximately 7 and 10 feet deep. The lateral extent of the soil impacts has been defined, based on drilling and soil sampling at locations shown in Figure 2. The bulk of the impacted soil will be removed from an area just northwest of the security center, centering around the former dispenser locations.

The excavated areas will be benched, as necessary, to prevent damage to structures and utilities (Figure 2). Additionally, several utilities, including sewer laterals, storm sewers, and electric lines, are located in and/or near the planned excavation areas. Care must be taken not to damage the utilities, and as such, some impacted soil will remain in place.

The petroleum-contaminated soil will be transported to Advanced Disposal landfill, N7296 County Road V, Horicon, WI.

3.5 Soil Sampling

Soil samples will be collected from every 20 linear feet of excavation wall. Soil samples will be collected from excavation walls for every three feet in depth, starting at one foot. For example, in a 6-foot excavation, wall samples would be collected at 1 foot and 4 feet; in a 10-foot excavation, wall samples would be collected at 1, 4 and 7 feet. One soil sample will be collected for every 400 sq. ft. (20 ft. x 20 ft. area) from the bottom of the

excavation. These samples will be collected below the water table, and will be identified as such.

Soil samples will be analyzed by a Wisconsin-certified laboratory for PVOCs, PAHs and lead (total). Samples collected for analysis will be placed on ice and transported under chain-of-custody to a Wisconsin-certified laboratory.

3.6 Excavation Dewatering and Liquid Phase Hydrocarbon Handling

In the event free liquids are present in the excavation, groundwater will be pumped directly to the closest City of Horicon sanitary sewer, per City of Horicon approval. Liquids pumped to the City of Horicon sewer will be pretreated by pumping the fluid directly through a bag filter capable of removing sediment. Liquids will not be pumped to the City of Horicon sanitary sewer if LPH is present.

If LPH is present in the excavation, petroleum-absorbent pads and booms will be used to capture and direct LPH to parts of the open area of excavation that allow for effective petroleum recovery. Pads and booms saturated with petroleum and removed from the excavation will be stored in new, unused DOT-approved 55-gallon steel drums. The drums will be secured in a nearby area acceptable to John Deere and, once approved for disposal, will be shipped to an off-site licensed treatment and/or disposal facility.

Should large volumes of LPH enter the excavation (although not expected), a vacuum truck may be employed on site to remove the impacted liquid. Liquids removed with a vacuum truck will be manifested and treated as special waste by the selected treatment firm.

Any LPH removal activities, including an estimate of the volume removed, will be included in the Remedial Action Report.

4.0 SITE RESTORATION

The completed remedial excavation will be filled with clean, clay-rich soil and gravel near the surface, imported from a nearby licensed backfill provider. Clay-rich soil will be used for backfill to inhibit the movement of residual impacts left in place, due to inaccessibility. The backfill will be free of organic soil and debris such as roots, sod, leaves and construction debris, and will not contain stones over 6 inches in diameter.

Six to eight inches of gravel will be installed over the fill, and the excavated areas will be returned to near-previous condition. The fill and gravel will be compacted by equipment specifically designed for the materials to be compacted. Compaction will meet compaction requirements acceptable to the owner. This generally requires that rolling vibratory compactors or impact-type compactors will be used for fill and compacted in no greater than 8-inch lifts.

The water piping trench will include a base course of gravel for the water piping to rest on. The water pipe will be covered by at least 0.5 feet of gravel. In order to prevent the water piping from becoming a potential conduit for the migration of residual petroleum-impacted groundwater through the trench, the piping will be covered in three to four select locations, with bentonite. The bentonite will act as a plug, redirecting groundwater to move through the less granular soil fill.

The concrete sidewalk and asphalt pavement will be replaced, as required by John Deere specifications, following the completion of the remedial activities.

5.0 POST-EXCAVATION CARE

Two monitoring wells (MW-2 and MW-5) and one recovery well (RW-1) will be removed as a result of the excavation activities. To monitor the groundwater conditions after the removal of the soil, the existing remaining monitoring wells (MW-1, MW-3, MW-4, MW-6 and MW-7) will continue to be monitored. These wells will be used for several purposes including, but not limited to, collecting groundwater samples, monitoring groundwater levels, checking for the presence/absence of LPH and checking the water chemistry for natural attenuation progress.

The remaining monitoring wells will be sampled quarterly for a minimum of one year (four quarters) for PVOCs and any additional compounds identified to exceed the soil to groundwater RCLs in the post-excavation sampling. After that period, recommendations for additional monitoring remediation or case closure will be considered, based on the sampling results and observations. No replacement monitoring wells will be installed in the excavated area.

6.0 SCHEDULE

The remedial action schedule is provided in Table 1. The schedule projects a timetable for the major tasks that are the components of the remedial actions proposed in this document, including:

- Submission of the RAP to the WDNR
- Preparation of Project Manual (bid specifications)
- Issuance of a contract to a qualified remediation contractor through competitive bidding
- Performance of remediation
- Preparation of a Remedial Action Report
- Post-remedial groundwater sampling

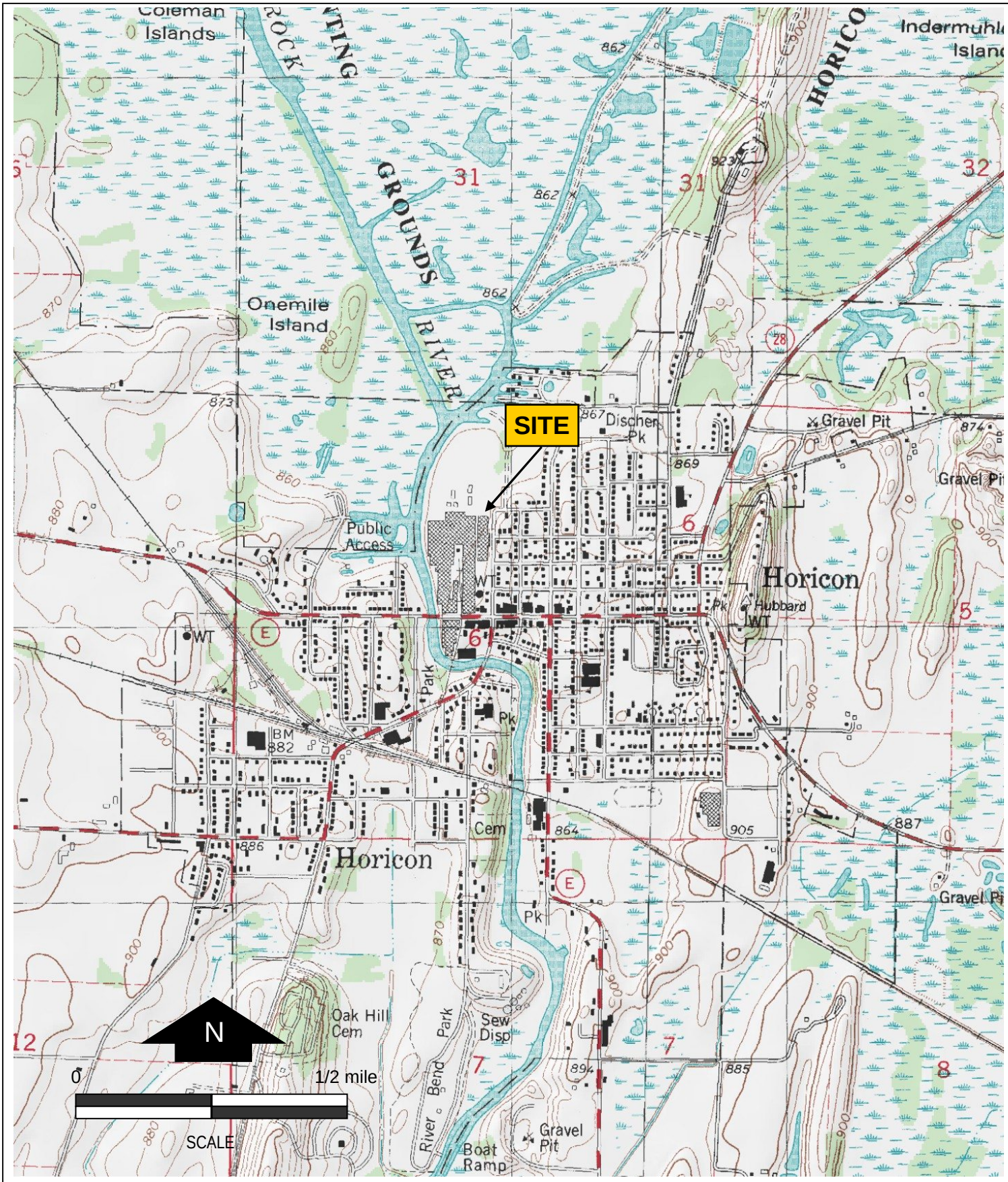
JDHW and Hyde will make every reasonable effort to adhere to the timetable outlined in the project schedule.

7.0 REMEDIAL ACTION REPORT

A Remedial Action Report will be prepared that presents the results of the remedial and follow-up activities. The report will provide appropriate background information, summarize previous investigative and remedial work, and provide dates and descriptions of pertinent field activities. It will include photographs of the recent remedial excavation and backfilling activities. The report will include a table summarizing the soil results completed by the laboratory. It will include scaled figures that depict the final soil sampling locations and depths. Cross-sections will be provided in the event they convey the analytical results more clearly than plan view figures. Copies of laboratory reports and waste manifests will be attached. The report will include backfill source locations, pavement and soil disposal locations, groundwater treatment locations and disposal manifests.

The report will provide recommendations pertinent to the findings of the remedial activities.

FIGURES

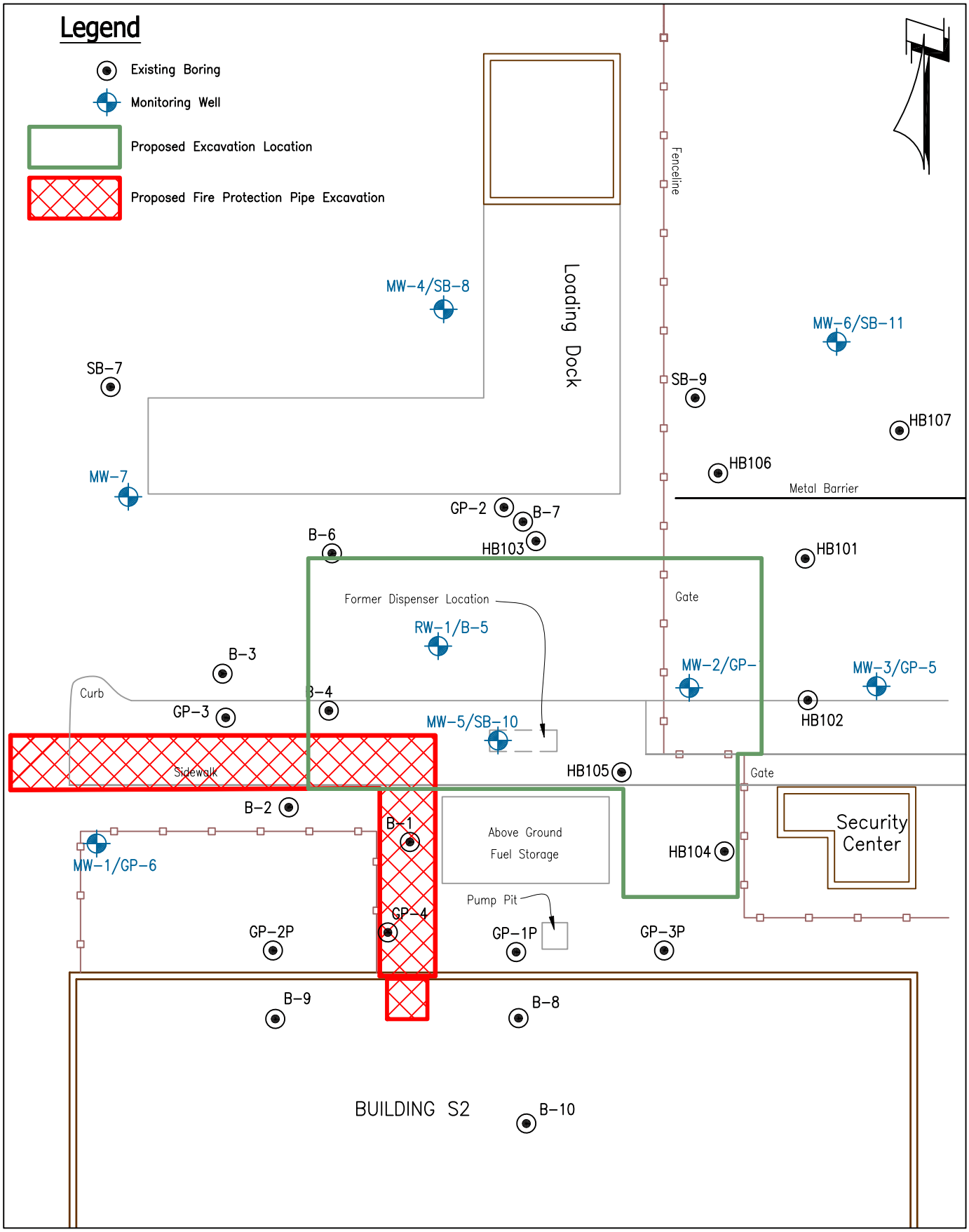


Source: http://www.digital-topo-maps.com/, Horicon and Mayview South, WI Quadrangles, 7.5 minute Services, 1980, USGS

HYDE ENVIRONMENTAL, INC.

FIGURE 1
SITE LOCATION

John Deere — Horicon Works
Horicon, Wisconsin



0 20'
SCALE

HEI
HYDE ENVIRONMENTAL, INC.

Figure 2

PROPOSED EXCAVATION LOCATIONS/LIMITS

JOHN DEERE HORICON WORKS – North Yard Vault
Horicon, Wisconsin

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TABLE

TABLE 1. REMEDIAL ACTION SCHEDULE

John Deere Horicon Works North Yard Vault
Horicon, WI

Date	Task
7/14/2017	Submission of the Remedial Action Plan (RAP) to WDNR
7/14/2017	Issuance of a Contract to a Qualified Remediation Contractor
7/24/2017	Start of Remedial Actions
7/30/2017	Completion of Remedial Actions
Sept. 2017	Completion of a Remedial Action Report
Oct. 2017	Sample Remaining Monitoring Wells

APPENDIX A

Health and Safety Plan

HEALTH & SAFETY PLAN

Soil Excavation

Prepared By:

Hyde Environmental, Inc.
W175N11163 Stonewood Drive, Ste. 110
Germantown, WI

Prepared For:

John Deere Horicon Works
300 N. Vine Street
Horicon, Wisconsin

July 2017

HEALTH AND SAFETY PLAN
John Deere Horicon Works
Horicon, Wisconsin

This Health and Safety Plan (HASP) establishes guidelines and requirements for the safety of Hyde Environmental, Inc. (HYDE) personnel and subcontractors directly involved with soil excavation activities at the John Deere Horicon Works facility in Horicon Wisconsin. Site workers are expected to read, understand, and abide by the provisions of this HASP. Site workers shall sign the attached Compliance Agreement Appendix prior to beginning work on site. It is expected that the HASP will be reviewed at the beginning of each day that work will be performed.

This HASP addresses activities to be conducted by HYDE employees and subcontracted employees. Subcontractors who perform other activities, such as soil excavating, may also carry their own HASP but HYDE's HASP shall take precedence over conflicting requirements.

HYDE shall carry a copy of the HASP or have a copy of the HASP available for review in an on-site vehicle while conducting work at the installation.

Project Activities & Expected Safety Level

This HASP addresses the following remedial and/or site investigation activities that may be conducted by HYDE and subcontractors:

1. Removal of concrete pavement
2. Excavation of petroleum-contaminated soil and water
3. Backfilling
4. Installation of concrete

All site workers are expected to meet Safety Level D requirements, unless notified by the Site Safety Officer of conditions that require additional protections. All site personnel are expected to be observant for changes in the work area that might require a safety level update.

Training

Because some field work will be performed in areas with potentially contaminated soil and/or groundwater, field work will be performed in accordance with current health and safety guidelines contained in the Occupational Safety and Health (OSHA) standards published in 29 CFR Part 1910 of the Code of Federal Regulations. It is anticipated that most of the work will be performed utilizing Level D protection, with the ability to

upgrade to Level C, if necessary. In addition, employees performing sampling activities will be required to have the 8-hour health and training refresher course, as specified by OSHA. Health and safety training will include the proper operation and care of appropriate environmental monitoring and other safety equipment. Training records will be maintained in each employee's file.

Site Safety Officer

A HYDE Site Safety Officer will be designated prior to any HYDE work at the site. In the event that only one HYDE representative is on site, that person is the de-facto Site Safety Officer. The duties of the Site Safety Officer are the following:

1. Hold a daily meeting with the project team to review and briefly discuss the procedures outlined in the HASP,
2. Identify exclusion zones,
3. Identify the physical location of the HASP, emergency contact list and hospital route map on-site,
4. Identify a safe meeting area(s) in the event of a weather-related emergency (electrical, wind and/or snow storms, tornado, national emergency, etc.),
5. Collect signed Site Safety Compliance Agreement forms from HYDE employees/subcontractors, and
6. Maintain the HASP records.

Important Site Contacts

The key factory contacts are as follows:

Deere Security	(920-485-5541)
Dan Ketter, Sr. Environmental Engineer	(608-469-2580)
Mike Creegan, Environmental Engineer	(262-853-9708)

Chemical Hazards

Area of excavation is the location of former petroleum underground storage tanks (USTs) and within the extent of a historic landfill. The historic landfill was documented to include foundry sand and waste, caustic stripping solution and painting waste. Although the site investigation in this area has only identified foundry sand related to the historic landfill there is a possibility that other historic landfill waste will be encountered during

excavation. Documented chemicals of concern at the site related to the former USTs include petroleum compounds (volatile organic compounds - VOCs). The petroleum compounds are present in groundwater as a result of past operations. There is a risk of contact with these compounds during handling of soil and groundwater. Exposure to chemicals may occur through three routes of exposure: inhalation, ingestion and dermal contact. Workers will further reduce potential exposure by performing the following:

- Don nitrile and/or latex disposable gloves while examining or sampling soil, and collection of groundwater samples.
- Wear clothing that is protective of skin.
- Wear safety glasses and/or face shields to prevent splashing liquids or solids from directly contacting eyes.
- Keep sample containers out the breathing zone when they are being filled.
- Stay upwind of open excavations
- Limit eating and drinking to approved areas.

Physical Hazards

Physical hazards including, but not limited to, work near open excavations, moving heavy equipment, slips, trips, falls, potential contact with moving vehicles, contact with insects, and interaction with and exposure to heat and/or cold pose the greatest concerns. Site workers should remain aware of all moving vehicles and equipment.

Contact with subsurface and overhead utilities can also create electrical (electrical power lines) and explosive (buried gas lines) hazards. As such, sampling personnel will not:

- Touch exposed electrical lines
- Enter confined spaces that may have engulfment hazards and/or hazardous atmospheres (depending upon ventilation and/or VOC concentrations)

To prevent unwanted contact with sampling machinery, overhead hazards, insects, or explosives, workers will perform the following:

- Place brightly-colored cones/barricades around equipment
- Wear brightly colored clothing and/or vests
- Wear hard-hats.
- Don insecticides during the growing season

In the event of extreme heat or severe cold, care will be taken to protect workers from exposure. Heat exposure care includes, but is not limited to, wearing brightly colored, breathable clothing during periods of intense heat and or high humidity, covering exposed skin from UV rays, using lotions capable of reducing sun exposure, maintaining hydration, and working during cooler periods. Exposure to severe cold care includes wearing layers of insulated breathable clothing, staying dry, and intake of warm, non-alcoholic beverages.

Foot- and toe-related injuries shall be minimized by wearing sturdy, non-slip footwear protective of metatarsals and toes.

Work Limitations

The following limitations will apply:

- There will be no eating or smoking permitted in the work area.
- Neither illegal or non-prescription drugs, nor alcohol, will be permitted on site.
- Work should be restricted to daylight hours.
- No work will be performed during extreme weather conditions (lightning, thunder, intense rain, heavy snowfall, and/or extremely high winds and/or severe cold or heat).

Exclusion Zones

For the purposes of this plan, any open excavation or active work area (area where workers and/or machines are working and within a 20-foot radius) is considered the Hot Zone. Workers shall be aware of all moving equipment and personnel located in the Hot Zone. Workers not actively involved in work shall move outside of this area. No breaks or food shall be completed in the Hot Zone. Areas outside of the Hot Zones are considered the Warm Zone. The Warm Zone consists of the area east of the excavation area, north of the Security Center and south of the security parking lot. The warm zone will be used for the storage of materials and equipment used to complete the work. Trucks used to collect soil for disposal purposes will be actively moving into and out of the Warm Zone. Workers may rest inside the warm zone, but food shall be consumed outside of this area, in the inactive Cold Zone.

Monitoring of Organic Compounds

Air monitoring will be performed and recorded during soil excavation and loading and at any time a change of condition becomes evident. Changes may include: new or stronger odor, changes in soil color, changes in wind speed or direction, etc. Monitoring will be performed using a Mini Rae Photo Ionization Detector (PID) that has been field-checked prior to use each day. The monitoring technician shall be properly trained to use the specific meter being utilized.

Action levels, based upon monitoring results recorded by a PID, are as follows:

Organic Vapor Concentrations	
<24 ppm	No Action
24 ppm – 249 ppm	Implement Engineering Controls in attempt to lessen VOC concentrations
>249 ppm	Suspend excavation/loading operations until site conditions change or engineering controls can be implemented to reduce air VOC concentrations

Decontamination Procedures

The following decontamination procedures will be followed by HYDE personnel and subcontractors to minimize exposure:

- Clean equipment exposed to toxic chemicals and/or environment with clean water.
- Wash hands and face (if necessary) thoroughly, with soap and potable rinse water.
- Stand upwind of all open excavations, where possible.

Good hygienic standards must be maintained by frequent changes of clothing and daily showering. Clothing should be permitted to dry or be changed during rest periods. Address any signs of skin problems (i.e., rashes, irritations) with a physician, immediately.

Disposal Practices

Sampling water and wastes may include used disposable gloves and disposable clothing. Solid waste items will be placed into plastic garbage bags and disposed of with the facility's waste or as general refuse. Detergent washing wastes and rinses are not hazardous, and will be disposed of via City of Horicon sanitary sewer. Detergent washing waste is not to be disposed of by dumping on the ground or dumping into storm water basins.

Compliance Agreement

The Site Safety Officer will hold a meeting with HYDE personnel and subcontractors before work starts. During the meeting, personnel will be provided access to this HASP and will be instructed where to find it in the event of an emergency. In addition, Compliance Agreement Forms will be distributed and signed forms collected. The forms are attached.

Site Emergencies

In the event of a site emergency, such as illness, injury and/or accident, the following procedures will be followed:

1. Evacuate personnel to a safe zone.
2. Observe conditions and render first aid (if necessary) only when conditions are safe to do so (Example: Do not enter a confined space to retrieve any downed personnel unless supplied oxygen is available and you are trained in entry and retrieval techniques; do not move a person with a potential spine injury).
3. Contact Deere security and emergency services.
4. Assess potential causes of the illness, injury and/or accident and present information to emergency medical personnel.
5. Do not perform additional work until the cause of the illness, injury and/or accident has been determined, procedures are developed to prevent reoccurrence, and the Site Safety Officer determines it is safe to resume work.
6. Notify the Site Safety Officer of reportable accidents, occupational injuries, property damage and/or illness. Copies of OSHA Form Number 101, "First Report of Injury" (or equivalent), and any hospital form must be completed properly and submitted within 24 hours of an incident.

A list of the site-specific emergency telephone numbers and a route map to the nearest hospital are provided at the end of this plan.

HASP Compliance Agreement

Hospital Information and Emergency Service Contacts

Map of Route to Nearest Hospital

HASP COMPLIANCE AGREEMENT

I have reviewed, understand, and agree to abide by all aspects of the Health and Safety Plan for the soil excavation and sampling work at the JDHW North Yard Vault site.

Printed Name	Signature	Company	Date

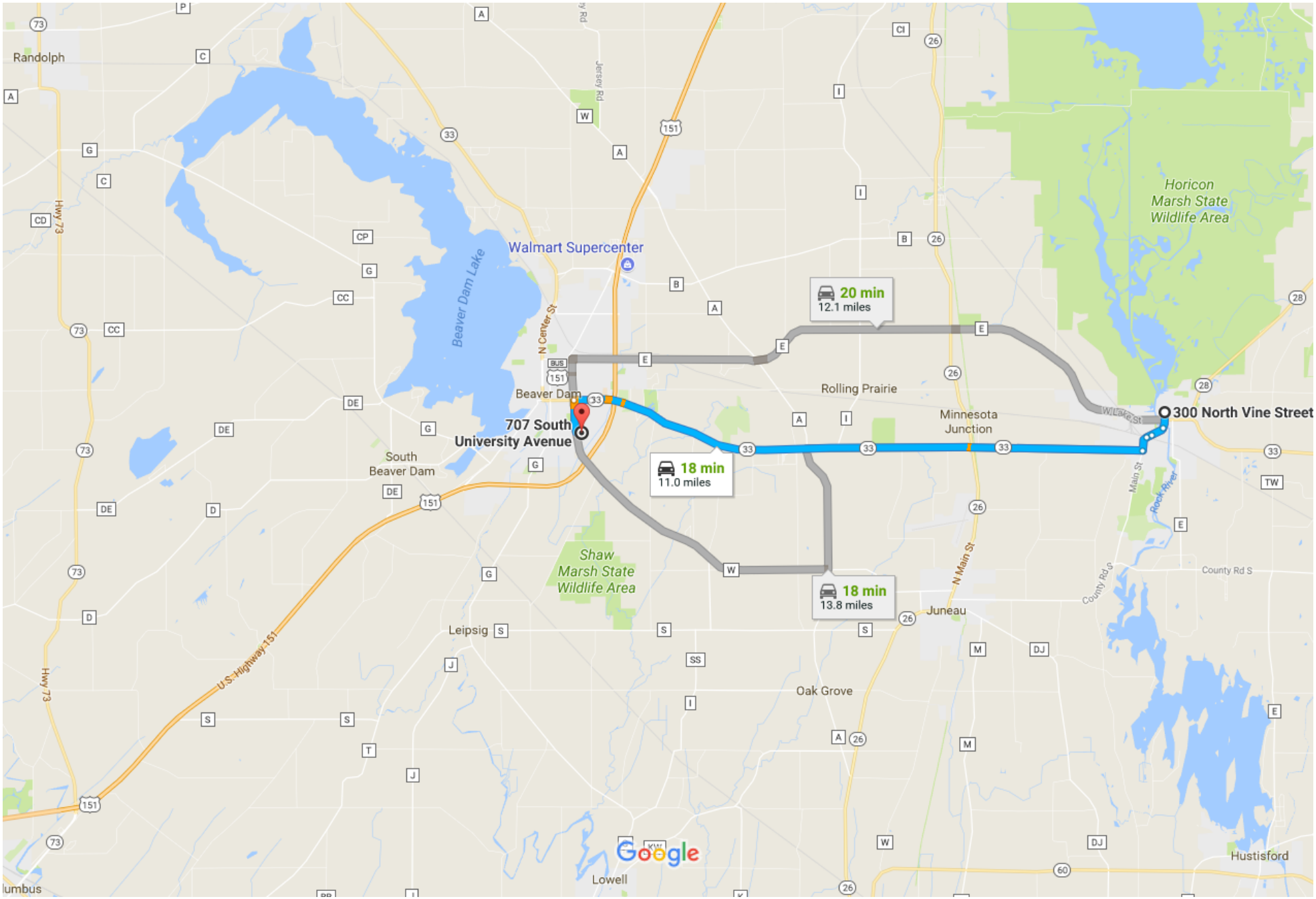
JDHW, Horicon, WI
Hospital Information and Emergency Service Contacts

Hospital Name and Location:	Beaver Dam Community Hospital 707 S. University Avenue Beaver Dam, WI 53916
Hospital Telephone Number:	920-887-7181
Route to Hospital:	See map, attached
Approximate Distance to hospital:	12 miles
Approximate time to nearest hospital:	20 minutes by road

Emergency Services Contacts

Name	**Telephone Number**
Local Ambulance Services	911 (Emergency)
Horicon Fire Department 220 Ellison St., Horicon, WI	911 (Emergency) (920) 485-3511
Horicon Police Department 220 Ellison St., Horicon, WI	911 (Emergency) (920) 485-3555

Google Maps 300 N Vine St, Horicon, WI 53032 to 707 S University Ave, Beaver Dam, WI 53916 Drive 11.0 miles, 18 min



Map data ©2017 Google United States 1 mi

300 N Vine St

Horicon, WI 53032

1. Head south on N Vine St toward E Walnut St

0.3 mi

2. Continue onto Barstow St

0.2 mi

3. Continue onto Hwy St

466 ft

4. Continue onto Main St

0.3 mi

5. Turn right onto State Hwy 33 Trunk W/WI-33 W/Washington St
   Continue to follow State Hwy 33 Trunk W/WI-33 W

9.4 mi

6. Continue straight onto Park Ave

0.3 mi

7. Turn left onto S University Ave

0.5 mi

707 S University Ave

Beaver Dam, WI 53916

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.