

Source Property Information

CLOSURE DATE: 06/30/2016

BRRTS #: 03-31-544904
ACTIVITY NAME: Miller Property
PROPERTY ADDRESS: N2892 Church Rd
MUNICIPALITY: West Kewaunee TN
PARCEL ID #: 31 020 31.022

FID #:

DATCP #:

PECFA#: 54216965192A

***WTM COORDINATES:**

X: 708380 Y: 442221

** Coordinates are in
WTM83, NAD83 (1991)*

WTM COORDINATES REPRESENT:

Approximate Center Of Contaminant Source

Approximate Source Parcel Center

Please check as appropriate: (BRRTS Action Code)

CONTINUING OBLIGATIONS

Contaminated Media for Residual Contamination:

Groundwater Contamination > ES (236)

Contamination in ROW

Off-Source Contamination

*(note: for list of off-source properties
see "Impacted Off-Source Property Information,
Form 4400-246")*

Soil Contamination > *RCL or **SSRCL (232)

Contamination in ROW

Off-Source Contamination

*(note: for list of off-source properties
see "Impacted Off-Source Property Information,
Form 4400-246")*

Site Specific Obligations:

Soil: maintain industrial zoning (220)

*(note: soil contamination concentrations
between non-industrial and industrial levels)*

Structural Impediment (224)

Site Specific Condition (228)

Cover or Barrier (222)

Direct Contact

Soil to GW Pathway

Vapor Mitigation (226)

Maintain Liability Exemption (230)

*(note: local government unit or economic
development corporation was directed to
take a response action)*

Monitoring Wells:

Are all monitoring wells properly abandoned per NR 141? (234)

Yes No N/A

** Residual Contaminant Level*

***Site Specific Residual Contaminant Level*



June 30, 2016

Thomas R. Miller
N2892 Church Road
Kewaunee, WI 54216

KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS

SUBJECT: Final Case Closure with Continuing Obligations
Miller Property, N2892 Church Road, West Kewaunee TN, Wisconsin
DNR BRRTS Activity # 03-31-544904

Dear Mr. Miller:

The Department of Natural Resources (DNR) considers the Miller Property contamination case closed, with continuing obligations. No further investigation or remediation is required at this time. However, you, future property owners, and occupants of the property must comply with the continuing obligations as explained in the conditions of closure in this letter. Please read over this letter closely to ensure that you comply with all conditions and other on-going requirements. Provide this letter and any attachments listed at the end of this letter to anyone who purchases, rents or leases this property from you. For residential property transactions, you may be required to make disclosures under s. 709.02, Wis. Stats. Certain continuing obligations also apply to affected property owners or rights-of-way holders. These are identified within each continuing obligation.

This final closure decision is based on the correspondence and data provided, and is issued under chs. NR 726 and 727, Wis. Adm. Code. The Northeast Region (NER) Closure Committee reviewed the request for closure on March 18, 2016. The DNR Closure Committee reviewed this environmental remediation case for compliance with state laws and standards to maintain consistency in the closure of these cases. A request for remaining actions needed was issued by the DNR on April 12, 2016, and documentation that the conditions in that letter were met was received on June 28, 2016.

The property was previously utilized as a general store with likely retail sale of leaded gasoline until the 1940s. Currently the property is utilized for residential purposes. Obvious soil contamination was identified during tank removal activities in 2006. Soil and groundwater contaminated with petroleum compounds remain on the property and in the adjacent Church Road right-of-way. The conditions of closure and continuing obligations required were based on the property being used for residential purposes.

Continuing Obligations

The continuing obligations for this site are summarized below. Further details on actions required are found in the section Closure Conditions.

- Groundwater contamination is present at or above ch. NR 140, Wis. Adm. Code enforcement standards.
- Residual soil contamination exists that must be properly managed should it be excavated or removed.

- Remaining contamination could result in vapor intrusion if future construction activities occur. Future construction includes expansion or partial removal of current buildings as well as construction of new buildings. Vapor control technologies will be required for occupied buildings, unless the property owner assesses the potential for vapor intrusion, and the DNR agrees that vapor control technologies are not needed.

The DNR fact sheet “Continuing Obligations for Environmental Protection,” RR-819, helps to explain a property owner’s responsibility for continuing obligations on their property. The fact sheet may be obtained at <http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf>.

GIS Registry

This site will be included on the Bureau for Remediation and Redevelopment Tracking System (BRRTS on the Web) at <http://dnr.wi.gov/topic/Brownfields/clean.html>, to provide public notice of residual contamination and of any continuing obligations. The site can also be viewed on the Remediation and Redevelopment Sites Map (RRSM), a map view, under the Geographic Information System (GIS) Registry layer, at the same web address.

DNR approval prior to well construction or reconstruction is required for all sites shown on the GIS Registry, in accordance with s. NR 812.09 (4) (w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. To obtain approval, complete and submit Form 3300-254 to the DNR Drinking and Groundwater program’s regional water supply specialist. This form can be obtained on-line at <http://dnr.wi.gov/topic/wells/documents/3300254.pdf>.

All site information is also on file at the Northeast Regional DNR office, at 2984 Shawano Avenue in Green Bay. This letter and information that was submitted with your closure request application, including any maps, can be found as a Portable Document Format (PDF) in BRRTS on the Web.

Closure Conditions

Compliance with the requirements of this letter is a responsibility to which you, and any subsequent property owners must adhere. DNR staff will conduct periodic prearranged inspections to ensure that the conditions included in this letter are met. If these requirements are not followed, the DNR may take enforcement action under s. 292.11, Wis. Stats. to ensure compliance with the specified requirements, limitations or other conditions related to the property.

Please send written notifications in accordance with the following requirements to:

Department of Natural Resources
Attn: Keld Lauridsen
2984 Shawano Avenue
Green Bay, WI 54313

Residual Groundwater Contamination (ch. NR 140, 812, Wis. Adm. Code)

Groundwater contamination greater than enforcement standards is present both on this contaminated property and in the adjacent Church Road right-of-way (ROW), as shown on the attached map (Groundwater Isoconcentration; Figure B.3.b; March 21, 2011). If you intend to construct a new well, or reconstruct an existing well, you’ll need prior DNR approval. The affected right-of-way holder was notified of the presence of groundwater contamination. This continuing obligation also applies to the ROW holder for Church Road (Town of West Kewaunee).

Residual Soil Contamination (ch. NR 718, chs. 500 to 536, Wis. Adm. Code or ch. 289, Wis. Stats.) Soil contamination remains as indicated on the attached map (Pre/Post Remaining Soil Contamination; Figure B.2.c; March 21, 2011). If contaminated soil is excavated in the future, the property owner or right-of-way holder at the time of excavation must sample and analyze the excavated soil to determine if contamination remains. If sampling confirms that contamination is present, the property owner or right-of-way holder at the time of excavation will need to determine whether the material is considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable standards and rules. Contaminated soil may be managed in accordance with ch. NR 718, Wis. Adm. Code, with prior DNR approval. This continuing obligation also applies to the ROW holder for Church Road (Town of West Kewaunee).

In addition, all current and future owners and occupants of the property and right-of-way holders need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken to prevent a direct contact health threat to humans.

Vapor Mitigation or Evaluation (s. 292.12 (2), Wis. Stats., s. NR 726.15, s. NR 727.07, Wis. Adm. Code) Vapor intrusion is the movement of vapors coming from volatile chemicals in the soil or groundwater, into buildings where people may breathe air contaminated by the vapors. Vapor mitigation systems are used to interrupt the pathway, thereby reducing or preventing vapors from moving into the building.

Future Concern: Volatile petroleum compounds remain in soil and groundwater in the vicinity of the former underground storage tank (UST) system location, as shown on the attached maps (Pre/Post Remaining Soil Contamination; Figure B.2.c; March 21, 2011 & Groundwater Isoconcentration; Figure B.3.b; March 21, 2011), at levels that may be of concern for vapor intrusion in the future, depending on construction and occupancy of a building. Currently the existing building located adjacent to the former UST system is utilized for residential purposes. Therefore, before a building is constructed and/or an existing building is modified, the property owner must notify the DNR at least 45 days before the change. Vapor control technologies are required for construction of occupied buildings unless the property owner assesses the vapor pathway and DNR agrees that vapor control technologies are not needed.

Other Closure Information

General Wastewater Permits for Construction Related Dewatering Activities

The DNR's Water Quality Program regulates point source discharges of contaminated water, including discharges to surface waters, storm sewers, pits, or to the ground surface. This includes discharges from construction related dewatering activities, including utility and building construction.

If you or any other person plan to conduct such activities, you or that person must contact that program, and if necessary, apply for the necessary discharge permit. Additional information regarding discharge permits is available at <http://dnr.wi.gov/topic/wastewater/GeneralPermits.html>. If residual soil or groundwater contamination is likely to affect water collected in a pit/trench that requires dewatering, a general permit for Discharge of Contaminated Groundwater from Remedial Action Operations may be needed. If water collecting in a pit/trench that requires dewatering is expected to be free of pollutants other than suspended solids and oil and grease, a general permit for Pit/Trench Dewatering may be needed.

PECFA Reimbursement

Section 101.143, Wis. Stats., requires that Petroleum Environmental Cleanup Fund Award (PECFA) claimants seeking reimbursement of interest costs, for sites with petroleum contamination, submit a final reimbursement claim within 120 days after they receive a closure letter on their site. For claims not received within 120 days of the date of this letter, interest costs after 60 days of the date of this letter will not be eligible for PECFA reimbursement. If there is equipment purchased with PECFA funds remaining at the site, contact the DNR Project Manager to determine the method for salvaging the equipment.

Per Wisconsin Act 55 (2015 State budget), a claim for PECFA reimbursement must be submitted within 180 days of incurring costs (i.e., completing a task). If your final PECFA claim is not submitted within 180 days of incurring the costs, the costs will not be eligible for PECFA reimbursement.

In Closing

Please be aware that the case may be reopened pursuant to s. NR 727.13, Wis. Adm. Code, for any of the following situations:

- if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, or welfare or to the environment,
- if the property owner does not comply with the conditions of closure, or
- a property owner fails to maintain or comply with a continuing obligation (imposed under this closure approval letter).

The DNR appreciates your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact Keld Lauridsen at (920) 662-5420, or at Keld.Lauridsen@wisconsin.gov.

Sincerely,



Roxanne N. Chronert
Team Supervisor, Northeast Region
Remediation and Redevelopment Program

Attachments:

- Groundwater contamination map (Groundwater Isoconcentration; Figure B.3.b; March 21, 2011)
- Soil contamination map (Pre/Post Remaining Soil Contamination; Figure B.2.c; March 21, 2011)

cc: Chad Fradette/Cami Felten, Mach IV (e-copy - cfradette@mach-iv.com)
Bonnie Purzner, Town of West Kewaunee,
N2933 County Road B, Kewaunee, WI 54216

Figure B.3.b Groundwater Isoconcentration

March 21, 2011

Tom Miller Property
Town of West Kewaunee, Kewaunee County, Wisconsin

Sheet Three of Three
Project No. 0315-01-10
Drawing No. 385

Scale:
1"=20'

Client: Tom Miller
Drafted By: BJJ
Tax Parcel No.: 020-00031-0100

Mach IV
Engineering & Surveying LLC
211 N. Broadway, Suite 114, Green Bay, WI
PH: 920-569-5765 Fax: 920-569-5767

MONITORING WELL INFORMATION

MONITORING WELL #1
Ground Elevation = 101.23
Rim Elevation = 101.23
Pipe Elevation = 100.77

MONITORING WELL #2
Ground Elevation = 100.20
Rim Elevation = 100.15
Pipe Elevation = 99.76

MONITORING WELL #3
Ground Elevation = 101.55
Rim Elevation = 101.55
Pipe Elevation = 100.95

MONITORING WELL #4
Ground Elevation = 100.45
Rim Elevation = 100.24
Pipe Elevation = 99.80

MONITORING WELL #5
Ground Elevation = 100.90
Rim Elevation = 100.90
Pipe Elevation = 100.44

Legend

- ⊙ SA Septic Vent / Tank
- ⊗ Well Potable
- Telephone Pedestal
- ⊙ Light Pole
- ⊙ Power Pole
- Overhead Wires
- E- Underground Electric Line
- T- Underground Telephone Line
- G- Underground Gas Line
- Fence
- Blacktop
- ▨ Concrete
- ▨ Gravel
- ⊕ Monitoring Well Location
- ES Exceedance

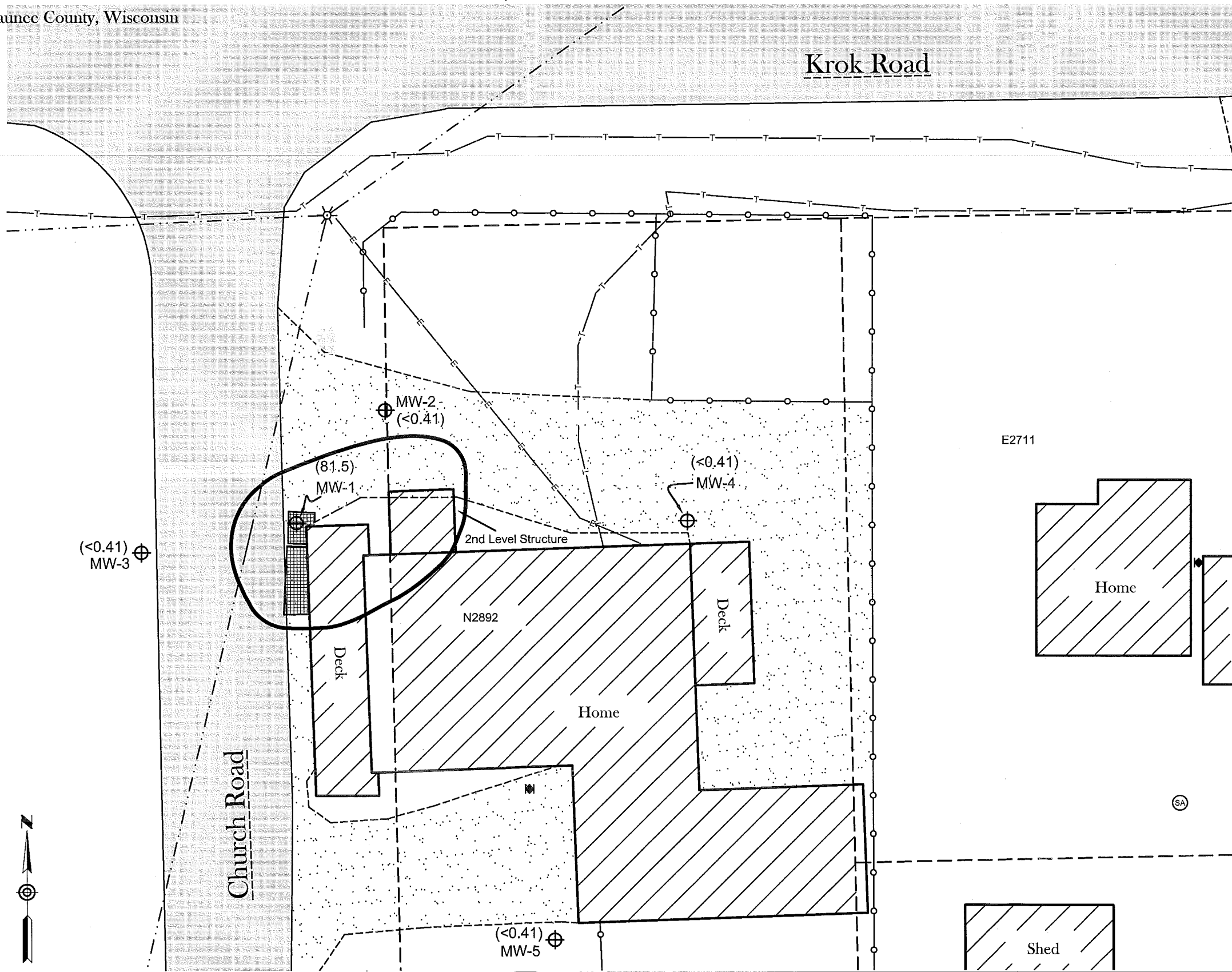
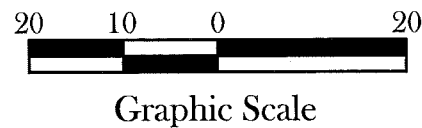


Figure B.2.c Pre / Post Remaining Soil Contamination

March 21, 2011

Tom Miller Property
Town of West Kewaunee, Kewaunee County, Wisconsin

Sheet Three of Three
Project No.0315-01-10
Drawing No.385

MONITORING WELL INFORMATION

MONITORING WELL #1

Ground Elevation = 101.23
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MONITORING WELL #2

Ground Elevation = 100.20
Rim Elevation = 100.15
Pipe Elevation = 99.76

MONITORING WELL #3

Ground Elevation = 101.55
Rim Elevation = 101.55
Pipe Elevation = 100.95

MONITORING WELL #4

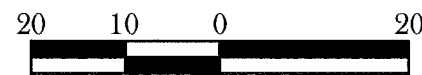
Ground Elevation = 100.45
Rim Elevation = 100.24
Pipe Elevation = 99.80

MONITORING WELL #5

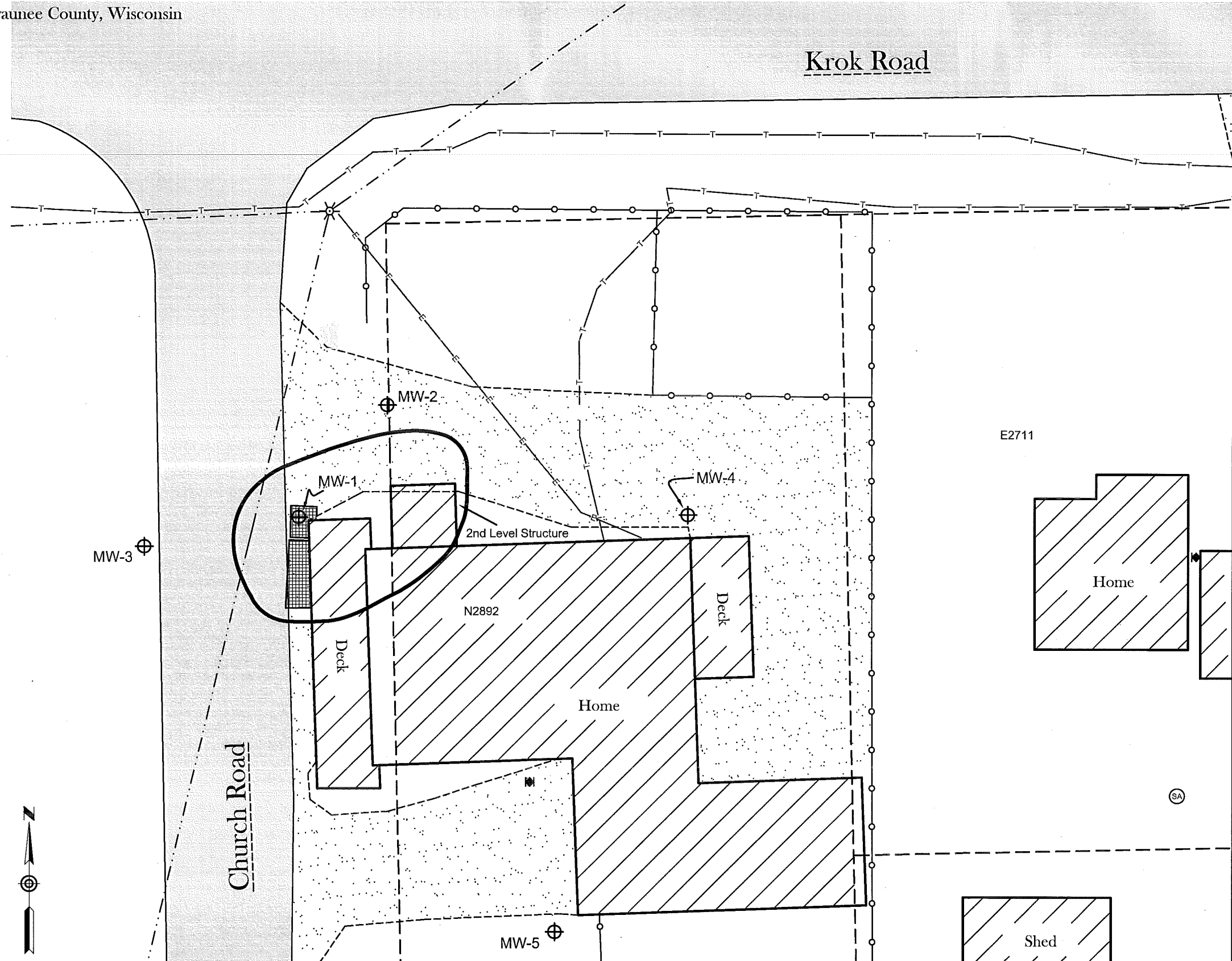
Ground Elevation = 100.90
Rim Elevation = 100.90
Pipe Elevation = 100.44

Legend

- ⊕ SA Septic Vent / Tank
- Well Potable
- Telephone Pedestal
- ⊗ Light Pole
- ⊕ Power Pole
- Overhead Wires
- E— Underground Electric Line
- T— Underground Telephone Line
- G— Underground Gas Line
- Fence
- Blacktop
- ▨ Concrete
- ▩ Gravel
- ⊕ Monitoring Well Location
- Groundwater RCL Exceedance



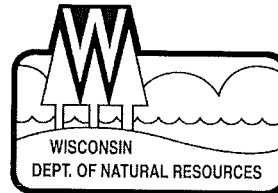
Graphic Scale



Scale:
1"=20'

Client: Tom Miller
Drafted By: BJL
Tax Parcel No.: 020-00031-0100

Mach IV
Engineering & Surveying LLC
211 N. Broadway, Suite 114, Green Bay, WI
PH: 920-569-5763 Fax: 920-569-5767



April 12, 2016

Thomas R. Miller
N2892 Church Road
Kewaunee, WI 54216

Subject: Remaining Actions Needed
Miller Property, N2892 Church Road, West Kewaunee TN, Wisconsin
DNR BRRTS Activity # 03-31-544904

Dear Mr. Miller:

On March 18, 2016, the Northeast Region Closure Committee reviewed your request for closure of the case described above. The Closure Committee reviews environmental remediation cases for compliance with state rules and statutes to maintain consistency in the closure of these cases. On March 30, 2016, the Department requested revision to the closure packet to be completed by Cami Felten of Mach IV. Final revised documents to be included on the Department's GIS Registry was received on April 11, 2016. The following actions are needed to complete our review of your request. Upon completion of these actions, closure approval will be provided.

Remaining Actions Needed

Monitoring Well or Remedial System Piping Abandonment

The monitoring wells at the site must be properly abandoned in accordance with ch. NR 141, Wis. Adm. Code. Documentation of well abandonment for all wells must be submitted to Keld Lauridsen on Form 3300-005, found at <http://dnr.wi.gov/topic/groundwater/forms.html>.

Purge Water, Waste and Soil Pile Removal

Any remaining purge water, waste and/or soil piles generated as part of site investigation or remediation activities must be removed from the site and disposed of or treated in accordance with the applicable rules. Once that work is completed, please send any appropriate documentation not previously submitted regarding the treatment or disposal of the remaining purge water, waste and/or soil piles.

Documentation

When the required actions have been completed, submit the appropriate documentation within 60 days of the date of this letter, to verify their completion. At that point, your closure request can be approved and your case can be closed.

GIS Registry

Your site will be listed on the DNR Remediation and Redevelopment Program's GIS Registry, to provide public notice of remaining contamination and continuing obligations. The continuing obligations will be specified in the final closure approval. Information that was submitted with your closure request application will be included on the Bureau for Remediation and Redevelopment Tracking System (BRRTS on the Web), at <http://dnr.wi.gov/topic/Brownfields/rasm.html>.

April 12, 2016
Mr. Thomas R. Miller
Remaining Actions Needed Letter
Miller Property – BRRTS # 03-31-544904

In Conclusion

We appreciate your efforts to restore the environment at this site. This remedial action project is nearing completion. I look forward to working with you to complete all remaining actions that are necessary to achieve closure.

If you have any questions regarding this letter, please contact the project manager at (920) 662-5420, or by email at Keld.Lauridsen@wisconsin.gov.

Sincerely,



Roxanne N. Chronert
Team Supervisor, Northeast Region
Remediation and Redevelopment Program

cc: Chad Fradette/Cami Felten, Mach IV (ecopy - cfradette@mach-iv.com)

SUBMIT AS UNBOUND PACKAGE IN THE ORDER SHOWN

Notice: Pursuant to ch. 292, Wis. Stats., and chs. NR 726 and 746, Wis. Adm. Code, this form is required to be completed for case closure requests. The closure of a case means that the Department of Natural Resources (DNR) has determined that no further response is required at that time based on the information that has been submitted to the DNR. All sections of this form must be completed unless otherwise directed by the Department. Incomplete forms will be considered "administratively incomplete" and processing of the request will stop until required information is provided. Any section of the form not relevant to the case closure request must be fully filled out or explained on a separate page and attached to the relevant section of this form. DNR will consider your request administratively complete when the form and all sections are completed, all attachments are included, and the applicable fees required under ch. NR 749, Wis. Adm. Code, are included, and sent to the proper destinations. 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.).

Site Information			
BRRTS No. 03-31-544904		Parcel ID No. 31 020 31.022	
BRRTS Activity (Site) Name Miller Property		WTM Coordinates	
		X 708380	Y 442221
Street Address N2892 Church Road		City West Kewaunee TN	State ZIP Code WI 54216
Responsible Party (RP) Name Thomas R Miller Jr			
Company Name None			
Street Address N2892 Church Road		City Kewaunee	State ZIP Code WI 54216
Phone Number (920) 304-0114		Email	
<input checked="" type="checkbox"/> Check here if the RP is the owner of the source property.			
Environmental Consultant Name Chad Fradette			
Consulting Firm Mach IV Engineering & Surveying, LLC			
Street Address 211 N. Broadway, Suite 114		City Green Bay	State ZIP Code WI 54303
Phone Number (920) 569-5765		Email cfradette@mach-iv.com	
Acres Ready For Use 0.5		Voluntary Party Liability Exemption Site? <input type="radio"/> Yes <input checked="" type="radio"/> No	

Fees and Mailing of Closure Request

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

- Send a copy of page one of this form and the applicable ch. NR 749, Wis. Adm. Code, fee(s) to the DNR regional Environmental Program Associate at <http://dnr.wi.gov/topic/Brownfields/Contact.html>. Check all fees that apply:
 - \$1,050 Closure Fee
 - \$300 Database Fee for Soil
 - \$350 Database Fee for Groundwater or Other Condition (MW Not Abandoned)

Total Amount of Payment \$ 1,700.00
- Send one paper copy and one e-copy on compact disk of the entire closure package to the Regional Project Manager assigned to your site. Submit as unbound, separate documents in the order and with the titles prescribed by this form. For electronic document submittal requirements, see <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>.

Site Summary

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

1. General Site Information and Site History

- A. **Site Location:** Describe the physical location of the site, both generally and specific to its immediate surroundings.
The site is located at N2892 Church Road, Town of West Kewaunee, Kewaunee County, Wisconsin. It is located southeast of the intersection of Church Road and Krok Road and is Part of NW ¼ of the NE ¼, Section 31, Township 23N, Range 24E.
- B. **Prior and current site usage:** Specifically describe the current and historic occupancy and types of use.
One underground storage tank (UST) system, including a 150-gallon and a 550-gallon UST each containing leaded gasoline, according to local residents, was possibly utilized until the 1940s for the retail sale of leaded gasoline at the local general store, the subject property. The tanks were removed in 2006. The current site is being used as residential.
- C. Describe how and when site contamination was discovered.
The 150-gallon UST was removed and the 550-gallon UST was abandoned in place on February 7, 2006 by Arnie Koller of American Remediation. Chad M. Fradette, certified site assessor, performed a site assessment during UST removal activities. Obvious soil contamination was observed by Mr. Fradette during the removal process. Mr. Fradette collected two soil samples from the 550-gallon UST through holes cut in the bottom of the tank and one sample was collected beneath the 150-gallon UST. The samples were submitted for laboratory analysis of gasoline range organics (GRO) to Pace Analytical of Green Bay, Wisconsin.
- D. Describe the type(s) and source(s) or suspected source(s) of contamination.
The soil sample results reported detections of GRO, T150 4' (7,400 ppm), T550 North (280 ppm), and T550 South (300 ppm) adjacent to the 2 USTs.
- E. Other relevant site description information (or enter Not Applicable).
Not Applicable
- F. List BRRTS activity site name and number for all other BRRTS activities at this property, including closed cases.
None
- G. List BRRTS activity/site name(s) and number(s) for all properties immediately adjacent to this site, and those impacted by contamination from this site.
None
- H. **Current zoning** (e.g. industrial, commercial, residential) for the site and for neighboring properties, and how verified (Provide documentation in Attachment G).
The zoning on the property is A2 Ag - Rural Residential. The property is nonconforming.

2. General Site Conditions

- A. Soil/Geology
 - i. Describe soil type(s) and relevant physical properties, thickness of soil column across the site, vertical and lateral variations in soil types.
The soils on the site consist of clay to 8.5 to 44 feet below ground surface (bgs). There are three primary soil types located on the subject site: DrB - Dresden silt loam (51%), WoB - Waymor silt loam (36%), and CbB - Casco sandy loam. The Dresden silt loam, 2 to 6 percent slopes, is well drained with moderate available water capacity. The Dresden is formed on outwash plains from a gravelly outwash parent material. The Waymor silt loam, 1 to 6 percent slopes, is a well drained soil with moderate available water capacity. The Waymor is found on ground moraines from silty loess over loamy till parent material. The Casco sandy loam, 2 to 6 percent slopes, is formed on outwash plains from gravelly outwash parent material. The Casco soil is well drained and has low available water capacity.
 - ii. Describe the composition, location and lateral extent, and depth of fill or waste deposits on the site.
There is approximately 1 to 2 feet of pea gravel located between MW-1 and GP-8 on the west side of the subject site.
 - iii. Depth to bedrock, bedrock type, and whether or not it was encountered during the investigation.
Dolomite or limestone bedrock in the immediate vicinity was encountered at depths varying from 8.5 to 44 ft bgs. The deepest boring on-site was 44 feet beneath the source area, however, less than 10 feet north of the source area, bedrock was encountered at 10 ft bgs. It is likely that the site is located at the end of a limestone ridge. The topography of the site drops off steeply towards the east to the East Twin River, whereas the topography on the adjacent farmstead to the west is flat for a distance.

- iv. Describe the nature and locations of current surface cover(s) across the site (e.g. natural vegetation, landscaped areas, gravel, hard surfaces, and buildings).

Surface cover includes a house with attached garage, gravel driveway and landscaped areas. There are trees on the eastern portion of the site.

B. Groundwater

- i. **Discuss depth to groundwater and piezometric elevations.** Describe and explain depth variations, and whether free product affects measurement or water table elevation. Describe the stratigraphic unit(s) where water table was found or which were measured for piezometric levels.

Groundwater on-site has been encountered at 1.25 to 4 feet below ground surface (bgs). The groundwater plume is contained within low permeable clay that extends into a sandy clay layer with a higher permeability located over a nearly impermeable clay layer located over dolomite bedrock.

- ii. Discuss groundwater flow direction(s), shallow and deep. Describe and explain flow variations, including fracture flow if present.

Groundwater flows east towards the East Twin River.

- iii. Discuss groundwater flow characteristics: hydraulic conductivity, flow rate and permeability, or state why this information was not obtained.

The majority of the site is dominated by low permeability fat and hard clay located over dolomite/limestone bedrock. The hydraulic conductivity of this type of clay would be on the order of 1×10^{-7} cm/s which is relatively impervious and leads to the formation of perched groundwater where layers of more permeable materials form a distinct layer. Perched groundwater was observed across most of the site contained in a layer of sandy clay with an estimated hydraulic conductivity of 0.1 cm/s.

- iv. Identify and describe locations/distance of potable and/or municipal Wells within 1200 feet of the site.

The site and adjacent potable wells have not been impacted by petroleum contamination and the petroleum contamination plume does not extend to the vicinity of the potable wells. The site potable well is located within 100 feet of the groundwater contaminant plume and soil contamination, but has not been impacted.

3. Site Investigation Summary

A. General

- i. Provide a brief summary of the site investigation history. Reference previous submittals by name and date. Describe site investigation activities undertaken since the last submittal for this project and attach the appropriate documentation in Attachment C, if not previously provided.

Mach IV commenced soil sampling activities on November 18, 2011. Groundwater monitoring wells were installed on December 20, 2011. Access to sample potable wells was obtained in February, 2011. Monitoring wells were developed on March 2, 2011. Potable well sampling and groundwater sampling was conducted on March 21, 2011. Additional potable well sampling was conducted on March 30, 2011, August 9, 2012, January 31, 2013, and March 14, 2014. Vapor intrusion sampling was conducted on May 24, 2011. Investigative waste removal was conducted on May 25, 2011.

- ii. Identify whether contamination extends beyond the source property boundary, describe the off-site media (e.g., soil, groundwater, etc.) impacted, and the vertical and horizontal extent of off-site impacts.

The western contaminant plume margin intersects the east side of Church Road adjacent to the former tank location. No utility corridors intersect the contaminant plume.

- iii. Identify any structural impediments to the completion of site investigation and/or remediation and whether these impediments are on the source property or off the source property. Identify the type and location of any structural impediment (e.g., structure) that also serves as the performance standard barrier for protection of the direct contact or the groundwater pathway.

There is a 2-story frame structure with attached garage located on the source property.

B. Soil

- i. Describe degree and extent of **soil contamination** at and from this site. Relate this to known or suspected sources and known or potential receptors/migration pathways.

Soil contamination of the site is largely concentrated within 10 feet of the former UST locations. Contamination that has moved off to the east from the source location appears to have followed the path of the perched groundwater, some of which is located in higher permeability soils consisting of sandy clay located at depths varying from 8 to 14 feet bgs. Soil sample GP-1, S-4, results reported detections of benzene (10,900 ppb), ethylbenzene (116,000 ppb), toluene (164,000 ppb) total xylenes (447,000 ppb), 1,2,4-TMB (200,000 ppb), 1,3,5-TMB (73,600 ppb) and lead (57.4 ppb). Benzene, ethylbenzene, total xylenes and 1,2,4-TMB exceed non industrial direct contact levels, toluene, 1,3,5-TMB and lead exceed groundwater RCLs. GP-1, S-6, results reported detections of ethylbenzene (3,460 ppb), total xylenes (11,330 ppb), 1,2,4-TMB (22,400 ppb) and 1,3,5-TMB all exceeding groundwater RCLs. GP-2, S-4, results reported detections of ethylbenzene (6,900 ppb), total xylenes (63,500 ppb), 1,2,4-TMB (33,700 ppb) and 1,3,5-TMB (24,100

ppb) all exceeding groundwater RCLs. GP-6, S-5, results reported detections of toluene (35,700 ppb) exceeding groundwater RCLs. GP-8, S-5, results reported detections of benzene (274 ppb) exceeding non industrial direct contact levels.

- ii. Describe the level and types of **soil contaminants** found in the upper four feet of the soil column. Based on screening conducted during collection of soil samples, no PID reading registered more than 64 ppm within the direct contact zone. Major contamination begins at 4 feet bgs in the source area.
- iii. Identify the ch. NR 720, Wis. Adm. Code, method used to establish the soil cleanup standards for this site. This includes a soil performance standard established in accordance with s. NR 720.08, a Residual Contaminant Level (RCL) established in accordance with s. NR 720.10 that is protective of groundwater quality, or an RCL established in accordance with s. NR 720.12 that is protective of human health from direct contact with contaminated soil. Identify the land use classification that was used to establish cleanup standards. Provide a copy of the supporting calculations/information in Attachment C.

The clean up standards used on site were groundwater RCLs and Non Industrial Direct Contact RCLs, and were obtained from the WDNR RR Program Soil RCLs spreadsheet which are derived from the US EPA Regional Screening level web calculator.

C. Groundwater

- i. Describe degree and extent of groundwater contamination at or from this site. Relate this to known or suspected sources and known or potential receptors/migration pathways. Specifically address any potential or existing impacts to water supply wells or interception with building foundation drain systems.

Groundwater contamination on-site is concentrated in the vicinity of groundwater monitoring well MW-1, the source well. The contamination of this site is historic, originating from use of the site as a general store in the early part of the 20th century, and the contaminant plume is likely more than 70 years old. Due to the hard clay soils dominating the site, the groundwater contaminant plume has not migrated far from the source location, approximately 20 to 30 feet. The degree of groundwater contamination includes benzene (134 ppb) exceeding the NR 140 ES (5 ppb) and total TMBs (581 ppb) exceeding the NR 140 ES (480 ppb). The site and adjacent potable wells have not been impacted by petroleum contamination and the petroleum contamination plume does not extend to the vicinity of the potable wells. The site potable well is located within 100 feet of the groundwater contaminant plume and soil contamination.

- ii. Describe the presence of free product at the site, including the thickness, depth, and locations. Based on soil data results, LNAPL was suspected to be present, however, LNAPL was not observed on-site.

D. Vapor

- i. Describe how the vapor migration pathway was assessed, including locations where vapor or indoor air samples were collected. If the vapor pathway was not assessed, explain reasons why.

The vapor intrusion pathway was evaluated and investigation of the pathway determined to be necessary. Mach IV's vapor intrusion screening and analysis combines groundwater and soil data collected during investigation activities with vapor data collected on-site. Vapor intrusion data was collected on-site on May 24, 2014. Mach IV vapor intrusion screening evaluation:

- It does not appear that an LNAPL layer underlies the building or is within 30 feet of the building foundation.
- There does not appear to be petroleum contaminated soils with the potential for off-gassing vapors within five feet or less of the building foundation.
- The benzene concentration in groundwater underlying the building is not greater than 1,000 ppb.
- It is possible that groundwater contaminated with petroleum product above the WAC NR 140 PAL is intercepted by the building's foundation drain system and sump or is in contact with the building foundation.
- Although petroleum vapors are present in the vicinity of monitoring well MW-1, it does not appear that those petroleum vapors migrated from the petroleum source and moved through preferential pathways such as fractured bedrock, and no sewer lines or other utilities exist in this area.

Since it was possible that groundwater contaminated with petroleum product above the WAC NR 140 PAL is intercepted by the building's foundation drain system and sump or is in contact with the building foundation, the vapor intrusion pathway screening indicated the potential for vapor intrusion. The groundwater table at the site is very shallow measuring from 1.25 to 4 feet bgs. It was not possible to collect sub-slab soil vapor samples, therefore vapor samples were taken from each of the groundwater monitoring wells, inside air in the basement, and within the sump. The sump was checked 3 times, and every time there was not enough water to sample. On May 24, 2014 Mach IV collected PID readings from inside the basement of the home and all readings registered at 0.0 ppm. The sump was sealed and Tygon tubing was attached to the PID to observe the vapors just above the water in the sump. The sump PID readings registered at 0.0 ppm. Again Tygon tubing was attached to the PID and the vapor above the groundwater in each of the monitoring wells was observed. Each of the monitoring wells registered a PID reading of 0.0 ppm except MW-1 which registered a PID reading of 45.3 ppm.

- ii. Identify the applicable DNR action levels and the land use classification used to establish them. Describe where the DNR action levels were reached or exceeded (e.g., sub slab, indoor air or both).
MW-1 had a PID detection of 45.3 ppm. All other PID detections were 0.0 ppm in basement sump, indoor air and monitoring wells MW-2 through MW-5.

E. Surface Water and Sediment

- i. Identify whether surface water and/or sediment was assessed and describe the impacts found. If this pathway was not assessed, explain why.
There was no surface water or sediment present on the subject site, therefore this pathway was not assessed.
- ii. Identify any surface water and/or sediment action levels used to assess the impacts for this pathway and how these were derived. Describe where the DNR action levels were reached or exceeded.
Not applicable

4. Remedial Actions Implemented and Residual Levels at Closure

- A. General: Provide a brief summary of the remedial action history. List previous remedial action report submittals by name and date. Identify remedial actions undertaken since the last submittal for this project and provide the appropriate documentation in Attachment C.
No remedial action was taken on the site.
- B. Describe any immediate or interim actions taken at the site under ch NR 708, Wis. Adm. Code.
There were no immediate or interim actions taken at the site.
- C. Describe the *active* remedial actions taken at the site, including: type of remedial system(s) used for each media impacted; the size and location of any excavation or in-situ treatment; the effectiveness of the systems to address the contaminated media and substances; operational history of the systems; and summarize the performance of the active remedial actions. Provide any system performance documentation in Attachment A.7.
No active remedial actions were taken on the site.
- D. Provide a discussion of the nature, degree and extent of residual contamination that will remain at the site or on off-site affected properties after case closure.
The soil contamination on-site is concentrated within approximately 40 feet of the source area with significant soil contamination located entirely within 10 feet of the source area. Less significant soil contaminant concentrations have moved a bit to the east via the action of a perched groundwater layer contained within a narrow band of medium permeable sandy clay located between layers of low permeability clay. The prevalence of low permeability clay has kept the soil contamination area to a minimal extent.
- E. Describe the remaining soil contamination within four feet of ground surface (direct contact zone) that attains or exceeds Residual Contaminant Levels established under s. NR 720. 12 , the ch. NR720, Wis. Adm. Code, for protection of human health from direct contact.
There is no remaining soil contamination within four feet of the ground surface that exceeds direct contact standards.
- F. Describe the remaining soil contamination in the vadose zone that attains or exceeds the soil standard(s) for the groundwater pathway.
All soil contamination described in part D above is located within the vadose zone.
- G. Describe how the residual contamination will be addressed, including but not limited to details concerning: covers, engineering controls or other barrier features; use of natural attenuation of groundwater; and vapor mitigation systems or measures.
The low permeability clay has kept the significant contamination contained within 10 feet of the source area at a depth of 8 to 14 feet bgs. The building structure on site provides an additional partial cover over the impacted soils.
- H. If using natural attenuation as a groundwater remedy, describe how the data collected supports the conclusion that natural attenuation is effective in reducing contaminant mass and concentration, (e.g. stable or receding groundwater plume).
Based on the location of groundwater monitoring wells and data collected from them it appears that the horizontal extent of the groundwater contamination has been identified. Soil data collected indicates that the groundwater is perched on top of low permeability clay. The groundwater contamination is concentrated in the vicinity of groundwater monitoring well MW-1. No contaminants have been found in the other monitoring wells. LNAPL has not been observed on-site. Groundwater sampling was conducted two more times to verify the stability of the groundwater plume.
- I. Identify how all exposure pathways were removed and/or adequately addressed by immediate and/or remedial action(s) described above in paragraphs, B, C, D, E and F.
There is no direct contact pathway applicable for this site, as the impacted soils are located below 4 feet in depth. The groundwater pathway has been addressed by the very low permeability clays along with the building structure that caps part of the impacted area.

- J. Identify any system hardware anticipated to be left in place after site closure, and explain the reasons why it will remain.
There is no system hardware present on site.
- K. Identify the need for a ch. NR 140, Wis. Adm. Code, groundwater Preventive Action Limit (PAL) or Enforcement Standard (ES) exemption, and identify the affected monitoring points and applicable substances.
N/A No PAL or ES exemption is needed.
- L. If a DNR action level for vapor intrusion was exceeded (for indoor air, sub slab, or both) describe where it was exceeded and how the pathway was addressed.
PID readings from inside the basement of the home registered at 0.0 ppm. The sump PID readings registered at 0.0 ppm. Each of the monitoring wells registered a PID reading of 0.0 ppm except MW-1 which registered a PID reading of 45.3 ppm.
- M. Describe the surface water and/or sediment contaminant concentrations and areas after remediation. If a DNR action level was exceeded, describe where it was exceeded and how the pathway was addressed.
There were no surface water or sediment contaminant impacts on the subject site.

5. Continuing Obligations: Situations where a maintenance plan(s) and inclusion on DNR's GIS Registry are required.

Directions: Check all that apply to this case closure request:

	This scenario Applies to this Case Closure		Case Closure Scenario: Maintenance Plans and GIS Registry	Maintenance Plan (s) Required in Attachment D	GIS Registry Listing
	A. On-Site	B. Off-Site			
i.	<input type="checkbox"/>	<input type="checkbox"/>	Engineering Control/Barrier for Direct Contact	✓	✓
ii.	<input type="checkbox"/>	<input type="checkbox"/>	Engineering Control/Barrier for Groundwater Infiltration	✓	✓
iii.	<input type="checkbox"/>	<input type="checkbox"/>	Vapor Mitigation - post closure passive system	✓	✓
iv.	<input type="checkbox"/>	<input type="checkbox"/>	Vapor Mitigation - post closure active system	✓	✓
v.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	None of the above scenarios apply to this case closure	NA	NA

6. Continuing Obligations: Situations where inclusion on DNR's GIS Registry is required.

Directions: Check all that apply to this case closure request:

	This scenario Applies to this Case Closure		Case Closure Scenario: GIS Registry Only	GIS Registry Listing
	A. On-Site	B. Off-Site		
i.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual soil contamination exceeds ch. NR 720 generic or site-specific RCLs	✓
ii.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sites with groundwater contamination equal to or greater than the ch. NR 140, enforcement standards (ES)	✓
iii.	<input type="checkbox"/>	<input type="checkbox"/>	Monitoring wells: lost, transferred or remaining in use	✓
iv.	<input type="checkbox"/>	<input type="checkbox"/>	Structural Impediment (not as a performance standard)	✓
v.	<input type="checkbox"/>	<input type="checkbox"/>	Residual soil contamination remaining at ch. NR 720 Industrial Use levels	✓
vi.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Vapor intrusion may be future, post-closure issue if building use or land use changes	✓
vii.	<input type="checkbox"/>	<input type="checkbox"/>	None of the above scenarios apply to this case closure	NA

7. Underground Storage Tanks

- A. Were any tanks, piping or other associated tank system components removed as part of the investigation or remedial action? Yes No
- B. Do any upgraded tanks meeting the requirements of ch. SPS 310, Wis. Adm. Code, exist on the property? Yes No
- C. If the answer to question 7b is yes, is the leak detection system currently being monitored? Yes No

Data Tables (Attachment A)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General directions for Data Tables:

- Use bold and italics font on information of importance on tables and figures. Use bold font for ch. NR 140, Wis. Adm. Code, groundwater enforcement standard (ES) attainments or exceedances, and italicized font for ch. NR 140, Wis. Adm. Code, groundwater preventive action limit (PAL) standard attainments or exceedances.
- Do not use shading or highlighting on the analytical tables.
- Include on Data Tables the level of detection for results which are below the detection level (i.e. do not just list as no detect (ND)).
- Include the units on data tables.
- Summaries of all data must include information collected by previous consultants.
- Do not submit lab data sheets unless these have not been submitted in a previous report. Tabulate all data required in s. NR 716.15(3)(c), Wis. Adm. Code, in the format required in s. NR 716.15(4)(e), Wis. Adm. Code.
- Include in Attachment A all of the following tables, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: A.1. Groundwater Analytical Table; A.2. Pre-remedial Soil Analytical Table, etc).
- For required documents, each table (e.g., A.1., A.2., etc.) should be a separate PDF.

A. Data Tables

- A.1. **Groundwater Analytical Table(s):** Table(s) showing the analytical results and collection dates, for all groundwater sampling points e.g. monitoring wells, temporary wells, sumps, extraction wells, any potable wells and any other wells, extraction wells and any potable wells for which samples have been collected.
- A.2. **Pre-remedial Soil Analytical Table(s):** Table(s) showing the soil analytical results and collection dates - prior to conducting the interim and/or remedial action. Indicate if sample was collected above or below the all-time low water table (unsaturated verses saturated).
- A.3. **Post-remedial Soil Analytical Table(s):** Table(s) showing the post-remedial action soil analytical results and collection dates. Indicate if sample was collected above or below the all-time low water table (unsaturated verses saturated).
- A.4. **Pre and Post Remaining Soil Contamination Soil Analytical Table(s):** Table(s) showing only the pre and post remedial action soil analytical results that exceed a Residual Contaminate Level (RCL) or a Site-Specific Residual Level (SSRCL).
- A.5. **Vapor Analytical Table:** Table(s) showing type(s) of samples, sample collection methods, analytical method, sample results, date of sample collection, time period for sample collection, method and results of leak detection, and date, method and results of communication testing.
- A.6. **Other Media of Concern (e.g., sediment or surface water):** Table(s) showing type(s) of sample, sample collection method, analytical method, sample results, date of sample collection, time period for sample collection, method and results sampling.
- A.7. **Water Level Elevations:** Table(s) showing all water level elevation measurements and dates from all monitoring wells. If present, free product should be noted on the table.
- A.8. **Other:** This attachment should include: 1) any available tabulated natural attenuation data; 2) data tables pertaining to engineered remedial systems that document operational history, demonstrate system performance and effectiveness, and display emissions data; and (3) any other data tables relevant to case closure not otherwise noted above. If this section is not applicable, please explain the reasons why.

Maps and Figures (Attachment B)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General Directions for all Maps and Figures:

- If any map or figure is not relevant to the case closure request, you must fully explain the reason(s) why and attach that explanation (properly labeled with the map/ figure title) in Attachment B.
- Provide on paper no larger than 11 x 17 inches, unless otherwise directed by the Department. Maps and figures may be submitted in a larger electronic size than 11x17 inches, in a portable document format (pdf) readable by the Adobe Acrobat Reader. However, those larger-size documents must be legible when printed.
- Prepare visual aids, including maps, plans, drawings, fence diagrams, tables and photographs according to the applicable portions

Save...

of ss. NR 716.15(4), 726.09(2) and 726.11(3), (5) and (6), Wis Adm. Code.

- Do not use shading or highlights on any of the analytical tables.
- Include all sample locations.
- Contour lines should be clearly labeled and defined.
- Include in Attachment B all of the following maps and figures, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: B.1. Location Map; B.2. Detailed Site Map, etc).
- For the electronic copies that are required, each map (e.g., B.1.a., B.2.a, etc..) should be a separate PDF.

B.1. Location Maps

- B.1.a. **Location Map:** A map outlining all properties within the contaminated site boundaries on a U.S.G.S. topographic map or plat map in sufficient detail to permit easy location of all impacted and/or adjacent parcels. If groundwater standards are exceeded, include the location of all potable wells, including municipal wells, within 1200 feet of the area of contamination.
- B.1.b. **Detailed Site Map:** A map that shows all relevant features (buildings, roads, current ground surface cover, individual property boundaries for on-site and applicable off-site properties, contaminant sources, utility lines, monitoring wells and potable wells) within the contaminated area. This map is to show the location of all contaminated public streets, and highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination exceeding a ch. NR 140 Enforcement Standard (ES), and/or in relation to the boundaries of soil contamination exceeding a Residual Contaminant Level (RCL) established in accordance with the provisions contained in s. NR 720.10 or s. NR 720.12, Wis. Adm. Code.
- B.1.c. **RR Site Map:** From RR Sites Map ([http://dnrmaps.wi.gov/sl/?Viewer=RR Sites](http://dnrmaps.wi.gov/sl/?Viewer=RR%20Sites)) attach a map depicting the source property, and all open and closed BRRTS sites within a half-mile radius or less of the property.

B.2. Soil Figures

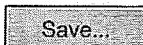
- B.2.a. **Pre-remedial Soil Contamination:** Figure(s) showing the sample location of all pre-remedial, unsaturated contaminated soil and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeded a Residual Contaminant Level (RCL) established in accordance with the provisions contained in s. NR 720.10 or s. NR 720.12, Wis. Adm. Code.
- B.2.b. **Post-remedial Soil Contamination :** Figure(s) showing the sample location of all post-remedial, unsaturated contaminated soil and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeds a Residual Contaminant Level (RCL) established in accordance with the provisions contained in s. NR 720.10 or s. NR 720.12, Wis. Adm. Code. A separate contour line should be used to indicate the extent of residual direct contact exceedances.
- B.2.c. **Pre/Post Remaining Soil Contamination:** Figure(s) showing the only location of all pre and post remedial residual soil sample location(s) where unsaturated contaminated soil remains after remediation and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeds a Residual Contaminant Level (RCL) established in accordance with the provisions contained in s. NR 720.10 or s. NR 720.12, Wis. Adm. Code. A separate contour line should be used to indicate the extent of residual direct contact exceedances.

B.3. Groundwater Figures

- B.3.a. **Geologic Cross-Section Figure(s):** One or more cross-section diagrams showing soil types and correlations across the site, water table and piezometric elevations, and locations and elevations of geologic rock units, if encountered. Display on one or more figures all of the following:
 - Source location(s) and vertical extent of residual soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL).
 - Source location(s) and lateral and vertical extent if groundwater contamination exceeds a ch. NR 140 Enforcement Standard (ES)
 - Surface features, including buildings and basements, and show surface elevation changes.
 - Any areas of active remediation within the cross section path, such as excavations or treatment zones.
 - Include a map displaying the cross-section location(s), if they are not displayed on the Detailed Site Map (Map B.1b)
- B.3.b. **Groundwater Isoconcentration:** Figure(s) showing the horizontal extent of the post-remedial groundwater contamination exceeding a ch. NR 140, Wis. Adm. Code, Preventive Action Limit (PAL) and/or an Enforcement Standard (ES). Indicate the date and direction of groundwater flow based on the most recent sampling data.
- B.3.c. **Groundwater Flow Direction:** Figure(s) representing groundwater movement at the site. If the flow direction varies by more than 20° over the history of the site, submit two groundwater flow maps showing the maximum variation in flow direction.
- B.3.d. **Monitoring Wells:** Figure(s) showing all monitoring wells, with well identification number. Clearly designate any wells that: (1) are proposed to be abandoned; (2) cannot be located; (3) are being transferred; (4) will be retained for further sampling, or (5) have been previously abandoned.

B.4. Vapor Maps and Other Media

- B.4.a. **Vapor Intrusion Map:** Map(s) showing all locations and results for samples taken to investigate the vapor intrusion pathway, in relation to remaining soil and groundwater contamination, including sub-slab, indoor air, soil vapor,



ambient air, and communication testing. Show locations and footprints of affected structures and utility corridors, and/or where residual contamination poses a future risk of vapor intrusion.

- B.4.b. **Other media of concern (e.g., sediment or surface water):** Map(s) showing all sampling locations and results for other media investigation. Include the date of sample collection and identify where any standards are exceeded.
- B.4.c. **Other:** Include any other relevant maps and figures not otherwise noted above. (This section may remain blank)

Documentation of Remedial Action (Attachment C)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General Directions:

- Include in Attachment C all of the following documentation, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: C.1. Site Investigation Documentation; C.2. Investigative Waste, etc).
- If the documentation requested below is “not applicable” to the site-specific circumstances, include a brief explanation to support that conclusion.
- If the documentation requested below has already been submitted to the Department, please note the title and date of the report for that particular document requested.

- C.1. **Site investigation documentation**, that has not otherwise been previously submitted.
- C.2. **Investigative waste** disposal documentation.
- C.3. **Provide a description of the methodology used along with all supporting documentation if the Residual Contaminant Levels are different than those contained in the Department’s RCL Spreadsheet available at: <http://dnr.wi.gov/topic/Brownfields/Professionals.html>.**
- C.4. **Construction documentation** or as-built report for any constructed remedial action or portion of, or interim action specified in s. NR 724.02(1), Wis. Adm. Code.
- C.5. **Decommissioning of Remedial Systems.** Include plans to properly abandon any systems or equipment upon receiving conditional closure.
- C.6. **Photos.** For sites or facilities with a cover or other performance standard, a structural impediment or a vapor mitigation system. Include one or more photographs documenting the condition and extent of the feature at the time of the closure request. Pertinent features should be visible and discernible. Photographs must be labeled with the site name, the features shown, location and the date on which the photograph was taken.
- C.7. **Other.** Include any other relevant documentation not otherwise noted above. (This section may remain blank)

Maintenance Plan(s) and Photographs (Attachment D)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

When one or more “maintenance plans” are required for a site closure, include in each maintenance plan all required information listed below, and attach the plan(s) in Attachment D. The following “model” maintenance plans can be located at: (1) Maintenance plan for a engineering control or cover: <http://dnr.wi.gov/topic/Brownfields/documents/maintenance-plan.pdf>; and (2) Maintenance plan for vapor intrusion: http://dnr.wi.gov/topic/Brownfields/documents/appendix5_606.pdf.

- D.1. **Location map(s)** which show(s): (1) the feature that requires maintenance; (2) the location of the feature(s) that require(s) maintenance - on and off the source property; (3) the extent of the structure or feature(s) to be maintained, in relation to other structures or features on the site; (4) the extent and type of residual contamination; and (5) and all property boundaries.
- D.2. **Brief descriptions** of the type, depth and location of residual contamination.
- D.3. **Description of maintenance action(s)** required for maximizing effectiveness of the engineered control, vapor mitigation system, feature or other action for which maintenance is required.
- D.4. **Inspection log**, to be maintained on site, or at a location specified in the maintenance plan or approval letter.
- D.5. **Contact information**, including the name, address and phone number of the individual or facility who will be conducting the maintenance.
- D.6. **Photographs**
 - D.6.a. For site or facilities with a cover or other performance standard, a structural impediment or a vapor mitigation system, include one or more photographs documenting the condition and extent of the feature at the time of the closure request. Pertinent features shall be visible and discernible.
 - D.6.b. Photographs shall be submitted with a title related to the site name and location, and the date on which it was taken.

Monitoring Well Information (Attachment E)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General Directions:

Attach monitoring well construction and development forms (DNR FORM 4400-113 A and B: http://dnr.wi.gov/topic/groundwater/documents/forms/4400_113_1_2.pdf) for all wells that will remain in-use, be transferred to another party or that could not be located. A figure of these wells should be included in Attachment B.3.d.

Select One:

- No monitoring wells were required as part of this response action.
- All monitoring wells have been located and will be properly abandoned upon the DNR granting conditional closure to the site
- Select One or More:**
 - Not all monitoring wells can be located, despite good faith efforts. Attachment E must include description of efforts made to locate the "lost" wells.
 - One or more wells will be transferred to another owner upon case closure being granted. Attachment E should include documentation identifying the name, address and email for the new owner(s).
 - One or more wells will remain in use at the site after this closure. Attachment E must include documentation as to the reason(s) the well(s) will remain in use.

Notifications to Owners of Impacted Properties (Attachment F)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General Directions:

- State law requires that the responsible party provide a 30-day, written advance notice (i.e., a letter) to certain persons prior to applying for case closure. This requirement applies if: (1) the person conducting the response action does not own the source property; (2) the contamination has migrated onto another property; and/or (3) one or more monitoring wells will not be abandoned.
- Use of Form 4400-286, Notification of Residual Contamination and Continuing Obligations, is required under ch. NR 725 for notifying property owners and right-of-way holders about residual contamination affecting their properties, and of continuing obligations which may be imposed. This form can be downloaded at <http://dnr.wi.gov/files/PDF/forms/4400/4400-286.pdf>.

Check all that apply to the site-specific circumstances of this case closure:

	A. Impacted Source Property and Owner is not Conducting Cleanup	B. Impacted Right of Way	C. Impacted Off-Site Property Owner	Impacted Property Notification Situations: Ch. NR 726 Appendix A Letter
1.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Residual groundwater contamination exceeds Ch. NR 140 Wis. Administrative Code enforcement standards.
2.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Residual soil contamination that attains or exceeds standards is present after the remedial action is complete, and must be properly managed should it be excavated or removed.
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	An engineered cover or a soil barrier (e.g. pavement) must be maintained over contaminated soil for direct contact or groundwater infiltration concerns.
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Industrial land use soil standards were used for the clean-up standard.
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A vapor mitigation system (or other specific vapor protection) must be operated and maintained.
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vapor assessment needed if use changes.
7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Structural impediment.
8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lost, transferred or open monitoring wells.
9.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Not Applicable.

If any of the previous boxes in rows 1 thru 8 were checked, include the following as part of Attachment F:

- FORM 4400-246;
- Copy of each letter sent, 30 days or more prior to requesting closure; and
- Proof of receipt for each letter.
- For this site closure, 1 (number) property (ies) has/have been impacted, the owners have been notified, and copies of the letters and receipts are included in Attachment F.

Save...

Source Legal Documents (Attachment G)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

Include all of the following documents, in this order, in Attachment G:

- G.1. **Deeds - Source Property and Other Impacted Properties:** The most recent deed with legal descriptions clearly labeled for (1) the **Source Property** (where the contamination originated) and (2) all **off-source** (off-site) properties where letters were required to be sent per the ch. NR 700, Wis. Adm. Code, rule series (e.g., off-site cover maintenance required, lost monitoring well, off-site cover property impacts to groundwater exceeding the ch. NR 140, Wis. Adm. Code.
Note: If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.
- G.2. **Certified Survey Map:** A copy of the certified survey map or the relevant section of the recorded plat map for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map. (Lots on subdivided or platted property (e.g. lot 2 of xyz subdivision)).
- G.3. **Verification of Zoning:** Documentation (e.g., official zoning map or letter from municipality) of the property's or properties' current zoning status.
- G.4. **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes that the attached legal description(s) accurately describe(s) the correct contaminated property or properties.

Signatures and Findings for Closure Determination

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

Check the correct box for this case closure request, and have either a professional engineer or a hydrogeologist, as defined in ch. NR 712, Wis. Adm. Code, sign this document.

A response action(s) for this site addresses groundwater contamination (including natural attenuation remedies).

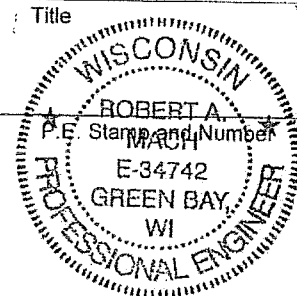
The response action(s) for this site addresses media other than groundwater.

Engineering Certification

I, ROBERT A. MACH 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 case closure request has been prepared by me or prepared under my supervision 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 case closure request is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code. Specifically, with respect to compliance with the rules, in my professional opinion a site investigation has been conducted in accordance with ch. NR 716, Wis. Adm. Code, and all necessary remedial actions have been completed in accordance with chs. NR 140, NR 718, NR 720, NR 722, NR 724 and NR 726, Wis. Adm. Codes."

ROBERT A. MACH P.E.
Printed Name Title

Robt A. Mach 7/25/14
Signature Date



Hydrogeologist Certification

I _____ hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this case closure request is correct and the document was prepared by me or prepared by me or prepared under my supervision and, in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code. Specifically, with respect to compliance with the rules, in my professional opinion a site investigation has been conducted in accordance with ch. NR 716, Wis. Adm. Code, and all necessary remedial actions have been completed in accordance with chs. NR 140, NR 718, NR 720, NR 722, NR 724 and NR 726, Wis. Adm. Codes."

Printed Name Title

Signature Date

Attachment A: Data Tables

A.1. Groundwater Analytical Table

A.2. Pre-remedial Soil Analytical Table

A.3 Post-remedial Soil Analytical Table-not attached because there were no post samples taken

A.4 Pre and Post remaining Soil Contamination Table

A.5. Vapor Analytical Table

A.6. Other Media of Concern- there are no other media of concern

A.7. Water Level Elevations

A.8. Other-N/A

Table A.1 Groundwater Analytical Table
 Groundwater Sample Laboratory Analytical Results
 Miller Property
 N2892 Church Road, Kewaunee, Wisconsin

Well	Sample Date	Benzene	Ethyl-Benzene	Toluene	Total Xylenes	Total TMB's	MTBE	n-Butyl Benzene	sec-Butyl Benzene	EDB	Cumene	1,2-DCA	p-Isopropyl Toluene	Naphthalene	n-Propyl Benzene	Lead
MW-1	3/21/2011	81.5	134.0	546	696	339	<3.0	<4.6	<4.4	<2.8	17.0	<1.8	13.7	32.1	27.9	3.6
	8/9/2012	134	193	134	105	127.7	1.5J	NA	NA	NA	NA	NA	NA	33.0	NA	<1.4
	1/31/2013	69	169	63.4	84.8	140.3	2.1	NA	NA	NA	NA	NA	NA	44.7	NA	NA
	3/14/2014	39.3	212	177	772	581	<0.99	<0.80	4.3J	<0.76	13.6	<0.95	11.1	42.3	29	NA
MW-2	3/21/2011	<0.41	<0.54	<0.67	<2.63	<1.80	<0.61	<0.93	<0.89	<0.56	<0.59	<0.36	<0.67	<0.89	<0.81	NA
	8/9/2012	<0.39	<0.41	0.81J	<1.3	<0.83	<0.38	NA	NA	NA	NA	NA	NA	<0.40	NA	<1.4
	1/31/2013	4.3	10.4	3.3	5.2	13.2	<0.38	NA	NA	NA	NA	NA	NA	2.7	NA	NA
	3/14/2014	<0.50	<0.50	<0.44	<1.32	<1.00	<0.49	<0.40	<0.60	<0.38	<0.34	<0.48	<0.40	<2.5	<0.50	NA
MW-3	3/21/2011	<0.41	<0.54	<0.67	<2.63	<1.80	<0.61	<0.93	<0.89	<0.56	<0.59	<0.36	<0.67	<0.89	<0.81	NA
	8/9/2012	<0.39	<0.41	1.9	<1.3	<0.83	<0.38	NA	NA	NA	NA	NA	NA	<0.40	NA	<1.4
	1/31/2013	<0.39	<0.41	<0.42	<1.3	<0.83	<0.38	NA	NA	NA	NA	NA	NA	<0.40	NA	NA
	3/14/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	3/21/2011	<0.41	<0.54	<0.67	<2.63	<1.80	<0.61	<0.93	<0.89	<0.56	<0.59	<0.36	<0.67	<0.89	<0.81	NA
	8/9/2012	<0.39	<0.41	0.70J	<1.3	<0.83	<0.38	NA	NA	NA	NA	NA	NA	<0.40	NA	<1.4
	1/31/2013	<0.39	<0.41	<0.42	<1.3	<0.83	<0.38	NA	NA	NA	NA	NA	NA	<0.40	NA	NA
	3/14/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-5	3/21/2011	<0.41	<0.54	<0.67	<2.63	<1.80	<0.61	<0.93	<0.89	<0.56	<0.59	<0.36	<0.67	<0.89	<0.81	NA
	8/9/2012	<0.39	<0.41	0.61J	<1.3	<0.83	<0.38	NA	NA	NA	NA	NA	NA	<0.40	NA	<1.4
	1/31/2013	<0.39	<0.41	<0.42	<1.3	<0.83	<0.38	NA	NA	NA	NA	NA	NA	<0.40	NA	NA
	3/14/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N2982 Church	3/21/2011	<0.41	<0.54	<0.67	<2.63	<1.80	<0.61	<0.93	<0.89	<0.56	<0.59	<0.36	<0.67	<0.89	<0.81	NA
	3/30/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.7
E2695 Krok	3/30/2011	<0.41	<0.54	<0.67	<2.63	<1.80	<0.61	<0.93	<0.89	<0.56	<0.59	<0.36	<0.67	<0.89	<0.81	NA
E2711 Krok	4/19/2011	<0.41	<0.54	<0.67	<2.63	<1.80	<0.61	<0.93	<0.89	<0.56	<0.59	<0.36	<0.67	<0.89	<0.81	7.0
	8/9/2012	<0.41	<0.54	<0.67	<1.01	<1.71	<0.61	<0.93	<0.89	<0.56	<0.59	<0.36	<0.67	<0.89	<0.81	<1.4
	7/1/2013	<0.34	<0.34	<0.34	<1.0	<0.69	<0.37	NA	NA	NA	NA	NA	<0.34	<0.37	NA	NA
NR 140 ES		5	700	800	2,000	480	60	NS	NS	0.05	NS	5	NS	100	NS	15
NR 140 PAL		0.5	140	160	400	96	12	NS	NS	0.005	NS	0.5	NS	10	NS	1.5

Note: All concentrations reported in parts per billion
Bold value represents exceedence of NR 140 enforcement standard
Italicized values represent exceedence of NR 140 preventive action limits
 TMB: trimethylbenzene
 MTBE: methyl tert-butyl ether NA: not analyzed/not applicable
 Cumene: Isopropylbenzene NS: no standard
 1,2-DCA: 1,2-Dichloroethane ES: Enforcement Standard
 EDB: 1,2-Dibromoethane PAL: Preventive Action Limit

Table A.2 Pre-remedial Soil Analytical Table
 Soil Sample Laboratory Analytical Results
 Miller Property
 N2892 Church Road, Kewaunee, Wisconsin

Sample ID	Sample Date	Sample Interval (ft bgs)	PID (ppm eq)	GRO	Benzene	Ethyl-benzene	Toluene	Total Xylenes	1,2,4-TMB	1,3,5-TMB	MTBE	Lead
TANK REMOVAL SAMPLES												
T150 4'	2/7/2006	4.0	NA	7400	NA	NA	NA	NA	NA	NA	NA	NA
T550 North	2/7/2006	3.0 - 4.0	NA	280	NA	NA	NA	NA	NA	NA	NA	NA
T550 South	2/7/2006	3.0 - 4.0	NA	300	NA	NA	NA	NA	NA	NA	NA	NA
SITE INVESTIGATION SAMPLES												
GP-1, S-4	11/18/2010	6.0 - 8.0	1,900	5,540	10,900	116,000	<i>164,000</i>	447,000	200,000	<i>73,600</i>	<2,000	<i>57.4</i>
GP-1, S-6	11/18/2010	10.0 - 11.0	1,300	1,420	<312	<i>3,460</i>	443	<i>11,330</i>	<i>22,400</i>	<i>15,600</i>	<312	6.0
GP-1, S-9	11/18/2010	19.0 - 20.0	103	19.1	<25	298	319	1,114	554	219	<25	8.8
GP-2, S-4	11/18/2010	6.0 - 8.0	1,900	2,250	<500	<i>6,900</i>	<500	<i>63,500</i>	<i>33,700</i>	<i>24,100</i>	<500	5.7
GP-2, S-6	11/18/2010	10.0 - 12.0	60	<2.9	<25	<25	<25	<75	<25	<25	<25	5.7
GP-3, S-7	11/18/2010	12.0 - 14.0	0.0	3.6	<25	31.0	<25	97.4	92.3	42.9	<25	5.5
GP-5, S-8	11/18/2010	14.0 - 16.0	0.0	<2.9	<25	<25	<25	<75	<25	<25	<25	4.1
GP-6, S-5	11/18/2010	8.0 - 10.0	440	118	<125	434	<i>35,700</i>	1,635	<125	188	<125	5.4
GP-8, S-5	11/18/2010	8.0 - 10.0	0.0	6.1	274	253	69.6	630	320	113	<25	7.9
GP-8, S-8	11/18/2010	14.0 - 16.0	0.0	<3.0	<25	<25	<25	<75	<25	<25	<25	2.7
GP-9, S-6	11/18/2010	10.0 - 12.0	0.0	<2.8	<25	<25	<25	<75	<25	<25	<25	3.2
GP-9, S-8	11/18/2010	14.0 - 16.0	0.0	<3.0	<25	<25	<25	<75	<25	<25	<25	6.5
GP-10, S-2	12/21/2010	2.0-4.0	NA	<3.0	<25	<25	<25	<75	<25	<25	<25	4.3
Groundwater RCLs				NS	5.1	<i>1,570</i>	<i>1,107</i>	3,940	1,382	1,382	27	27
Non Industrial Direct Contact				NS	1,490	7,470	818,000	258,000	89,800	182,000	59,400	400

Notes: All concentrations reported in parts per billion, except for GRO and Lead given in parts per million

Bold value represents an exceedence of the Non Industrial Direct Contact

Italic value represents an exceedence of the Groundwater RCLs

bgs: below ground surface

ppm eq: part per million equivalent

GRO: gasoline range organics

TMB: trimethylbenzene

MTBE: methyl tert-butyl ether

NS: no standard

WDNR: Wisconsin Department of Natural Resources

NA: not analyzed

Table A.4 Pre and Post Remaining Soil Contamination Soil Analytical Table
 Soil Sample Laboratory Analytical Results
 Miller Property
 N2892 Church Road, Kewaunee, Wisconsin

Sample ID	Sample Date	Sample Interval (ft bgs)	PID (ppm eq)	GRO	Benzene	Ethyl-benzene	Toluene	Total Xylenes	1,2,4-TMB	1,3,5-TMB	MTBE	Lead
<i>SITE INVESTIGATION SAMPLES</i>												
GP-1, S-4	11/18/2010	6.0 - 8.0	1,900	5,540	10,900	116,000	<i>164,000</i>	447,000	200,000	<i>73,600</i>	<2,000	<i>57.4</i>
GP-1, S-6	11/18/2010	10.0 - 11.0	1,300	1,420	<312	<i>3,460</i>	443	11,330	<i>22,400</i>	<i>15,600</i>	<312	6.0
GP-2, S-4	11/18/2010	6.0 - 8.0	1,900	2,250	<500	<i>6,900</i>	<500	<i>63,500</i>	<i>33,700</i>	<i>24,100</i>	<500	5.7
GP-6, S-5	11/18/2010	8.0 - 10.0	440	118	<125	434	<i>35,700</i>	1,635	<125	188	<125	5.4
GP-8, S-5	11/18/2010	8.0 - 10.0	0.0	6.1	274	253	69.6	630	320	113	<25	7.9
Groundwater RCLs				<i>NS</i>	<i>5.1</i>	<i>1,570</i>	<i>1,107</i>	<i>3,940</i>	<i>1382</i>	<i>1382</i>	<i>27</i>	<i>27</i>
Non Industrial Direct Contact				NS	1,490	7,470	818,000	258,000	89,800	182,000	59,400	400

Bold value represents an exceedence of the Non Industrial Direct Contact

Italic value represents an exceedence of the Groundwater RCLs

bgs: below ground surface

ppm eq: part per million equivalent

GRO: gasoline range organics

TMB: trimethylbenzene

MTBE: methyl tert-butyl ether

NS: no standard

WDNR: Wisconsin Department of Natural Resources

Table A.5 Vapor Analytical Table
Vapor Field Screening (PID)
Miller Property
Town of West Kewaunee, Wisconsin

Sample Point	Sample Date	Vapor Results (PPM)
MW-1	5/24/2011	45.3
MW-2	5/24/2011	0.0
MW-3	5/24/2011	0.0
MW-4	5/24/2011	0.0
MW-5	5/24/2011	0.0
Basement air	5/24/2011	0.0
Sump	5/24/2011	0.0

Table A.7 Water Level Elevations
 Groundwater Sample Laboratory Analytical Results
 Miller Property
 N2892 Church Road, Kewaunee, Wisconsin

Well	Sample Date	Groundwater Elevation
MW-1	3/21/2011	99.52
	3/14/2014	96.94
MW-2	3/21/2011	97.16
	3/14/2014	96.61
MW-3	3/21/2011	100.75
	3/14/2014	96.65
MW-4	3/21/2011	94.98
	3/14/2014	95.21
MW-5	3/21/2011	96.92
	3/14/2014	96.04
N2982 Church	3/21/2011	-----
	3/30/2011	-----
E2695 Krok	3/30/2011	-----
E2711 Krok	4/19/2011	-----

- - - Not analyzed

Attachment B: Maps and Figures

B.1. Location Maps

B.1.a. Location Maps

B.1.b. Detailed Site Map

B.1.c. RR Site Map

B.2. Soil Figures

B.2.a. Pre-remedial Soil Contamination

B.2.b. Post-remedial soil contamination-not attached because there were no post samples taken

B.2.c. Pre-post remaining soil contamination

B.3. Groundwater Figures

B.3.a. Geologic Cross Section Figures

B.3.b. Groundwater Isoconcentration

B.3.c. Groundwater Flow Direction

B.3.d. Monitoring Wells

Vapor Maps and Other Media

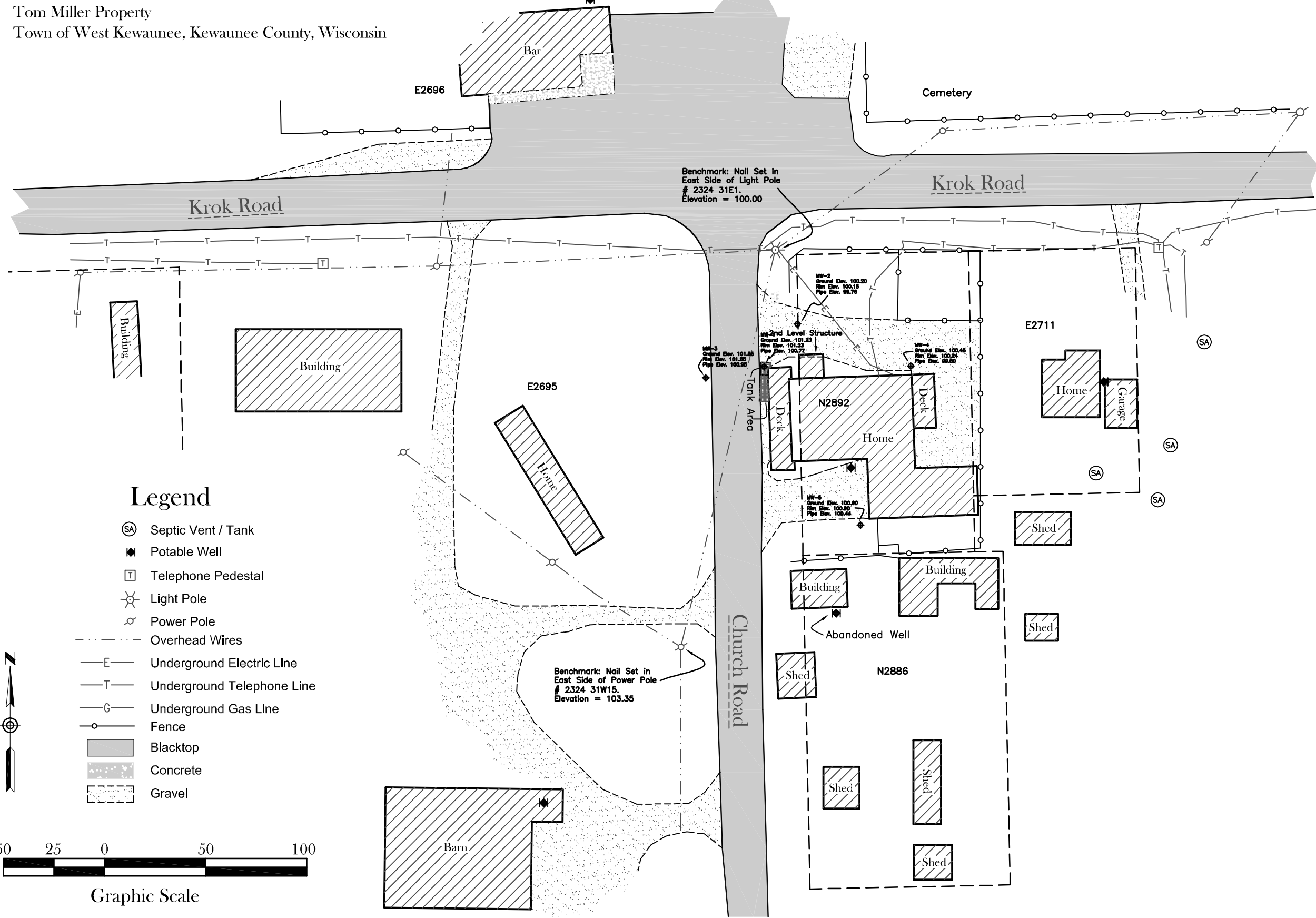
B.4.a Vapor Intrusion Map

B.4.b. Other Media of Concern- not attached because there is no other media of concern

B.4.c. Other-N/A

Figure B.1.b Detailed Site Map

Tom Miller Property
Town of West Kewaunee, Kewaunee County, Wisconsin



Sheet One of Three
Project No. 0315-01-10
Drawing No. 385

Scale:
1"=50'

Client: Tom Miller
Drafted By: BJL
Tax Parcel No.: 020-00031-0100

Mach IV
Engineering & Surveying LLC
211 N. Broadway, Suite 114, Green Bay, WI
PH: 920-366-3763 Fax: 920-366-3767



B.1.c RR Site Map



Legend

- Open Site (ongoing cleanup)
- Closed Site (completed cleanup)
- Rivers and Streams
- Open Water
- Cities
- Villages

Notes

0.1 0 0.06 0.1 Miles

NAD_1983_HARN_Wisconsin_TM

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1: 4,002



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Note: Not all sites are mapped.

Figure B.2.a.1 Pre-remedial Soil Contamination - Benzene

Tom Miller Property
Town of West Kewaunee, Kewaunee County, Wisconsin

March 21, 2011

Krok Road

Sheet Three of Three
Project No.0315-01-10
Drawing No.385

Scale:
1"=20'

Client: Tom Miller
Drafted By: BJL
Tax Parcel No.: 020-00031-0100

Mach IV
Engineering & Surveying LLC
211 N. Broadway, Suite 114, Green Bay, WI
PH: 920-509-5763 Fax: 920-509-5767

Legend

- ⊕ SA Septic Vent / Tank
- ⊕ Well Potable
- ⊕ Telephone Pedestal
- ⊕ Light Pole
- ⊕ Power Pole
- Overhead Wires
- E- Underground Electric Line
- T- Underground Telephone Line
- G- Underground Gas Line
- Fence
- Blacktop
- Concrete
- Gravel
- ⊕ Monitoring Well Location
- Ground Probe Location
- (###) Benzene Concentration ppb
- RCL Exceedance

Graphic Scale

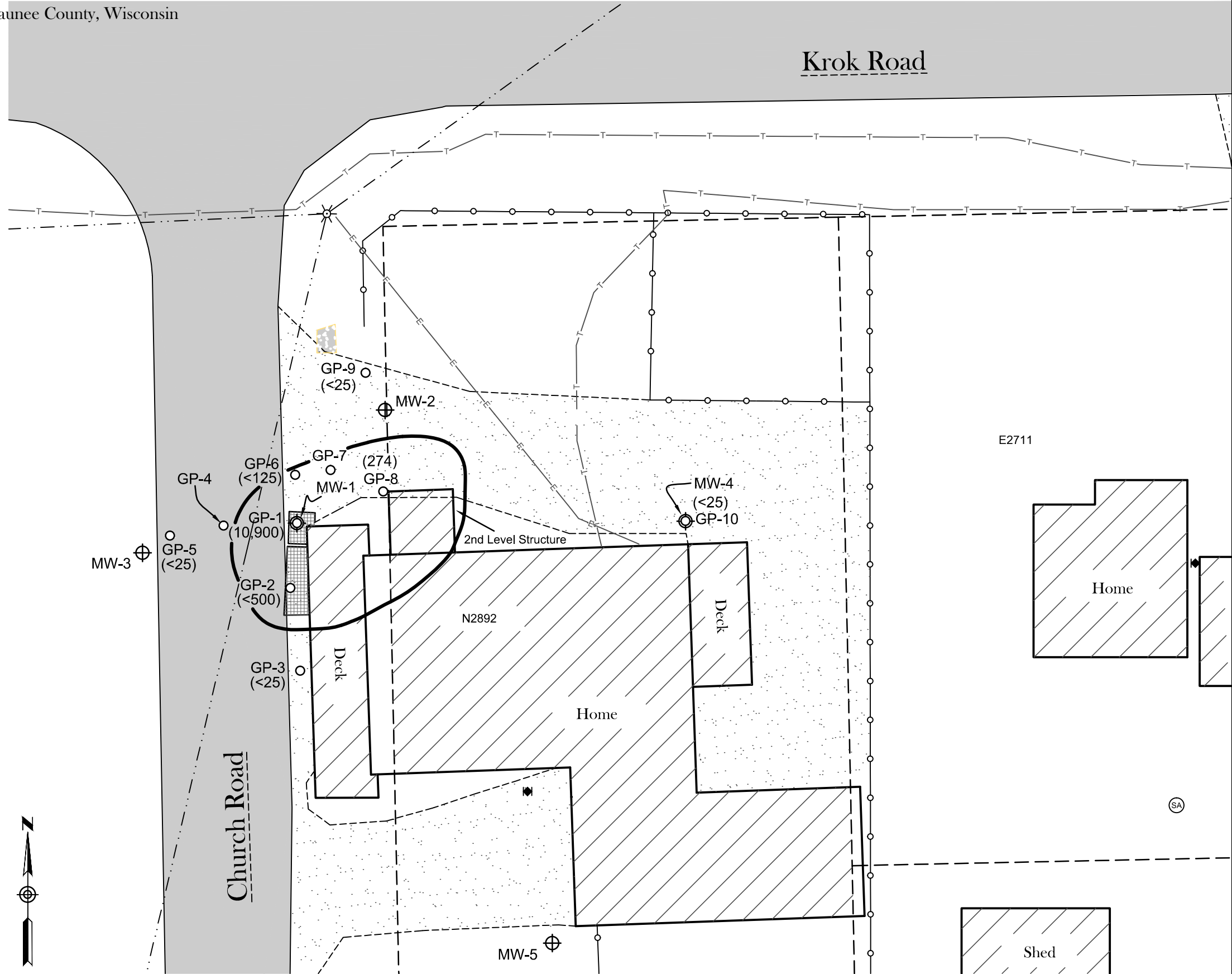


Figure B.2.a.2 Pre-remedial Soil Contamination - Xylene

March 21, 2011

Tom Miller Property
Town of West Kewaunee, Kewaunee County, Wisconsin

Krok Road

Sheet Three of Three
Project No.0315-01-10
Drawing No.385

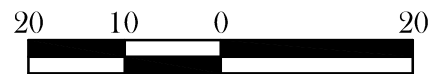
Scale:
1"=20'

Client: Tom Miller
Drafted By: BJL
Tax Parcel No.: 020-00031-0100

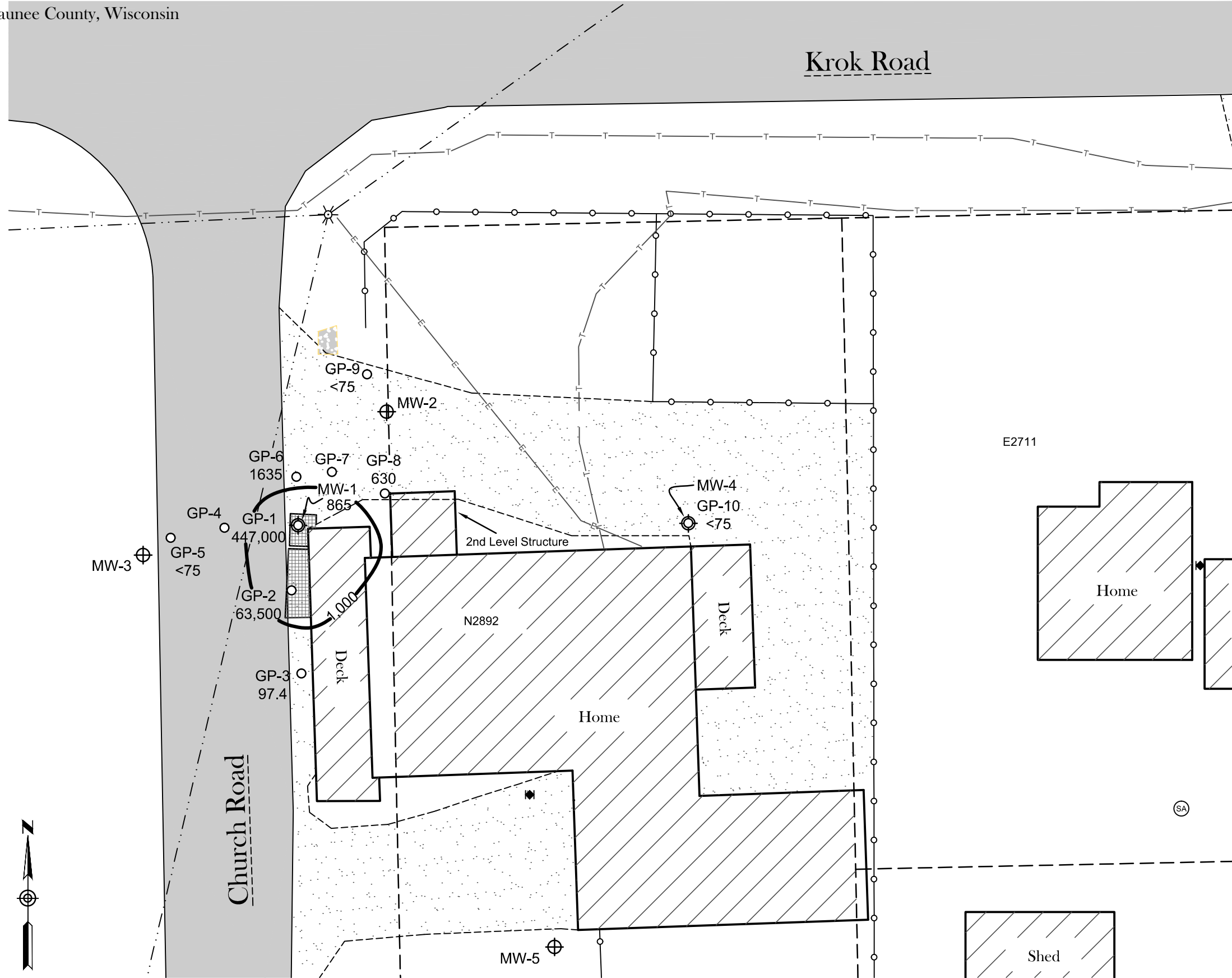
Mach IV
Engineering & Surveying LLC
211 N. Broadway, Suite 114, Green Bay, WI
PH: 920-509-5763 Fax: 920-509-5767

Legend

- ⊙(S) Septic Vent / Tank
 - ⊕ Well Potable
 - ⊠ Telephone Pedestal
 - ⊙ Light Pole
 - ⊕ Power Pole
 - Overhead Wires
 - E- Underground Electric Line
 - T- Underground Telephone Line
 - G- Underground Gas Line
 - Fence
 - Blacktop
 - ▨ Concrete
 - ▨ Gravel
 - ⊕ Monitoring Well Location
 - Ground Probe Location
- 63,500 Xylenes Concentration ppb



Graphic Scale



E2711

N2892

Church Road

Home

Home

Shed

2nd Level Structure

Deck

Deck

GP-6
1635

GP-7
865

GP-8
630

GP-4
<75

GP-1
447,000

GP-2
63,500

GP-3
97.4

MW-3

MW-2

GP-9
<75

MW-4
GP-10
<75

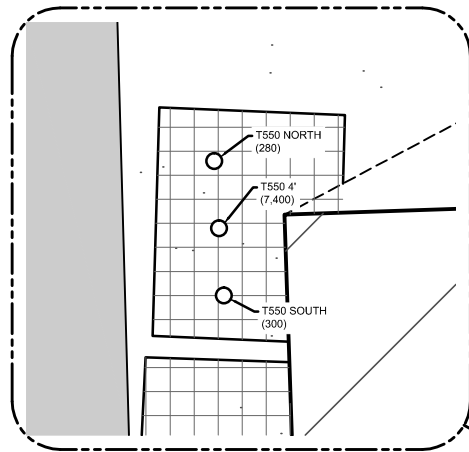
MW-5

Figure B.2.a.3 Pre-remedial Soil Contamination (Tank Pull) - GRO

Tom Miller Property
Town of West Kewaunee, Kewaunee County, Wisconsin

March , 2016

Krok Road



Sheet Three of Three
Project No.0315-01-10
Drawing No.385

Scale:
1"=20'

Client: Tom Miller
Drafted By: BJL
Tax Parcel No.: 020-00031-0100

Mach IV
Engineering & Surveying LLC
211 N. Broadway, Suite 114, Green Bay, WI
PH: 920-509-5763 Fax: 920-509-5767

Legend

- ⊙(SA) Septic Vent / Tank
 - ⊕ Well Potable
 - ⊠ Telephone Pedestal
 - ⊙ Light Pole
 - ⊙ Power Pole
 - Overhead Wires
 - E- Underground Electric Line
 - T- Underground Telephone Line
 - G- Underground Gas Line
 - Fence
 - Blacktop
 - ▨ Concrete
 - ▨ Gravel
 - ⊕ Monitoring Well Location
 - Ground Probe Location
- (7,400) GRO Concentration ppm

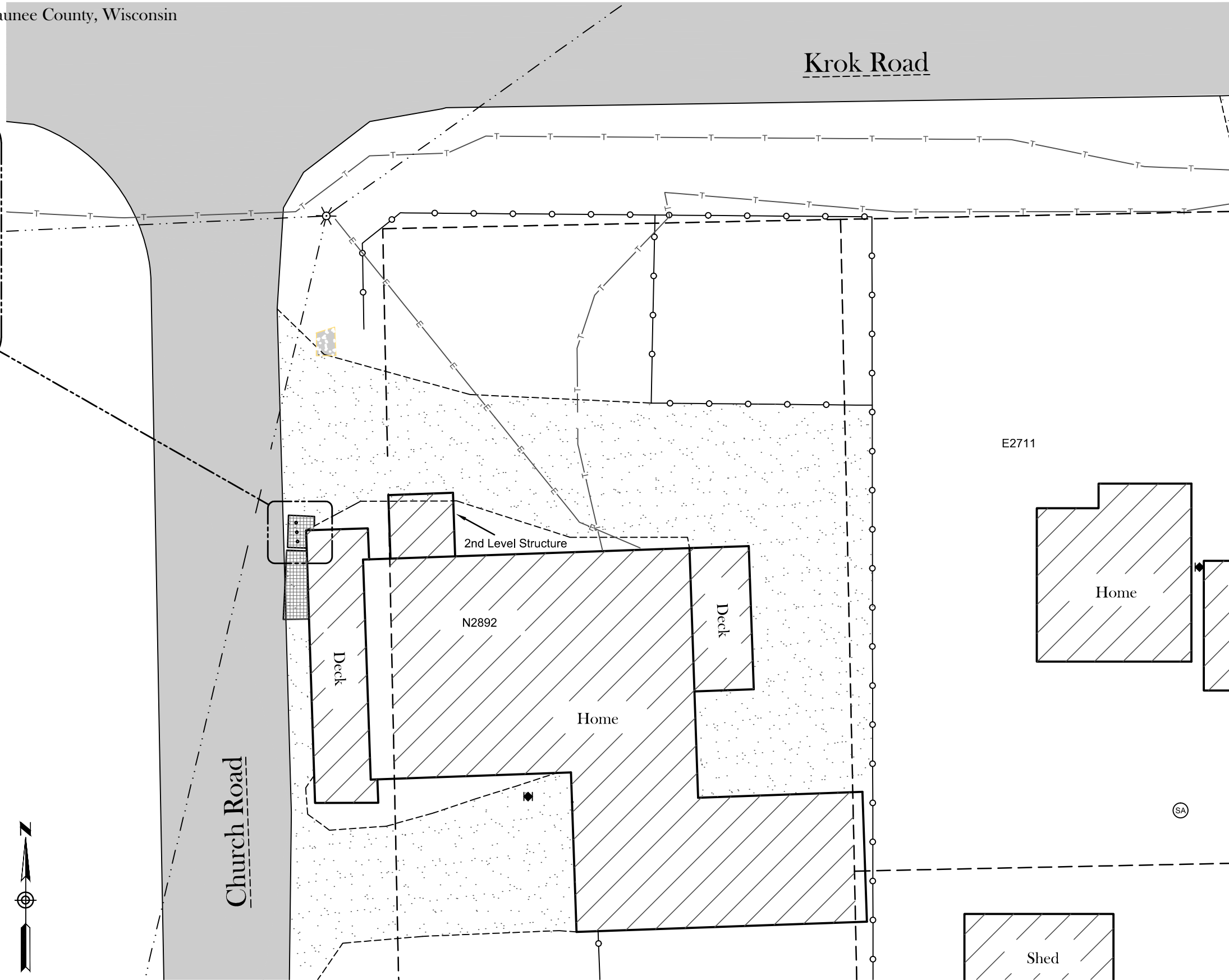
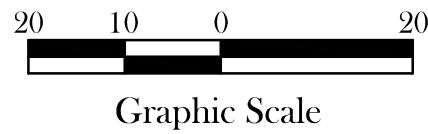


Figure B.2.c Pre / Post Remaining Soil Contamination

March 21, 2011

Tom Miller Property
Town of West Kewaunee, Kewaunee County, Wisconsin

Krok Road

MONITORING WELL INFORMATION

MONITORING WELL #1

Ground Elevation = 101.23
Rim Elevation = 101.23
Pipe Elevation = 100.77

MONITORING WELL #2

Ground Elevation = 100.20
Rim Elevation = 100.15
Pipe Elevation = 99.76

MONITORING WELL #3

Ground Elevation = 101.55
Rim Elevation = 101.55
Pipe Elevation = 100.95

MONITORING WELL #4

Ground Elevation = 100.45
Rim Elevation = 100.24
Pipe Elevation = 99.80

MONITORING WELL #5

Ground Elevation = 100.90
Rim Elevation = 100.90
Pipe Elevation = 100.44

Legend

⊕ SA Septic Vent / Tank

Well Potable

□ Telephone Pedestal

⊙ Light Pole

⊙ Power Pole

— Overhead Wires

E— Underground Electric Line

T— Underground Telephone Line

G— Underground Gas Line

○ Fence

■ Blacktop

□ Concrete

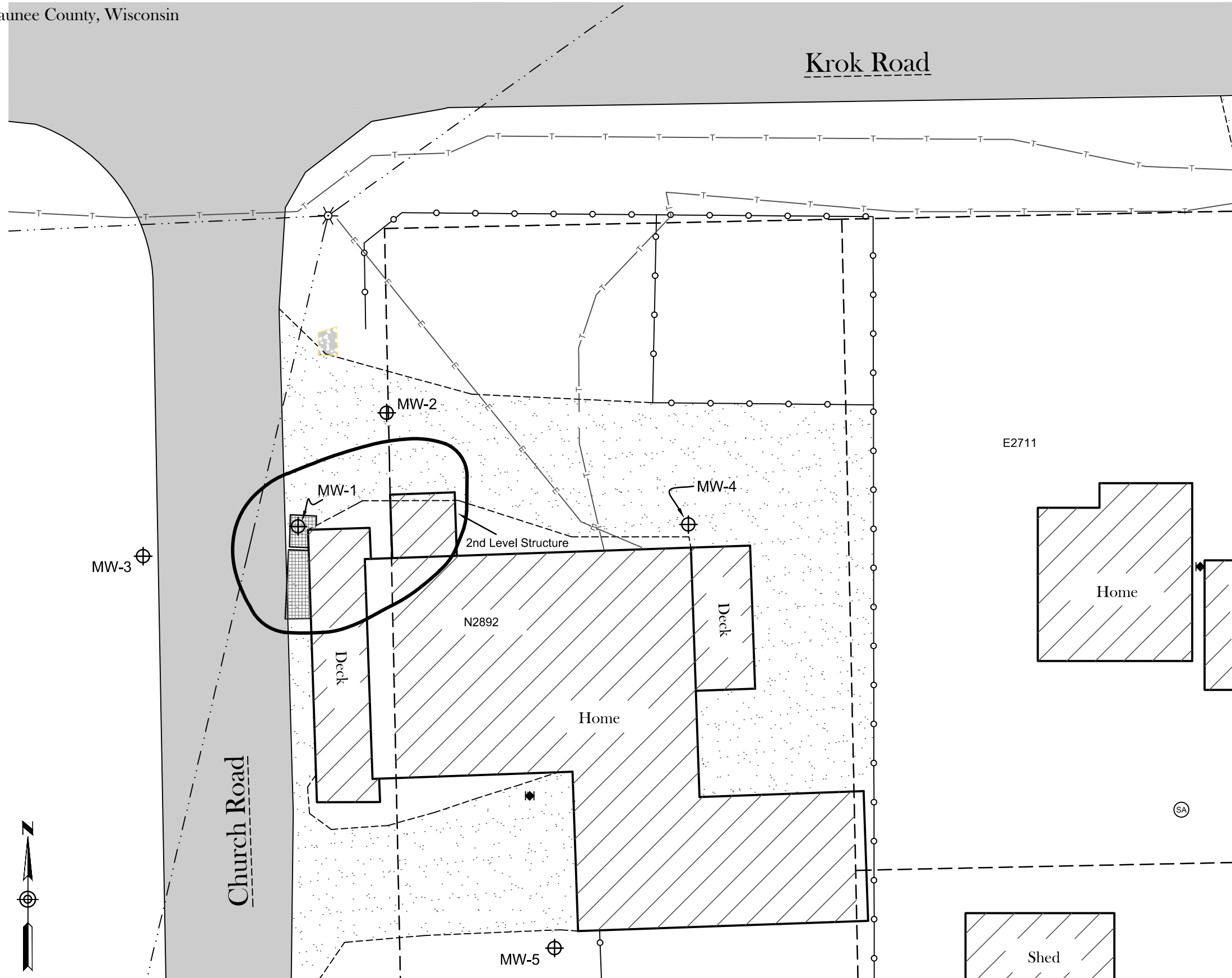
□ Gravel

⊕ Monitoring Well Location

— Groundwater RCL Exceedance



Graphic Scale



Sheet Three of Three
Project No.0315-01-10
Drawing No.385

Scale:
1"=20'

Client: Tom Miller
Drafted By: BJL
Tax Parcel No.: 020-00031-0100

Mach IV
Engineering & Surveying LLC
211 N. Broadway, Suite 114, Green Bay, WI
PH: 920-509-5763 Fax: 920-509-5767

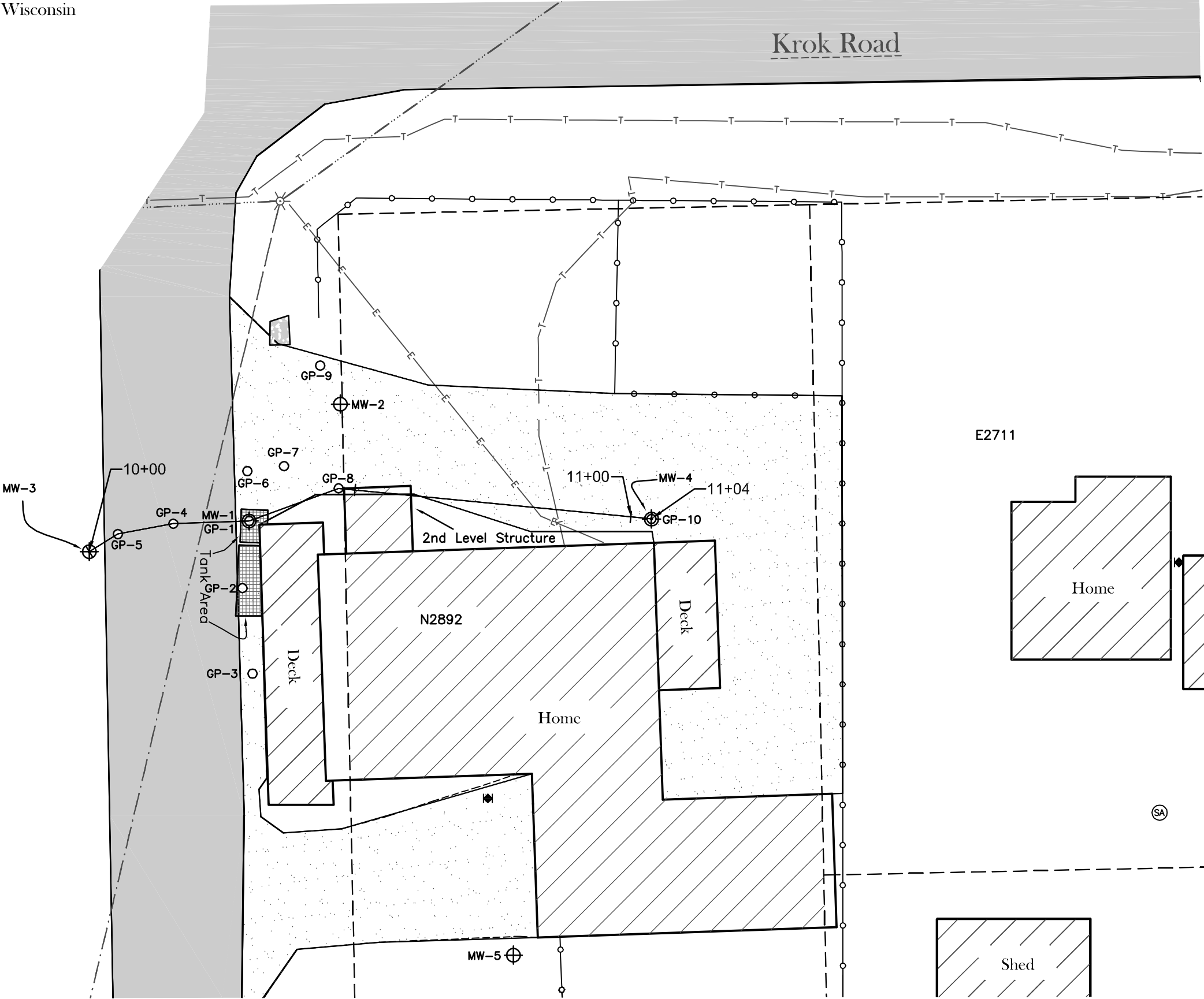
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Figure B.3.a.1 Geologic Cross Section Location

November 18, 2010

Tom Miller Property
Town of West Kewaunee, Kewaunee County, Wisconsin

Krok Road



Legend

- Ground Probe Location
- ⊕ Monitoring Well Location



Graphic Scale

Sheet Three of Three
Project No.0315-01-10
Drawing No.385

Scale:
H: 1"=20'

Client: Tom Miller
Drafted By: BJL
Tax Parcel No.: 020-00031-0100

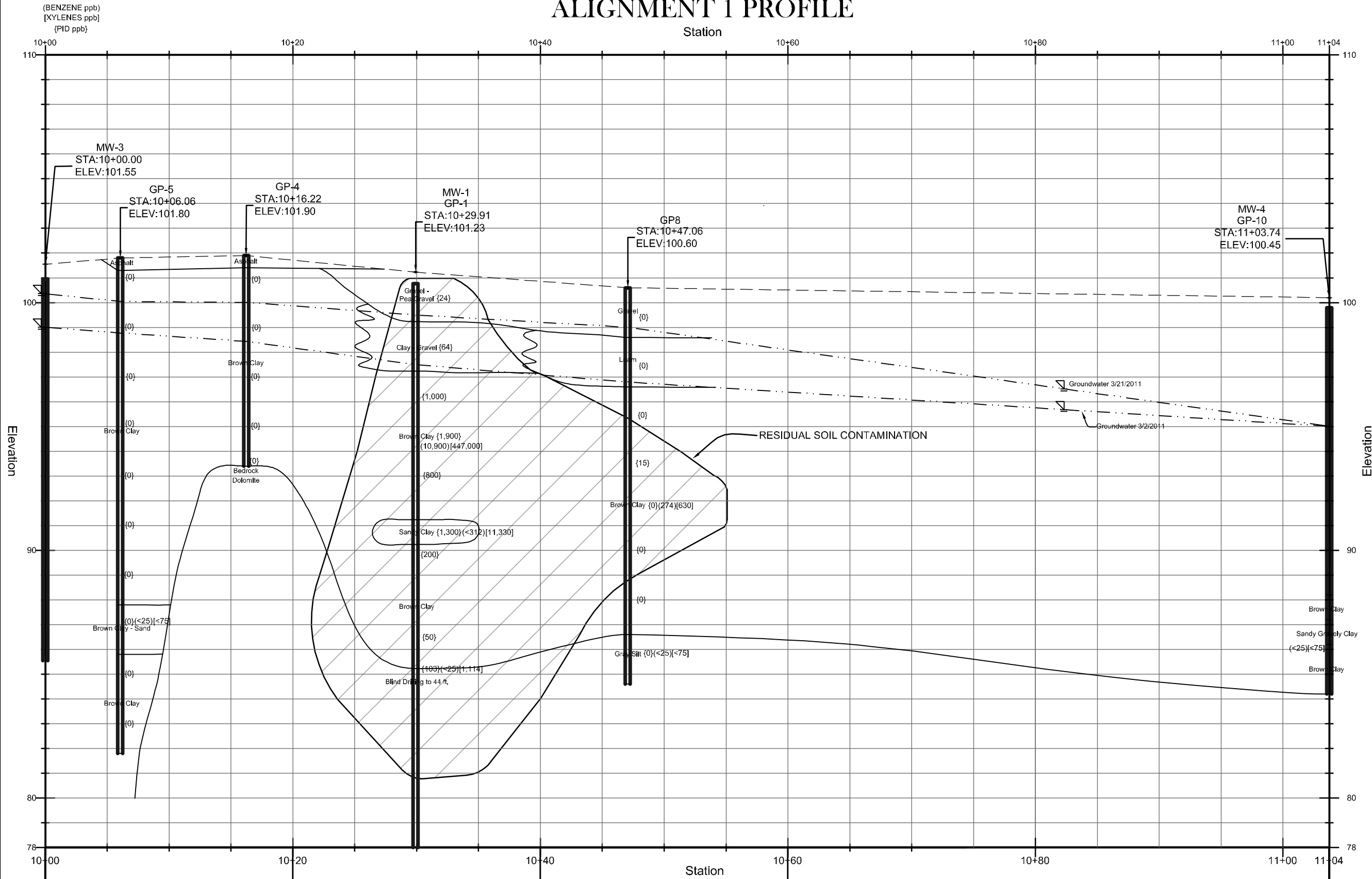
Mach IV
Engineering & Surveying LLC
217 N. Broadway, Suite 114, Green Bay, WI
PH: 920-509-5765 Fax: 920-509-5767

Tom Miller Property
Town of West Kewaunee, Kewaunee County, Wisconsin

Figure B.3.a.2 Geologic Cross Section

November 18, 2010

ALIGNMENT 1 PROFILE



Sheet Three of Three
Project No.0315-01-10
Drawing No.385

Scale:
H: 1"=40'
V: 1"=80'

Client: Tom Miller
Drafted By: BJL
Tax Parcel No.: 020-00031-0100

Mach IV
Engineering & Surveying LLC
217 N. Broadway, Suite 114, Green Bay, WI
PH: 920-509-5765 Fax: 920-509-5767

Figure B.3.b Groundwater Isoconcentration

March 21, 2011

Tom Miller Property
Town of West Kewaunee, Kewaunee County, Wisconsin

Krok Road

MONITORING WELL INFORMATION

MONITORING WELL #1

Ground Elevation = 101.23
Rim Elevation = 101.23
Pipe Elevation = 100.77

MONITORING WELL #2

Ground Elevation = 100.20
Rim Elevation = 100.15
Pipe Elevation = 99.76

MONITORING WELL #3

Ground Elevation = 101.55
Rim Elevation = 101.55
Pipe Elevation = 100.95

MONITORING WELL #4

Ground Elevation = 100.45
Rim Elevation = 100.24
Pipe Elevation = 99.80

MONITORING WELL #5

Ground Elevation = 100.90
Rim Elevation = 100.90
Pipe Elevation = 100.44

Legend

⊕ SA Septic Vent / Tank

⊕ Well Potable

⊕ Telephone Pedestal

⊕ Light Pole

⊕ Power Pole

— Overhead Wires

— E Underground Electric Line

— T Underground Telephone Line

— G Underground Gas Line

○ Fence

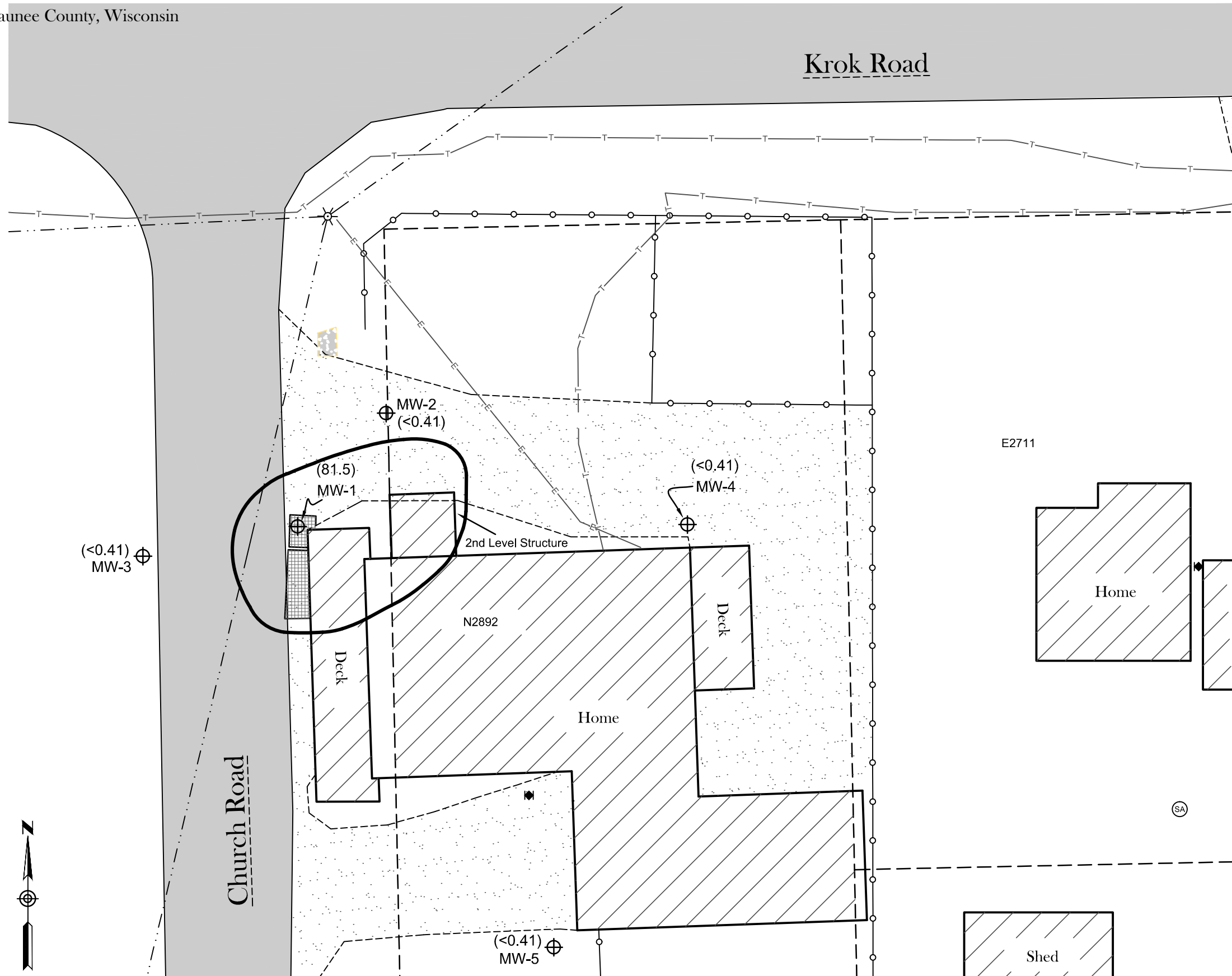
■ Blacktop

■ Concrete

■ Gravel

⊕ Monitoring Well Location

— ES Exceedance



Sheet Three of Three
Project No.0315-01-10
Drawing No.385

Scale:
1"=20'

Client: Tom Miller
Drafted By: BJL
Tax Parcel No.: 020-00031-0100

Mach IV
Engineering & Surveying LLC
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PH: 920-509-5763 Fax: 920-509-5767

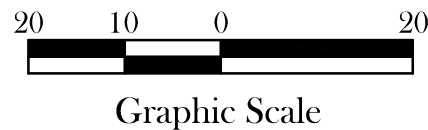


Figure B.3.c Groundwater Flow Direction

March 14, 2014

Tom Miller Property
N2892 Church Rd
Town of West Kewaunee, Kewaunee County, Wisconsin

Krok Road

MONITORING WELL INFORMATION

MONITORING WELL #1

Ground Elevation = 101.23
Rim Elevation = 101.23
Pipe Elevation = 100.77

MONITORING WELL #2

Ground Elevation = 100.20
Rim Elevation = 100.15
Pipe Elevation = 99.76

MONITORING WELL #3

Ground Elevation = 101.55
Rim Elevation = 101.55
Pipe Elevation = 100.95

MONITORING WELL #4

Ground Elevation = 100.45
Rim Elevation = 100.24
Pipe Elevation = 99.80

MONITORING WELL #5

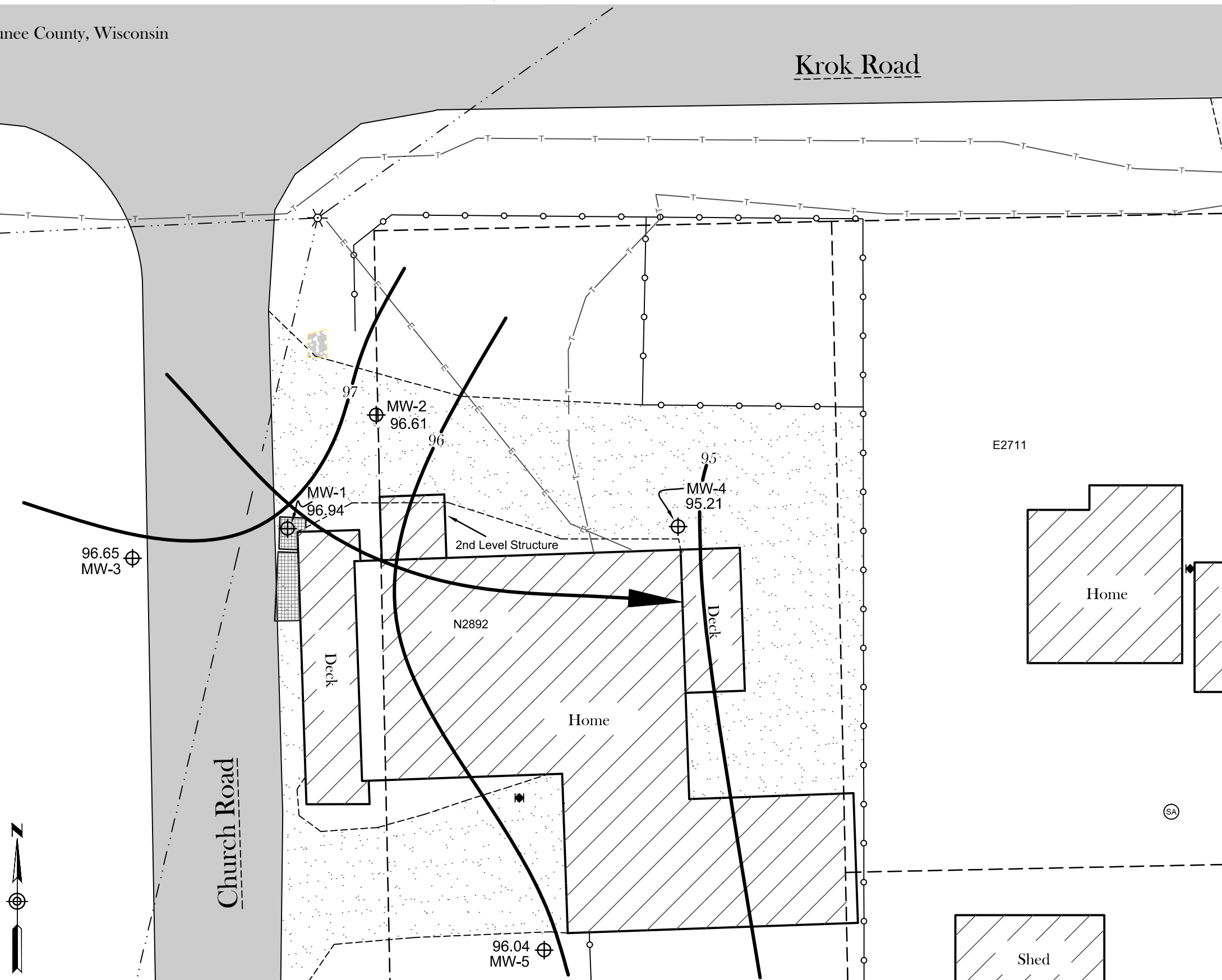
Ground Elevation = 100.90
Rim Elevation = 100.90
Pipe Elevation = 100.44

Legend

- ⊕ SA Septic Vent / Tank
- ⊕ Well Potable
- ⊕ Telephone Pedestal
- ⊕ Light Pole
- ⊕ Power Pole
- Overhead Wires
- E- Underground Electric Line
- T- Underground Telephone Line
- G- Underground Gas Line
- Fence
- Blacktop
- Concrete
- Gravel
- ⊕ Monitoring Well Location
- 97.65 Groundwater Elevation
- ◆ Portable Well Location
- Former Gasoline UST Location



Graphic Scale



Sheet Four of Four
Project No.0315-01-10
Drawing No.925

Scale:
1"=20'

Client: Tom Miller
Drafted By: BJL
Tax Parcel No.: 020-00031-0100

Mach IV
Engineering & Surveying LLC
211 N. Broadway, Suite 114, Green Bay, WI
PH: 920-509-5763 Fax: 920-509-5767

Figure B.3.d Monitoring Wells

March 14, 2014

Tom Miller Property
N2892 Church Rd
Town of West Kewaunee, Kewaunee County, Wisconsin

Krok Road

MONITORING WELL INFORMATION

MONITORING WELL #1

Ground Elevation = 101.23
Rim Elevation = 101.23
Pipe Elevation = 100.77

MONITORING WELL #2

Ground Elevation = 100.20
Rim Elevation = 100.15
Pipe Elevation = 99.76

MONITORING WELL #3

Ground Elevation = 101.55
Rim Elevation = 101.55
Pipe Elevation = 100.95

MONITORING WELL #4

Ground Elevation = 100.45
Rim Elevation = 100.24
Pipe Elevation = 99.80

MONITORING WELL #5

Ground Elevation = 100.90
Rim Elevation = 100.90
Pipe Elevation = 100.44

Legend

⊕ SA Septic Vent / Tank

Well Potable

□ Telephone Pedestal

⊙ Light Pole

⊙ Power Pole

--- Overhead Wires

-E- Underground Electric Line

-T- Underground Telephone Line

-G- Underground Gas Line

○ Fence

■ Blacktop

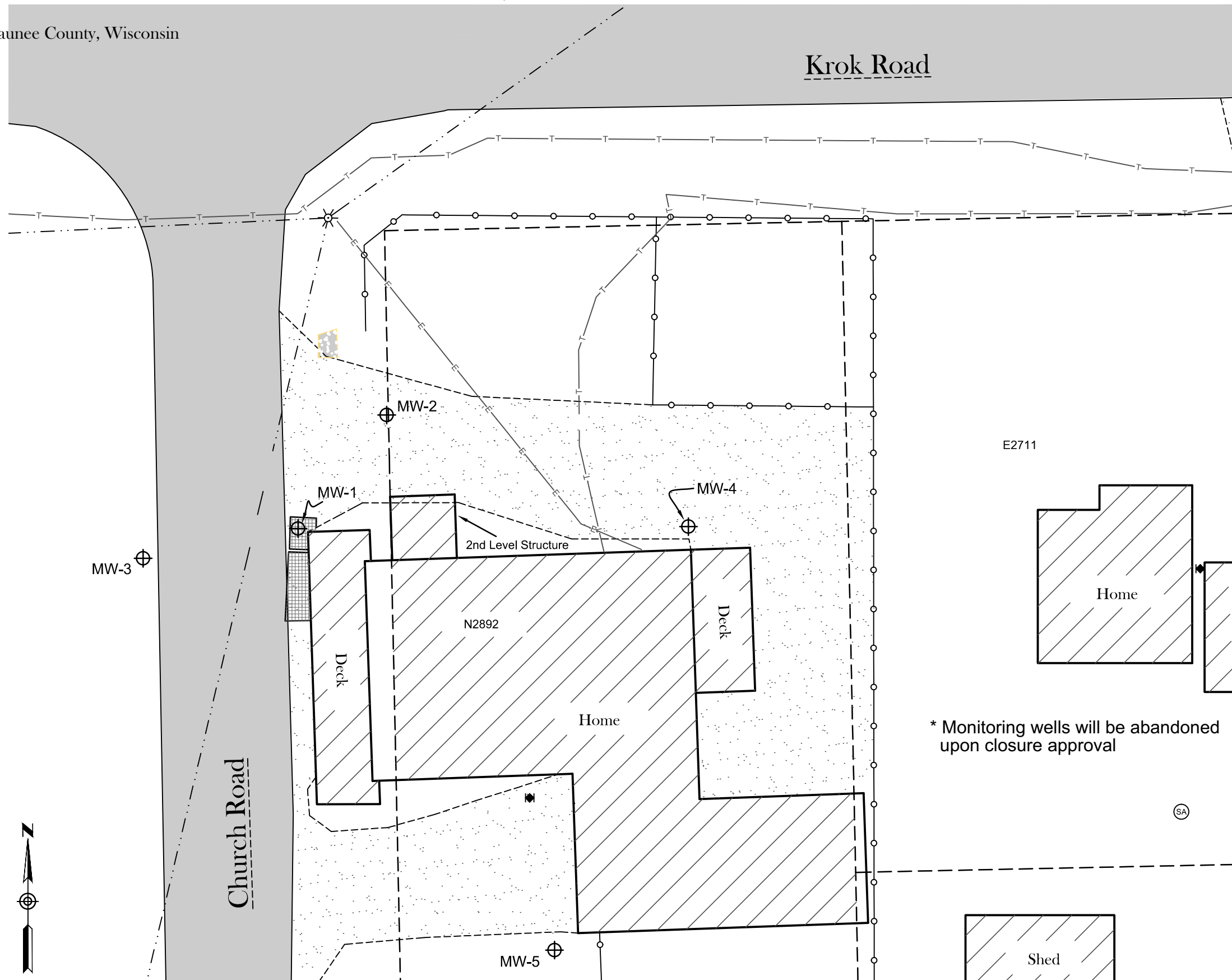
□ Concrete

□ Gravel

⊕ Monitoring Well Location



Graphic Scale



Sheet Four of Four
Project No.0315-01-10
Drawing No.925

Scale:
1"=20'

Client: Tom Miller
Drafted By: BJL
Tax Parcel No.: 020-00031-0100

Mach IV
Engineering & Surveying LLC
211 N. Broadway, Suite 114, Green Bay, WI
PH: 920-509-5763 Fax: 920-509-5767

Figure B.4.a Vapor Intrusion Map

March 14, 2014

Tom Miller Property
N2892 Church Rd
Town of West Kewaunee, Kewaunee County, Wisconsin

Krok Road

MONITORING WELL INFORMATION

MONITORING WELL #1

Ground Elevation = 101.23
Rim Elevation = 101.23
Pipe Elevation = 100.77

MONITORING WELL #2

Ground Elevation = 100.20
Rim Elevation = 100.15
Pipe Elevation = 99.76

MONITORING WELL #3

Ground Elevation = 101.55
Rim Elevation = 101.55
Pipe Elevation = 100.95

MONITORING WELL #4

Ground Elevation = 100.45
Rim Elevation = 100.24
Pipe Elevation = 99.80

MONITORING WELL #5

Ground Elevation = 100.90
Rim Elevation = 100.90
Pipe Elevation = 100.44

Legend

⊕ SA Septic Vent / Tank

Well Potable

□ Telephone Pedestal

⊙ Light Pole

⊙ Power Pole

--- Overhead Wires

-E- Underground Electric Line

-T- Underground Telephone Line

-G- Underground Gas Line

○ Fence

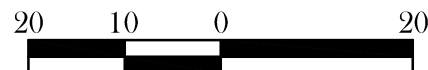
■ Blacktop

▨ Concrete

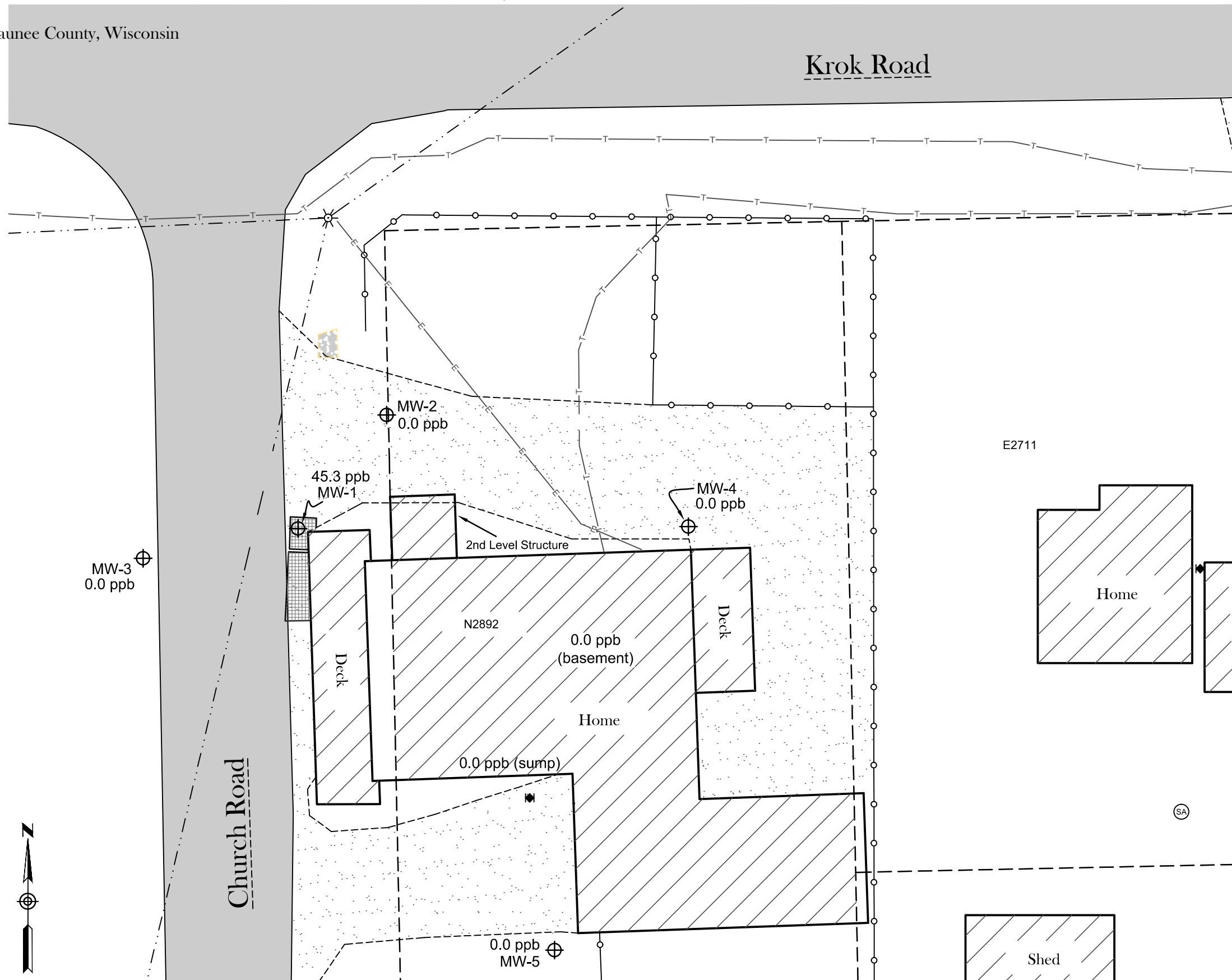
▨ Gravel

⊕ Monitoring Well Location

○ 0.0 ppb Vapor Samples (PID)



Graphic Scale



Sheet Four of Four
Project No.0315-01-10
Drawing No.925

Scale:
1"=20'

Client: Tom Miller
Drafted By: BJL
Tax Parcel No.: 020-00031-0100

Mach IV
Engineering & Surveying LLC
211 N. Broadway, Suite 114, Green Bay, WI
PH: 920-509-5763 Fax: 920-509-5767

Attachment C: Additional Site Investigation Documentation

- C.1. Site Investigation Documentation**
- C.2. Investigative Waste**
- C.3. Methodology**
 - Residual Contaminant levels are the same as those in the Department RCL spreadsheet
- C.4. Construction Documentation-**
 - not attached because there were no remedial or interim actions constructed on the site
- C.5. Decommissioning of Remedial Systems**
 - There were no remedial systems on the site, therefore decommissioning was not completed
- C.6. Photos**
- C.7. Other**
 - N/A

ATTACHMENT C.1 Additional Site Investigation Documentation

There is no additional site investigation documentation. All documentation has already been submitted.

ATTACHMENT C.2 Investigative Waste Documentation

LINCOLN COUNTY LANDFILL 715-536-9636
N4750 Landfill Lane, Merrill, WI 54452

Operating Hours Monday-Friday SUMMER (May 1 - Sept. 30) 7:00 am - 4:00 pm
WINTER (Oct. 1 - Apr. 30) 8:00 am - 4:00 pm
1st and 3rd Sat. 8:00 am - Noon

DATE: 5/26/2011 TICKET #: 131246 Vehicle #:
Time In: 12:18 PM Time Out: 01:21 PM
BILL TO: SGS Environmental Contracting, LLC HAULER: SGS Environmental Contracting, LLC
JOB : 11-27 B - Mach Four - Kewaunee

23.00 ton exempt (CON31) 1.79 tn
Gross: 12460 Tare: 8880 Net Weight: 3580

Scale Notes:

HAVE A NICE DAY!

Charge Transaction

Customer Signature  Weighed By: Administrator
I certify that the waste in this vehicle complies with the Wisconsin Recycling Law and the landfill bans. I also agree to pay 1.5% per month Late payment charge after 30 days.

**Lincoln County Solid Waste Facility
Petroleum Contaminated Soil Profile Form**

Responsible Party

Name Mach IV Engineering & Surveying, LLC
Site Address N2892 Church Rd
City, State, Zip Kewaunee, WI 54216
Contact Chad M. Fradette
Phone (920) 569-5765
FAX (920) 569-5767
E-mail cfradette@mach-iv.com

Billing Information

Name SGS Environmental Contracting, LLC
Address N2570 Daytona Drive
City, State, Zip Merrill, WI 54452
Contact Jay Schlueter
Phone (715) 539-2803
FAX (715) 539-2661
E-mail jschlueter@hughes.net

Type of Contamination (Please circle all that apply)

Leaded Gasoline Gasoline Diesel Fuel Oil Waste Oil
Chlorinated Organics Other (Explain) _____

Soil Classification (Please circle the most representative soil type)

Sand Silty Sand Silty Clay Clay
Other (Explain) _____

Estimated volume of soil 100 Circle Cubic Yards or Tons

Circle Source of Contamination: Underground Storage Tank

Aboveground Storage Tank Spill
Other (explain) _____

Average Soil Concentration GRO 3,070 mg/kg DRO N/A mg/kg
BTEX 397 mg/kg Lead 19.1 mg/kg Other N/A mg/kg
Circle Analytical Attached Yes No

Do you have an up-to-date charge account with Lincoln County Solid Waste Facility

Circle Yes or No or circle payment plan approved with Manager Yes No

Waste Limitations, Lincoln County Solid Waste Facility will not accept any of the following:

1. This waste is not a hazardous waste as defined in Wisconsin Administrative Code NR 605 of 40 CFR 261.
2. This waste does not contain regulated quantities of PCB's.
3. This waste does not contain regulated quantities of herbicides or pesticides.
4. This waste does not contain regulated quantities of solvents as specified in Wisconsin Administrative Code NR 605.
5. This waste does not contain infectious waste as defined in Wisconsin Administrative Code NR 526.
6. All information submitted in this and all attached documents contains true and accurate descriptions of this waste. All relevant information regarding or suspect hazards in the possession of the generator has been disclosed.

Generators Signature Chad M. Fradette
Print Name Chad M. Fradette

Title Dir of Environmental Svcs.
Date 06/01/2011

Lincoln County Solid Waste Facility • N4750 Landfill Lane • Merrill, WI 54452 •
Tel (715) 536-9636 • Fax (715) 536-6361

For office use only:
Bio pile

Daily cover

ATTACHMENT C.6 Photos



Overview of Miller Property, Town of West Kewaunee



Location of former LUST beds. Impacted ROW area to right of tank beds.



Subject site potable well (in front of back stairs)



Location of MW-1 (just to right of deck stairs)



Location of MW-2 (between fencepost and driveway)



Location of MW-3 (adjacent to Church Road)



Location of MW-4 (immediately left of fishing net)



Location of MW-5 (adjacent to garage corner)

Site Photographs
Miller Property

March 21, 2011
Mach IV Engineering & Surveying, LLC

Attachment D: Maintenance Plan

Cap barrier is not needed for groundwater protection. The majority of the surface cover over the contaminant area appears to be pervious (gravel, soil, deck). Cap not needed for direct contact protection as there are not direct contact exceedances from 0 to 4 feet bgs.

Attachment E: Monitoring Well Information

All monitoring wells have been located and will be properly abandoned upon closure approval

Attachment F: Notifications to Owners of Impacted Properties

ATTACHMENT F. Notifications to Owners of Impacted Properties

The RP is the owner of the Site. The contamination has migrated underneath Church Road adjacent to the northwest corner of the structure, and the Town of West Kewaunee was notified. The contamination has not migrated onto any other property, therefore no additional notifications were required for the Site.

Attachment G: Deeds

G.1. Deed

G.2. Certified Survey Map

G.3. Verification of Zoning

G.4. Signed Statement



402219

QUIT CLAIM DEED
DO NOT PUBLISH

Document Number

Return Address
Messmann Law Office
213 Ellis St.
Kewaunee, WI 54216

RECEIVED FOR RECORD
02/16/2005 8:03:38 AM
MARILYN G. MUELLER
REGISTER OF DEEDS, KEWAUNEE COUNTY WISCONSIN
RECEIPT# 18963, STATION 1
\$11.00 RECORDED DOCUMENT

Parcel I.D. Number: 31 020 31.022

THIS DEED, made between Thomas R. Miller, Jr. and Lissa A. Miller, Grantors, and Thomas R. Miller, Jr. Grantee. Grantors quit-claim to Grantee the following described real estate in Kewaunee County, State of Wisconsin:

A tract of land in the Northwest Quarter (NW1/4) of the Northeast Quarter (NE1/4) of Section Thirty-one (31), Township Twenty-three (23) North, Range Twenty-four (24) East, in the Town of West Kewaunee, Kewaunee County, Wisconsin, more particularly described as follows: Commencing at the North Quarter corner of said Section Thirty-one (31), which is marked by a Kewaunee County Monument and is the point of real beginning, thence South along the Quarter section line One Hundred Eighty-one and 65/100 (181.65) feet, thence South 89° 57' 00" East One Hundred Eighteen and 00/00 (118.00) feet, thence North One Hundred Eighty-one and 65/100 (181.65) feet to the section line, thence North 89° 57' 00" West along the section line One Hundred Eighteen and 00/100 (118.00) feet to the point of real beginning.

Together with all appurtenant rights, title and interests. Further, by signing this deed, Lissa A. Miller releases any and all right, claim, title or interest, including marital property interest she may have to the property herein conveyed. In the event the parties to this deed shall divorce in the future, the property shall be considered the individual property of Thomas R. Miller, Jr., regardless of any appreciation in the value of the property and regardless of any contribution toward the property from marital assets or marital income in the form of mortgage payments, taxes or insurance or any other contributions of whatever nature of kind, regardless of when such appreciation or contribution occurred.

RENTAL WEATHERIZATION EXCLUSION CODE W-3
TRANSFER TAX EXEMPT 77.25(8m)

This is homestead property.

Dated this 11th day of February, 2005.

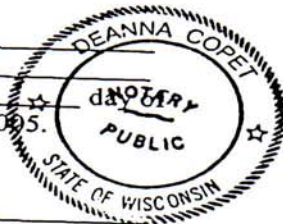
Thomas R. Miller, Jr.
Thomas R. Miller, Jr.

Lissa A. Miller
Lissa A. Miller

AUTHENTICATION

Signature(s) _____

authenticated this 11th day of February, 2005.



ACKNOWLEDGMENT

STATE OF WISCONSIN)
) SS
Kewaunee COUNTY)

Personally came before me this 11th day of February, 2005, the above named Thomas R. Miller, Jr. and Lissa A. Miller

to me known to be the person(s) who executed the foregoing instrument and acknowledge the same.

Deanna Copet
Deanna Copet
Notary Public Kewaunee County, WI
My commission expires: 1-11-09

TITLE: MEMBER STATE BAR OF WISCONSIN

THIS INSTRUMENT WAS DRAFTED BY ATTORNEY DOUGLAS J. MESSMANN

20

ATTACHMENT G.2 Certified Survey Map

ATTACHMENT G.2 Certified Survey Map

The Site location was not located within a Certified Survey Map.

ATTACHMENT G.3 Verification of Zoning

The zoning is A2 (Agricultural rural residential) according to a phone conversation with Edith Lauscher, Zoning Administrator for the Town of West Kewaunee on August 28, 2013, 2:10pm.

ATTACHMENT G.4 Signed Statement

ASSIGNMENT CERTIFICATION

I, **THOMAS R MILLER JR**, assign to **MACH IV ENGINEERING & SURVEYING LLC**, the right to act as my agent and to submit a claim on my behalf, for the purposes of a petroleum storage remedial action award under section 101.143 of the Wisconsin State Statutes for eligible costs of remedial action activities at **MILLER PROPERTY N2892 CHURCH RD KEWAUNEE, WI** in response to the petroleum product discharge that was reported in accordance with section 101.143 (3) (a) 5 and 292.11 of the Wisconsin State Statutes to the Department of Natural Resources on **FEBRUARY 21, 2006**.

Signatures:

MACH IV ENGINEERING & SURVEYING LLC:

By: *Robert A. Mack*

THOMAS R MILLER JR:

By: *Thomas R Miller Jr*

MACH IV ENGINEERING & SURVEYING LLC and THOMAS R MILLER JR hereby execute this Agreement as of:
this 2nd day of SEPTEMBER, 2010.