

From: Chase Kresl <ckresl@reiengineering.com>
Sent: Thursday, May 11, 2023 4:14 PM
To: Schrank, Jayson S - DNR
Subject: RE: BRRTS #02-37-589640 Former Mall Parking Facility #1 Remaining Actions Needed
Attachments: B.2.b.pdf; B.3.a.pdf; MW-1A.pdf; MW-2A.pdf; 4400-202 printed.pdf; B.2.a.pdf
Follow Up Flag: Follow up
Flag Status: Flagged

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good afternoon Jayson,

Please see attached documentation for well abandonment as well as requested updates to closure packet. Please let me know if you have any questions or need anything else. If you could give a rough time frame for the final letter as well that would be much appreciated.

Thanks,

Chase

From: Schrank, Jayson S - DNR <jayson.schrank@wisconsin.gov>
Sent: Monday, May 1, 2023 9:36 PM
To: eric.lindman@ci.wausau.wi.us
Cc: Chase Kresl <ckresl@reiengineering.com>
Subject: BRRTS #02-37-589640 Former Mall Parking Facility #1 Remaining Actions Needed

CAUTION: External Email.

Good evening,

I apologize for the late email but I wanted to get this over to you both before I am out of the office intermittently this week. I spoke with Chase today to discuss closure has been approved of the site, but a few actions are needed to correct a few minor discrepancies:

1. Properly abandon all monitoring wells.
2. Update figures to reflect proper investigation areas.
3. Correct Continuing Obligations table #5, ii. & iv.

Attached is the Remaining Actions Needed letter for your records and reference. Updated figures and table can be sent to me via email. Please feel free to reach out with any questions!

Regards,
Jayson

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Jayson Schrank

Regional Spills Coordinator / Hydrogeologist
Remediation & Redevelopment Program
Wisconsin Dept. of Natural Resources
890 Spruce Street, Baldwin, WI 54002
Cell Phone: 715-410-8841

Jayson.Schrank@wisconsin.gov



dnr.wi.gov



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. 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.). Incomplete forms will be considered "administratively incomplete" and processing of the request will stop until required information is provided.

Site Information			
BRRTS No.	VPLE No.		
02-37-589640			
Parcel ID No.	291-2907-362-0284, 291-2907-362-0243		
FID No.	WTM Coordinates		
737258060	X 549,231	Y 498,311	
BRRTS Activity (Site) Name	WTM Coordinates Represent:		
Former Mall Parking Facility #1	<input checked="" type="checkbox"/> Source Area <input checked="" type="checkbox"/> Parcel Center		
Site Address	City	State	ZIP Code
120 Forest Street	Wausau	WI	54403
Acres Ready For Use	0.5		

Responsible Party (RP) Name			
Eric Lindman			
Company Name			
City of Wausau			
Mailing Address	City	State	ZIP Code
407 Grant Street	Wausau	WI	54403
Phone Number	Email		
(715) 261-6745	eric.lindman@ci.wausau.wi.us		

Check here if the RP is the owner of the source property.

Environmental Consultant Name			
Chase J. Kresl			
Consulting Firm			
REI Engineering, Inc			
Mailing Address	City	State	ZIP Code
4080 N 20th Avenue	Wausau	WI	54401
Phone Number	Email		
(715) 675-9784	ckresl@reiengineering.com		

Fees and Mailing of Closure Request

1. **Send a copy of page one** of this form and the applicable ch. NR 749, Wis. Adm. Code, fee(s) to the DNR Regional EPA (Environmental Program Associate) at <http://dnr.wi.gov/topic/Brownfields/Contact.html#tabx3>. Check all fees that apply:

- \$1,050 Closure Fee
- \$350 Database Fee for Groundwater or Monitoring Wells (Not Abandoned)
- \$300 Database Fee for Soil
- Total Amount of Payment \$ 1,700.00
- Resubmittal, Fees Previously Paid

2. **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 portion of the Site Summary Section is not relevant to the case closure request, you must fully explain the reasons why in the relevant section of the form. All information submitted shall be legible. Providing illegible information will 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.
120 Forest Street, City of Wausau, Marathon County, WI 54403 Property located in commercial area of City of Wausau and is surrounded by commercial properties and street right-of-ways.
- B. Prior and current site usage: Specifically describe the current and historic occupancy and types of use.
The site was developed for commercial/residential use prior to 1884 and included houses, saloons, laundry facilities, and an auto repair facility. The western portion of the property appears to have been used primarily for parking from 1938 to present day. The central portion of the property contained the 2nd Street right-of-way until it was abandoned for mall construction in 1983. The eastern portion of the property contained several commercial properties until 1983, at which time it was converted to use as a driveway/parking/loading area. The entire site is currently used as a driveway/parking/loading area.
- C. Current zoning (e.g., industrial, commercial, residential) for the site and for neighboring properties, and how verified (Provide documentation in Attachment G).
Property zoned as Planned Unit Development (PUD) by City of Wausau. Surrounding property use is Downtown Periphery Mixed Use (DPMU) to the south and west and PUD to the north and east. The City of Wausau Zoning Map is included in Attachment F.
- D. Describe how and when site contamination was discovered.
Based on results of the recent investigation at the adjacent Former Wausau Center Mall site, REI conducted oversight for advancement of eight (8) soil covering the entirety of the site on March 2, 2022. A total of twenty-four (24) soil samples were collected and submitted for laboratory analysis of Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), and Resource Conservation and Recovery Act (RCRA) list of metals which include Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver and Mercury. Analytical results were tabulated in comparison to state standards which revealed detections of contaminants in exceedance of state standards.

REI was authorized to notify the WDNR of the soil detections exceeding state standards. Notification was submitted on April 27, 2022. The WDNR issued a Responsible Party (RP) letter to the City of Wausau on June 13, 2022.
- E. Describe the type(s) and source(s) or suspected source(s) of contamination.
Due to observations of subsurface materials, the lack of apparent source, and generally similar contaminant signature noted in samples across the site it is apparent that contamination across the site is resultant from historical fill placed on the site rather than a single point source. Contaminated fill was evidently placed preferentially on the east side of the property as opposed to the west. Low-level tetrachloroethene contamination may be resultant from a historical laundry facility located on/near the eastern portion of the property.
- F. Other relevant site description information (or enter Not Applicable).
The subject property is currently used as a parking/loading area and abandoned street right-of-way. Based on available information regarding the site's historical land use, and in reference to DNR Publication Number: DNR-RR-101E, the site is not currently and was not historically used for applications potentially associated with perfluoroalkyl and polyfluoroalkyl, or other substances potentially containing "emerging contaminants" such as surface treatment applications for paper, fabric, cookware, or carpeting. This historical use also did not include plastics, polymers, inks, paints, coatings, adhesives, cleaners, detergents, shampoo or cosmetics in its process stream and is unlikely to be a source of 1,4 Dioxane.
- G. List BRRTS activity/site name and number for BRRTS activities at this source property, including closed cases.
None
- H. List BRRTS activity/site name(s) and number(s) for all properties immediately adjacent to (abutting) this source property.
Wausau Center Mall (Former) - 02-37-587769 - Closed ERP Site (2022)

2. General Site Conditions

- A. Soil/Geology
- Describe soil type(s) and relevant physical properties, thickness of soil column across the site, vertical and lateral variations in soil types.
The soils encountered in the soil borings consisted of sand/sand and gravel fill from the ground surface to depths ranging up to approximately twelve (12) feet bgs underlain by sand to the end of exploration at up to forty-eight (48) feet bgs. Grain size of the sand material ranged from very fine to coarse and from poor to well graded.
 - Describe the composition, location and lateral extent, and depth of fill or waste deposits on the site.
Sand/sand and gravel fill from the ground surface to depths ranging up to approximately twelve (12) feet bgs across the site.

- iii. Describe the depth to bedrock, bedrock type, competency and whether or not it was encountered during the investigation. Weathered granite bedrock was encountered in hollow stem auger borings advanced for installation of monitoring well. Auger/sampler refusal was encountered at 43 feet bgs on the northern portion of the site, 48 feet bgs on the southeastern portion of the site, and 30-37 feet bgs on the western portion of the site.
- 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).
The site is currently nearly entirely covered by concrete parking, driving, and loading areas. Portions of the property not covered by concrete are covered by landscaped areas containing grass, mulch, and trees.

B. Groundwater

- i. Discuss depth to groundwater and piezometric elevations. Describe and explain depth variations, including high and low water table elevation and whether free product affects measurement of water table elevation. Describe the stratigraphic unit(s) where water table was found or which were measured for piezometric levels.
Soil borings conducted during site investigation activities were advanced using hollow stem augers. Groundwater was encountered at approximately forty-one (41) feet bgs during boring activities. Groundwater was measured between 40 and 41 feet bgs in the wells during both monitoring events, with shallowest groundwater being measured in the southern monitoring well, which is located at a slightly lower surficial elevation than the northern well. The groundwater was encountered in a fine to coarse grained sand material across the site.
- ii. Discuss groundwater flow direction(s), shallow and deep. Describe and explain flow variations, including fracture flow if present.
Groundwater flow is approximately south based on measured groundwater elevations and groundwater elevation data obtained from the adjacent site during previous investigations.
- iii. Discuss groundwater flow characteristics: hydraulic conductivity, flow rate and permeability, or state why this information was not obtained.
Groundwater was measured between 40 and 41 feet bgs in the wells during monitoring events, with shallowest groundwater being measured in the southern monitoring well, which is located at a slightly lower surficial elevation than the northern well. The groundwater was encountered in a fine to coarse grained sand material across the site. This material has a hydraulic conductivity of approximately 1 to 100 ft/day. Groundwater flow is approximately north to south based on measured groundwater elevations and groundwater elevation data obtained from the adjacent site during previous investigations. The estimated flow rate across the site is 0.2 ft/day.
- iv. Identify and describe locations/distance of potable and/or municipal wells within 1200 feet of the site. Include general summary of well construction (geology, depth of casing, depth of screened or open interval).
The site and surrounding properties are serviced by municipal water supply. According to the WDNR Well Viewer three (3) wells are listed within 1,200 feet of the property. The wells are mapped over 1,100 feet to the southwest and belong to Island Place Apartments. The wells were installed between 2009 and 2011. The wells were drilled to 120 to 124 feet bgs and are set in granite bedrock which is present approximately forty-five (45) feet bgs. These wells are not anticipated to be impacted by the subject property due to the distance and direction relative to the groundwater flow direction from the subject property, as well as the low level groundwater contamination encountered at the property.

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.

Based on results of the recent investigation at the adjacent Former Wausau Center Mall site, REI conducted oversight for advancement of eight (8) soil covering the entirety of the site on March 2, 2022. A total of twenty-four (24) soil samples were collected and submitted for laboratory analysis of Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), and Resource Conservation and Recovery Act (RCRA) list of metals which include Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver and Mercury. Analytical results were tabulated in comparison to state standards which revealed detections of contaminants in exceedance of state standards.

REI was authorized to notify the WDNR of the soil detections exceeding state standards. Notification was submitted on April 27, 2022. The WDNR issued a Responsible Party (RP) letter to the City of Wausau on June 13, 2022. REI submitted a Site Investigation Work Plan on June 24, 2022.

REI and a drilling subcontractor mobilized to the site on July 26, 2022 to advance three (3) total soil borings on the property and convert them to Wisconsin Administrative Code NR 141 compliant groundwater monitoring wells. Boring advancement was restricted by the presence of weathered bedrock, and borings advanced on the western portion of the boring were abandoned prior to encountering the groundwater table. In total, four (4) borings were advanced at the site and two (2) monitoring wells were installed. REI conducted well development, survey, and sampling activities following installation of the wells on August 4 and 5, 2022. Groundwater samples were submitted for laboratory analysis of VOCs, PAHs, and RCRA metals.

Laboratory analytical results of the groundwater samples collected on August 4/5, 2022 revealed detections of several compounds in exceedance of the NR 140 Preventative Action Limit (PAL) in both monitoring wells. Specifically, PAL exceedances included PAH compounds benzo(a)pyrene, benzo(b)fluoranthene, and chrysene in both wells and benzene in the northern well and tetrachloroethene in the southern well.

REI collected a second round of groundwater samples from the existing monitoring well network on September 7, 2022, and submitted the samples for laboratory analysis of VOCs, PAHs, and RCRA metals. Laboratory analytical results of the second round of groundwater samples revealed detections of benzo(a)pyrene, benzo(b)fluoranthene, and chrysene in exceedance of the Chapter NR140 Enforcement Standard (ES) in the southern well. Tetrachloroethene again exceeded the PAL in the southern well. Benzene and dissolved chromium were detected in exceedance of the PAL in the northern well.

REI submitted a Site Investigation Report to the DNR on October 14, 2022 recommending submittal of a case closure packet with continuing obligations for residual soil and groundwater contamination. No work has been completed on the site since that time.

- ii. Identify whether contamination extends beyond the source property boundary, and if so describe the media affected (e.g., soil, groundwater, vapors and/or sediment, etc.), and the vertical and horizontal extent of impacts.
Soil contamination exceeding the Direct Contact and Groundwater Pathway Protection RCLs was identified at the boundaries of the site at depths ranging from 2 to 16 feet bgs. Groundwater contamination in exceedance of the PAL and ES was detected in MW-2, the downgradient well on the property. Contamination identified at the site is related to historical fill. Low-level tetrachloroethene contamination may be resultant from a historical laundry facility located on/near the eastern portion of the property. Based on relative concentrations of contaminants in site groundwater, it is unlikely that significant groundwater contamination extends beyond the site boundaries assuming the site is the source of the contamination.
- 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 were no structural impediments to the completion of the site investigation.

B. Soil

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

On March 2, 2022, REI conducted oversight for advancement of eight (8) geoprobe soil borings across the site. A total of twenty-four (24) soil samples were collected and submitted for laboratory analysis of VOCs, PAHs, and RCRA list of metals which include Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver, and Mercury. Soil borings were advanced to sixteen (16) feet bgs, and three (3) soil samples were collected for laboratory analysis from each boring. One (1) sample was collected from the zone of direct contact (0-4' bgs), one (1) sample was collected from an intermediate depth with the highest PID reading, and one (1) soil sample was collected near the termination depth (14-16' bgs) in each boring.

Laboratory analytical results revealed detections of several compounds in exceedance of NR720 Direct Contact and Groundwater Pathway Protection RCLs. Compounds exceeding Direct Contact standards were all PAHs, with Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenz(a,h)anthracene, and Indeno(1,2,3-cd)pyrene commonly detected in the borings. In total, the Non-Industrial Direct Contact RCL was exceeded in eleven (11) of the collected samples from all eight (8) of the advanced geoprobe borings. Non-Industrial Direct Contact RCL exceedances were noted within four (4) feet of the ground surface in all boring locations except GP-2, which was advanced near the southwest corner of the site.

Dibenz(a,h)anthracene exceeded the Direct Contact RCL in two (2) locations, naphthalene exceeded the Direct Contact RCL in one (1) location, and lead exceeded the Direct Contact RCL in one (1) location. Exceedances of the Direct Contact RCL were noted primarily in borings advanced near the center and west side of the property.

Exceedances of NR720 Groundwater Pathway Protection RCLs were also primarily PAHs. Benzo(a)pyrene, Benzo(b)fluoranthene, and Chrysene were detected in exceedance of the Groundwater Pathway Protection RCL each of the borings except GP-1, which was advanced near the northwest corner of the site. These exceedances were also preferentially noted in shallower sample locations. Tetrachloroethene was the only non-PAH compound detected above state standards. Tetrachloroethene was reported above the Groundwater Pathway Protection RCL in three (3) sample locations which were collected from two (2) borings. The samples were collected within six (6) feet of the ground surface from borings GP-7 and GP-8, which were advanced on the east side of the site.

Due to observations of subsurface materials, the lack of apparent source, and generally similar contaminant signature noted in samples across the site it is apparent that contamination across the site is resultant from historical fill placed on

the site rather than a single point source. Contaminated fill was evidently placed preferentially on the east side of the property as opposed to the west. Low-level tetrachloroethene contamination may be resultant from a historical laundry facility located on/near the eastern portion of the property.

There are no anticipated impacts to potential receptors based on soil contamination encountered during site investigation activities. Nearly the entirety of the site is currently covered by concrete impeding the direct contact pathway. A cap maintenance plan will continue to prohibit this pathway in the future. Impacted soils encountered during future construction will be properly managed and future development of the site will be undertaken in accordance with post closure modifications.

- ii. Describe the concentration(s) and types of soil contaminants found in the upper four feet of the soil column. Soil contamination in exceedance of the NR720 Non-Industrial Direct Contact RCL within the upper four (4) feet of the soil column was found to be present across the property except the southwest corner. These exceedances were exclusively PAHs. Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Indeno(1,2,3-cd)pyrene, and Dibenz(a,h)anthracene were the PAH compounds detected in exceedance of the DC RCL within the upper four (4) feet of the soil column on the property.
- 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.

Soil analytical results compared to groundwater Pathway Protection RCL and Non-Industrial Not-to-Exceed Direct Contact RCL. The site is characterized as non-industrial due to the lack of industrial activities on site and its zoning status as Planned Unit Development (PUD). Planned development for the property does not include industrial facilities.

C. Groundwater

- i. Describe degree and extent of groundwater contamination. 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.

The first round of groundwater samples was collected following well development on August 4 and 5, 2022. Laboratory analytical results indicated the NR140 Preventative Action Limit (PAL) was exceeded in both installed wells. Benzo(a)pyrene, Benzo(b)fluoranthene, and Chrysene exceeded the PAL in both wells; benzene exceeded the PAL in MW-1, and tetrachloroethene exceeded the PAL in MW-2.

The second round of groundwater samples were collected on September 7, 2022. Laboratory analytical results indicated the PAL and Enforcement Standard (ES) were exceeded for Benzo(a)pyrene, Benzo(b)fluoranthene, and Chrysene in MW-2; and the PAL was again exceeded for tetrachloroethene in MW-2. In MW-1, benzene again exceeded the PAL, although there were no exceedances of PAH compounds. Dissolved chromium did however exceed the PAL in MW-1 in the second sampling round. Significant sediment was noted in samples collected from MW-1 due to the low amount of water in the well and slow recharge. This sediment may account for the PAH and dissolved chromium detections in this location.

Due to observations of subsurface materials, the lack of apparent source, and generally similar contaminant signature noted in samples across the site especially in comparison with soil samples it is apparent that contamination across the site is resultant from historical fill placed on the site rather than a single point source. Contaminated fill was evidently placed preferentially on the east side of the property as opposed to the west and several compounds leached into site groundwater at concentrations exceeding state standards. Low-level tetrachloroethene contamination may be resultant from a historical laundry facility located on/near the eastern portion of the property.

There are no potential receptors for the identified groundwater contamination as the subject property and all surrounding properties are on the municipal water supply. According to the WDNR Well Viewer only three (3) wells are listed within 1,200 feet of the property. The wells are mapped over 1,100 feet to the southwest and belong to Island Place Apartments. The wells were installed between 2009 and 2011. The wells were drilled to 120 to 124 feet bgs and are set in granite bedrock which is present approximately forty-five (45) feet bgs. These wells are not anticipated to be impacted by the subject property due to the distance and direction relative to the groundwater flow direction from the subject property, as well as the low level groundwater contamination encountered at the property.

Groundwater contamination is not anticipated to intercept building foundation drain systems due to its depth below ground surface at the site (>40 ft bgs).

- ii. Describe the presence of free product at the site, including the thickness, depth, and locations. Identify the depth and location of the smear zone.

No free product was encountered during the site investigation.

D. Vapor

- i. Describe how the vapor migration pathway was assessed, including locations where vapor, soil gas, or indoor air samples were collected. If the vapor pathway was not assessed, explain reasons why.
Soil and groundwater samples collected by REI did not reveal VOC contamination which would identify a potential vapor intrusion concern within any potential building on the property or nearby buildings except at the eastern portion of the site. Soil contamination was limited to low-level exceedances of PAH compounds across the site with low-level exceedances of the Groundwater Pathway Protection RCL for tetrachloroethene in the two (2) borings advanced on the east side of the site. Groundwater contamination was limited to low-level benzene, tetrachloroethene, chromium, and PAH compounds. No vapor samples were collected as part of this investigation due to the type of contamination and the location of the identified contamination. There are currently no buildings on the property. The site is proposed to be redeveloped potentially including soil excavation and management. Based on the minor degree and extent of shallow CVOC soil contamination, this material may be entirely removed during the redevelopment process. The CVOC vapor intrusion pathway should be reevaluated at that time.
- 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).
No indoor air/sub slab vapor samples were collected.

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.
The nearest surface water is a channel of the Wisconsin River located approximately 1,000 feet west of the property. Based on the distance from the subject property, the direction of groundwater flow, and the nature of contamination discovered at the site, surface water and/or sediment 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.
No surface water or sediment samples were collected.

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 actions occurred at this site.
- B. Describe any immediate or interim actions taken at the site under ch NR 708, Wis. Adm. Code.
No immediate or interim actions occurred at this site involving this site investigation.
- C. Describe the *active* remedial actions taken at the source property, including: type of remedial system(s) used for each media affected; 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.
There are no active remedial actions taken at the source property.
- D. Describe the alternatives considered during the Green and Sustainable Remediation evaluation in accordance with NR 722.09 and any practices implemented as a result of the evaluation.
No evaluation of Green and Sustainable Remediation was conducted.
- E. Describe the nature, degree and extent of residual contamination that will remain at the source property or on other affected properties after case **closure**.
Laboratory analytical results revealed detections of several compounds in exceedance of NR720 Direct Contact and Groundwater Pathway Protection RCLs in site soil. Compounds exceeding Direct Contact standards were all PAHs, with Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenz(a,h)anthracene, and Indeno(1,2,3-cd)pyrene commonly detected in the borings. In total, the Non-Industrial Direct Contact RCL was exceeded in eleven (11) of the collected samples from all eight (8) of the advanced geoprobe borings. Non-Industrial Direct Contact RCL exceedances were noted within four (4) feet of the ground surface in all boring locations except GP-2, which was advanced near the southwest corner of the site.

Dibenz(a,h)anthracene exceeded the Direct Contact RCL in two (2) locations, naphthalene exceeded the Direct Contact RCL in one (1) location, and lead exceeded the Direct Contact RCL in one (1) location. Exceedances of the Direct Contact RCL were noted primarily in borings advanced near the center and west side of the property.

Exceedances of NR720 Groundwater Pathway Protection RCLs were also primarily PAHs. Benzo(a)pyrene, Benzo(b)fluoranthene, and Chrysene were detected in exceedance of the Groundwater Pathway Protection RCL each of the borings except GP-1, which was advanced near the northwest corner of the site. These exceedances were also preferentially noted in shallower sample locations. Tetrachloroethene was the only non-PAH compound detected above state standards.

Tetrachloroethene was reported above the Groundwater Pathway Protection RCL in three (3) sample locations which were collected from two (2) borings. The samples were collected within six (6) feet of the ground surface from borings GP-7 and GP-8, which were advanced on the east side of the site.

Due to observations of subsurface materials, the lack of apparent source, and generally similar contaminant signature noted in samples across the site it is apparent that contamination across the site is resultant from historical fill placed on the site rather than a single point source. Contaminated fill was evidently placed preferentially on the east side of the property as opposed to the west. Low-level tetrachloroethene contamination may be resultant from a historical laundry facility located on/near the eastern portion of the property.

The residual soil contamination described above will remain at the source property after case closure. The soils will be covered by a concrete cap. Impacted soils encountered during future construction will be properly managed and future development of the site will be undertaken in accordance with post closure modifications.

Residual groundwater contamination is limited to PAL exceedances for benzene and chromium in the northern well, and PAL and ES exceedances for benzo(a)pyrene, benzo(b)fluoranthene, and chrysene in the southern well. Groundwater is present at depths greater than forty (40) feet bgs at the site and there is no valid pathway for groundwater contamination to impact potential receptors.

- F. Describe the residual soil contamination within four feet of ground surface (direct contact zone) that attains or exceeds RCLs established under s. NR 720.12, Wis. Adm. Code, for protection of human health from direct contact.
- Soil contamination in exceedance of the NR720 Non-Industrial Direct Contact RCL within the upper four (4) feet of the soil column was found to be present across the property except the southwest corner. These exceedances were exclusively PAHs. Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Indeno(1,2,3-cd)pyrene, and Dibenz(a,h)anthracene were the PAH compounds detected in exceedance of the DC RCL within the upper four (4) feet of the soil column on the property.

The soils will be covered by a concrete cap. Impacted soils encountered during future construction will be properly managed and future development of the site will be undertaken in accordance with post closure modifications.

- G. Describe the residual soil contamination that is above the observed low water table that attains or exceeds the soil standard(s) for the groundwater pathway.
- Exceedances of NR720 Groundwater Pathway Protection RCLs were primarily PAHs. Benzo(a)pyrene, Benzo(b)fluoranthene, and Chrysene were detected in exceedance of the Groundwater Pathway Protection RCL each of the borings except GP-1, which was advanced near the northwest corner of the site. These exceedances were also preferentially noted in shallower sample locations. Tetrachloroethene was the only non-PAH compound detected above state standards.
- Tetrachloroethene was reported above the Groundwater Pathway Protection RCL in three (3) sample locations which were collected from two (2) borings. The samples were collected within six (6) feet of the ground surface from borings GP-7 and GP-8, which were advanced on the east side of the site.

The soils will be covered by a concrete cap. Impacted soils encountered during future construction will be properly managed and future development of the site will be undertaken in accordance with post closure modifications.

- H. 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 soils will be covered by a concrete cap. Impacted soils encountered during future construction will be properly managed and future development of the site will be undertaken in accordance with post closure modifications.
- I. 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).
- Groundwater contamination exceeding the PAL was observed in MW-1 located on the northern portion of the property, and groundwater contamination exceeding the PAL and ES was observed in MW-2 located on the southeastern portion of the property. Natural attenuation is appropriate as a groundwater remedy due to the stable, low-level concentration of the compound as well as the lack of nearby receptors.
- J. Identify how all exposure pathways (soil, groundwater, vapor) were removed and/or adequately addressed by immediate, interim and/or remedial action(s).

Soil exposure pathways are currently being addressed by the concrete cap which remains on the property. The entirety of identified soil contamination is within the capped area. Impacted soils encountered during future construction will be properly managed and future development of the site will be undertaken in accordance with post closure modifications.

The groundwater exposure pathway will be addressed via natural attenuation due to the limited degree and extent of contamination as well as the lack of nearby receptors. Groundwater is present at such a depth on the property that it will not be encountered during construction activities nor will it interact with any potential building foundations.

The vapor exposure pathway is not currently relevant for the property due to the nature of contamination discovered at the site as well as lack of current buildings. Tetrachloroethene was detected in exceedance of the Groundwater Pathway

Protection RCL at the site, although at relatively low concentrations in a small geographical area. This material will be properly managed during potential site redevelopment, which may include removal of all CVOC impacted soil. The CVOC vapor intrusions pathway should be reevaluated at that time.

- K. Identify any system hardware anticipated to be left in place after site closure, and explain the reasons why it will remain.
No system hardware will be left in place.
- L. 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.
A PAL exemption will be needed for MW-1, located on the northern portion of the site, for benzene and chromium. A PAL exemption will be needed for MW-2, located on the southeastern portion of the site, for tetrachloroethene and a PAL and ES exemption will be needed for benzo(a)pyrene, benzo(b)fluoranthene, and chrysene at MW-2.
- M. 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.
No DNR action levels for vapor intrusion were exceeded.
- N. 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.
Surface water/sediment contamination was not evaluated.

5. Continuing Obligations: Includes all affected properties and rights-of-way (ROWs). In certain situations, maintenance plans are also required, and must be included in Attachment D.

Directions: For each of the 3 property types below, check all situations that apply to this closure request.

(NOTE: Monitoring wells to be transferred to another site are addressed in Attachment E.)

	This situation applies to the following property or Right of Way (ROW):			Case Closure Situation - Continuing Obligation (database fees will apply, ii. - xiv.)	Maintenance Plan Required
	Property Type:				
	Source Property	Affected Property (Off-Source)	ROW		
i.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	None of the following situations apply to this case closure request.	NA
ii.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Residual groundwater contamination exceeds ch. NR 140 ESs.	NA
iii.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Residual soil contamination exceeds ch. NR 720 RCLs.	NA
iv.				Monitoring Wells Remain:	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	• Not Abandoned (filled and sealed)	NA
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	• Continued Monitoring (requested or required)	Yes
v.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cover/Barrier/Engineered Cover or Control for (soil) direct contact pathways (includes vapor barriers)	Yes
vi.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cover/Barrier/Engineered Cover or Control for (soil) groundwater infiltration pathway	Yes
vii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Structural Impediment: impedes completion of investigation or remedial action (not as a performance standard cover)	NA
viii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Residual soil contamination meets NR 720 industrial soil RCLs, land use is classified as industrial	NA
ix.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor Mitigation System (VMS) required due to exceedances of vapor risk screening levels or other health based concern	Yes
x.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor: Dewatering System needed for VMS to work effectively	Yes
xi.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor: Compounds of Concern in use: full vapor assessment could not be completed	NA
xii.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor: Commercial/Industrial exposure assumptions used.	NA
xiii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vapor: Residual volatile contamination poses future risk of vapor intrusion	NA
xiv.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site-specific situation: (e. g., fencing, methane monitoring, other) (discuss with project manager before submitting the closure request)	Site specific

6. 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. ATCP 93, Wis. Adm. Code, exist on the property? Yes No
- C. If the answer to question 6.B. is yes, is the leak detection system currently being monitored? Yes No

General Instructions

All information shall be legible. Providing illegible information will result in a submittal being considered incomplete until corrected. For each attachment (A-G), provide a Table of Contents page, listing all 'applicable' and 'not applicable' items by Closure Form titles (e.g., A.1. Groundwater Analytical Table, A.2. Soil Analytical Results Table, etc.). If any item is 'not applicable' to the case closure request, you must fully explain the reasons why.

Data Tables (Attachment A)

Directions for Data Tables:

- Use **bold** and italics font for information of importance on tables and figures. Use **bold** font for ch. NR 140, Wis. Adm. Code ES attainments or exceedances, and *italicized font* for ch. NR 140, Wis. Adm. Code, PAL attainments or exceedances.
- Use **bold** font to identify individual ch. NR 720 Wis. Adm. Code RCL exceedances. Tables should also include the corresponding groundwater pathway and direct contact pathway RCLs for comparison purposes. Cumulative hazard index and cumulative cancer risk exceedances should also be tabulated and identified on Tables A.2 and A.3.
- 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. Soil Analytical Results Table, etc.).
- For required documents, each table (e.g., A.1., A.2., etc.) should be a separate Portable Document Format (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, potable wells) for which samples have been collected.
- A.2. Soil Analytical Results Table(s):** Table(s) showing **all** soil analytical results and collection dates. Indicate if sample was collected above or below the observed low water table (unsaturated versus saturated).
- A.3. Residual Soil Contamination Table(s):** Table(s) showing the analytical results of only the residual soil contamination at the time of closure. This table shall be a subset of table A.2 and should include only the soil sample locations that exceed an RCL. Indicate if sample was collected above or below the observed low water table (unsaturated versus saturated). Table A.3 is optional only if a total of fewer than 15 soil samples have been collected at the site.
- A.4. Vapor Analytical Table(s):** 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.5. 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, and time period for sample collection.
- A.6. 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.7. 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, Figures and Photos (Attachment B)

Directions for Maps, Figures and Photos:

- 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 11 x 17 inches, in a 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 of ss. NR 716.15(4), 726.09(2) and 726.11(3), (5) and (6), Wis. Adm. Code.
- 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.
- Maps, figures and photos should be dated to reflect the most recent revision.

B.1. Location Maps

- B.1.a. Location Map:** A map outlining all properties within the contaminated site boundaries on a United States Geological Survey (U.S.G.S.) topographic map or plat map in sufficient detail to permit easy location of all affected 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 all affected 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 attaining or exceeding a ch. NR 140 ES, and/or in relation to the boundaries of soil contamination attaining or exceeding a RCL. Provide parcel identification numbers for all affected properties.
- B.1.c. RR Sites 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. **Soil Contamination:** Figure(s) showing the location of **all** identified unsaturated soil contamination. Use a single contour to show the horizontal extent of each area of contiguous soil contamination that exceeds a soil to groundwater pathway RCL as determined under ch. NR 720.Wis. Adm. Code. A separate contour line should be used to indicate the horizontal extent of each area of contiguous soil contamination that exceeds a direct contact RCL exceedances (0-4 foot depth).
- B.2.b. **Residual Soil Contamination:** Figure(s) showing only the locations of soil samples where unsaturated soil contamination remains at the time of closure (locations represented in Table A.3). Use a single contour to show the horizontal extent of each area of contiguous soil contamination that exceeds a soil to groundwater pathway RCL as determined under ch. NR 720 Wis. Adm. Code. A separate contour line should be used to indicate the horizontal extent of each area of contiguous soil contamination that exceeds a direct contact RCL exceedance (0-4 foot depth).

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 an RCL. Distinguish between direct contact and the groundwater pathway RCLs.
 - Source location(s) and lateral and vertical extent if groundwater contamination exceeds ch. NR 140 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.1.b.)
- 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, PAL and/or an 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 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 residual soil and groundwater contamination, including sub-slab, indoor air, soil vapor, soil gas, 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).

- B.5. Structural Impediment Photos:** One or more photographs documenting the structural impediment feature(s) which precluded a complete site investigation or remediation at the time of the closure request. The photographs should document the area that could not be investigated or remediated due to a structural impediment. The structural impediment should be indicated on Figures B.2.a and B.2.b.

Documentation of Remedial Action (Attachment C)

Directions for Documentation of Remedial Action:

- 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 has already been submitted to the DNR, please note the title and date of the report for that particular document requested.
 - C.1. **Site investigation documentation**, that has not otherwise been submitted with the Site Investigation Report.
 - C.2. **Investigative waste** disposal documentation.
 - C.3. Provide a **description of the methodology** used along with all supporting documentation if the RCLs 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.
 - C.6. **Other.** Include any other relevant documentation not otherwise noted above (This section may remain blank).

Maintenance Plan(s) and Photographs (Attachment D)

Directions for Maintenance Plans and Photographs:

Attach a maintenance plan for each affected property (source property, each off-source affected property) with continuing obligations requiring future maintenance (e.g., direct contact, groundwater protection, vapor intrusion). See Site Summary section 5 for all affected property(s) requiring a maintenance plan. Maintenance plan guidance and/or templates for: 1) Cover/barrier systems; 2) Vapor intrusion; and 3) Monitoring wells, can be found at: <http://dnr.wi.gov/topic/Brownfields/Professionals.html#tabx3>

- D.1. **Descriptions of maintenance action(s) required for maximizing effectiveness of the engineered control, vapor mitigation system, feature or other action for which maintenance is required:**
- Provide brief descriptions of the type, depth and location of residual contamination.

- Provide a description of the system/cover/barrier/monitoring well(s) to be maintained.
 - Provide a description of the maintenance actions required for maximizing effectiveness of the engineered control, vapor mitigation system, feature or other action for which maintenance is required.
 - Provide contact information, including the name, address and phone number of the individual or facility who will be conducting the maintenance.
- D.2. **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) all property boundaries.
- D.3. **Photographs** 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. Photographs shall be submitted with a title related to the site name and location, and the date on which it was taken.
- D.4. **Inspection log**, to be maintained on site, or at a location specified in the maintenance plan or approval letter. The inspection and maintenance log is found at: <http://dnr.wi.gov/files/PDF/forms/4400/4400-305.pdf>.

Monitoring Well Information (Attachment E)

Directions for Monitoring Well Information:

For all wells that will remain in use, be transferred to another party, or that could not be located; 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)

Select One:

- No monitoring wells were installed 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 a description of efforts made to locate the wells.
- 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. When one or more monitoring wells will remain in use this is considered a continuing obligation and a maintenance plan will be required and must be included in Attachment D.
- One or more monitoring 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). Provide documentation from the party accepting future responsibility for monitoring well(s).

Source Legal Documents (Attachment F)

Directions for Source Legal Documents:

Label documents with the specific closure form titles (e.g., F.1. Deed, F.2. Certified Survey Map, etc.). Include all of the following documents, in the order listed:

- F.1. **Deed:** The most recent deed with legal description clearly listed.
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.
- F.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. In cases where the certified survey map or recorded plat map are not legible or are unavailable, a copy of a parcel map from a county land information office may be substituted. A copy of a parcel map from a county land information office shall be legible, and the parcels identified in the legal description shall be clearly identified and labeled with the applicable parcel identification number.
- F.3. **Verification of Zoning:** Documentation (e.g., official zoning map or letter from municipality) of the property's or properties' current zoning status.
- F.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. This section applies to the source property only. Signed statements for Other Affected Properties should be included in Attachment G.

Notifications to Owners of Affected Properties (Attachment G)

Directions for Notifications to Owners of Affected Properties:

Complete the table on the following page for sites which require notification to owners of affected properties pursuant to ch. 292, Wis. Stats. and ch. NR 725 and 726, Wis. Adm. Code. 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.]. The DNR's "Guidance on Case Closure and the Requirements for Managing Continuing Obligations" (PUB-RR-606) lists specific notification requirements <http://dnr.wi.gov/files/PDF/pubs/rr/RR606.pdf>.

State law requires that the responsible party provide a 30-day, written advance notification 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 form 4400-286, Notification of Continuing Obligations and Residual Contamination, at <http://dnr.wi.gov/files/PDF/forms/4400/4400-286.pdf>

Include a copy of each notification sent and accompanying proof of delivery, i.e., return receipt or signature confirmation.

Include the following documents for each property, keeping each property's documents grouped together and labeled with the letter G and the corresponding ID number from the table on the following page. (Source Property documents should only be included in Attachment F):

- **Deed:** The most recent deed with legal descriptions clearly listed for all affected properties.
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.
- **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. In cases where the certified survey map or recorded plat map are not legible or are unavailable, a copy of a parcel map from a county land information office may be substituted. A copy of a parcel map from a county land information office shall be legible, and the parcels identified in the legal description shall be clearly identified and labeled with the applicable parcel identification number.
- **Verification of Zoning:** Documentation (e.g., official zoning map or letter from municipality) of the property's or properties' current zoning status.
- **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes the attached legal description(s) accurately describe(s) the correct contaminated property or properties.

Signatures and Findings for Closure Determination

This page has been updated as of February 2019 to comply with the requirements of Wis. Admin. Code ch. NR 712.

Check the correct box for this case closure request and complete the corresponding certification statement(s) listed below to demonstrate that the requirements of Wis. Admin. Code ch. NR 712 have been met. The responsibility for signing the certification may not be delegated per Wis. Admin. Code § NR 712.09 (1). Per Wis. Admin. Code § 712.05 (1), the work must be conducted or supervised by the person certifying.

- The investigation and/or response action(s) for this site evaluated and/or addressed groundwater (including natural attenuation remedies). Both a professional engineer and a hydrogeologist must sign this document per Wis. Admin. Code ch. NR 712.
- The investigation and the response action(s) for this site did not evaluate or address groundwater. A professional engineer must sign this document per Wis. Admin. Code ch. NR 712.

Engineering Certification

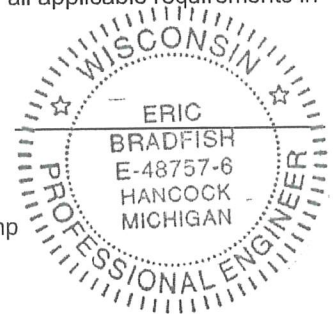
I, Eric Bradfish, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Signature 

P. E. #

Title Environmental Engineer

P.E. Stamp



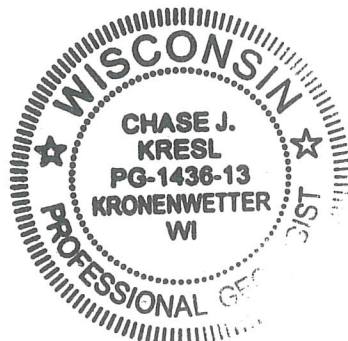
Hydrogeologist Certification

I, Chase Kresl, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Signature 

Title Hydrogeologist

Date 2/17/23



DRAWING FILE: P:\194,00-9499\19485E - WAUSAU MALL\Drawings\194,85E-Boring Location Map.DWG LAYOUT: OUTLOT SOIL PLOTTED BY: CHASEK MAY 01, 2023 - 2:03PM



LEGEND

0 30
SCALE: 1" = 30'

- EXTENT SOIL CONTAMINATION EXCEEDING GROUNDWATER PATHWAY PROTECTION
- EXTENT SOIL CONTAMINATION EXCEEDING NON-INDUSTRIAL DIRECT CONTACT RCL
- GEOPROBE SOIL BORING
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND FIBER OPTIC LINE
- UNDERGROUND STORM SEWER LINE
- UNDERGROUND WATER LINE
- UNDERGROUND SANITARY SEWER LINE
- UNDERGROUND NATURAL GAS LINE
- PROPERTY BOUNDARY



FORMER MALL PARKING FACILITY #
120 FOREST STREET
WAUSAU, WI 54403

FIGURE B.2.A SOIL CONTAMINATION MAP

PROJECT No. 9485E	DRAWN BY: CJK	DATE: 05/01/2023
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REI Engineering, INC.

DRAWING FILE: P:\94.00-9499\9485E - WAUSAU MALL\Drawings\94.85E-Boring Location Map.DWG LAYOUT: OUTLOT SOIL PLOTTED BY: CHASEK



LEGEND

0 30
SCALE: 1" = 30'

- EXTENT SOIL CONTAMINATION EXCEEDING GROUNDWATER PATHWAY PROTECTION
- EXTENT SOIL CONTAMINATION EXCEEDING NON-INDUSTRIAL DIRECT CONTACT RCL
- ⊙ GEOPROBE SOIL BORING
- E— UNDERGROUND ELECTRIC LINE
- T— UNDERGROUND FIBER OPTIC LINE
- SS— UNDERGROUND STORM SEWER LINE
- W— UNDERGROUND WATER LINE
- SAN— UNDERGROUND SANITARY SEWER LINE
- G— UNDERGROUND NATURAL GAS LINE
- - - PROPERTY BOUNDARY



FORMER MALL PARKING FACILITY #
120 FOREST STREET
WAUSAU, WI 54403

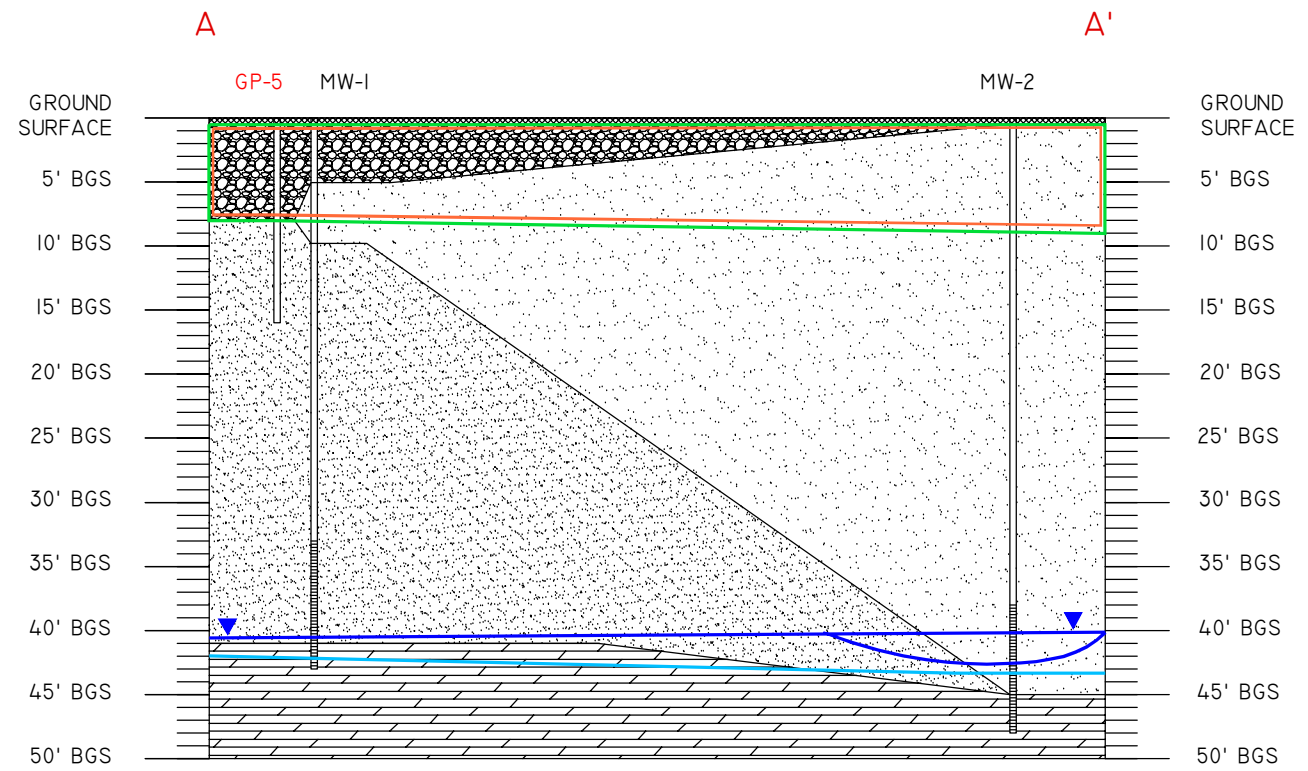
FIGURE B.2.B RESIDUAL SOIL CONTAMINATION MAP

PROJECT No. 9485E	DRAWN BY: CJK	DATE: 05/01/2023
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REI Engineering, INC.

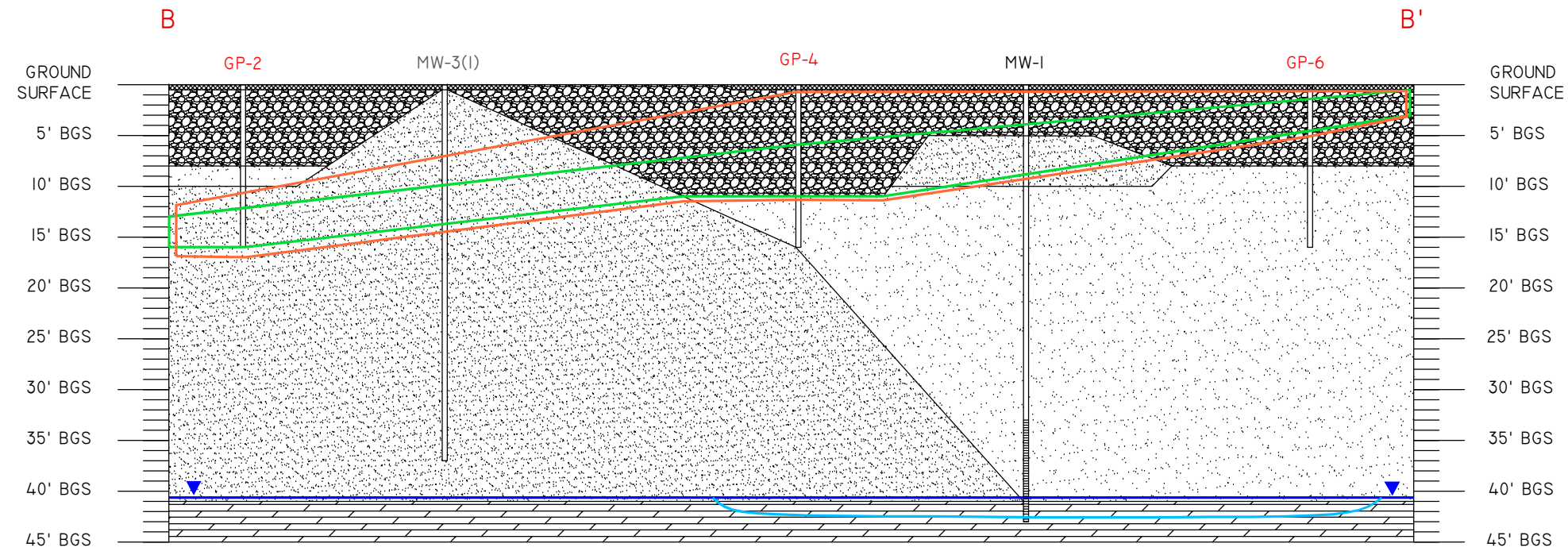
DRAWING FILE: P:\9400-9499\9485E - WAUSAU MALL\DRAWINGS\9485E-X SECTION.DWG LAYOUT: X-SECTION PLOTTED BY: CHASEK MAY 01, 2023 - 2:08PM



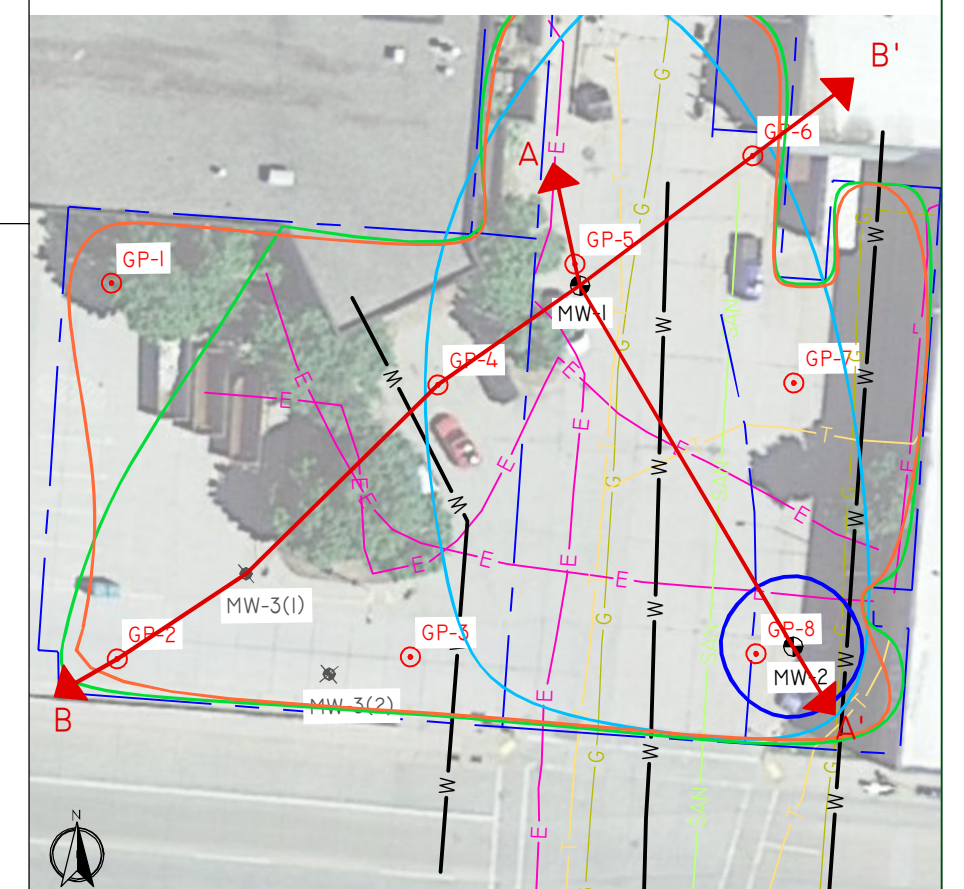
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=15'

- (CO)-CONCRETE
- (GW)-WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
- (SW)-WELL GRADED SANDS, GRAVELLY SANDS
- (SP)-POORLY GRADED SANDS, GRAVELLY SANDS
- WEATHERED BEDROCK

- EXTENT SOIL CONTAMINATION EXCEEDING GROUNDWATER PATHWAY PROTECTION
- EXTENT SOIL CONTAMINATION EXCEEDING NON-INDUSTRIAL DIRECT CONTACT RCL
- EXTENT GROUNDWATER CONTAMINATION EXCEEDING ENFORCEMENT STANDARD
- EXTENT GROUNDWATER CONTAMINATION EXCEEDING PREVENTATIVE ACTION LIMIT



HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=15'



FORMER MALL PARKING FACILITY #
102 FOREST STREET
WAUSAU, WI 54403

FIGURE B.3.A GEOLOGIC CROSS SECTION FIGURE

PROJECT No. 9485E	DRAWN BY: CJK	DATE: 05/01/2023
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REI ENGINEERING, INC.

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

- Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County Marathon	WI Unique Well # of Removed Well MW-1	Hicap #
Latitude / Longitude (see instructions) _____ N _____ W	Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001
¼ / ¼ NW ¼ NW or Gov't Lot #	Section 36	Township 28 N
Well Street Address 120 Forest Street	Range 07	Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W
Well City, Village or Town City of Wausau	Well ZIP Code 54403	
Subdivision Name	Lot #	

Facility Name Former Mall Parking Facility #1		
Facility ID (FID or PWS)		
License/Permit/Monitoring # BRRTS #: 02-37-589640		
Original Well Owner City of Wausau		
Present Well Owner City of Wausau		
Mailing Address of Present Owner 407 Grant Street		
City of Present Owner Wausau	State WI	ZIP Code 54403

Reason for Removal from Service Sampling complete	WI Unique Well # of Replacement Well
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3. Filled & Sealed Well / Drillhole / Borehole Information

<input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Water Well <input type="checkbox"/> Borehole / Drillhole	Original Construction Date (mm/dd/yyyy) 03/02/2022 If a Well Construction Report is available, please attach.
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Construction Type:
<input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input type="checkbox"/> Other (specify): _____

Formation Type:
<input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock

Total Well Depth From Ground Surface (ft.) 43	Casing Diameter (in.) 2
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Lower Drillhole Diameter (in.) 8	Casing Depth (ft.) 33
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Was well annular space grouted?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown

If yes, to what depth (feet)?	Depth to Water (feet) 40.23
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4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Liner(s) removed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Liner(s) perforated?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Screen removed?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Casing left in place?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Was casing cut off below surface?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Did sealing material rise to surface?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Did material settle after 24 hours?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
If yes, was hole retopped?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A

Required Method of Placing Sealing Material
<input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input checked="" type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain): _____

Sealing Materials
<input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Sand-Cement (Concrete) Grout <input checked="" type="checkbox"/> Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
<input checked="" type="checkbox"/> Bentonite Chips <input type="checkbox"/> Bentonite - Cement Grout <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite - Sand Slurry

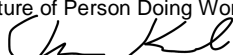
5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Concrete	0	0.5	1.5 gal	
3/8" Holeplug Bentonite	0.5	43	69 lbs	

6. Comments

HSA boring installed by Giles Engineering under REI Engineering oversight. Abandoned by REI Engineering, Inc.

7. Supervision of Work **DNR Use Only**

Name of Person or Firm Doing Filling & Sealing REI Engineering, Inc.	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 05/10/2023	Date Received	Noted By
Street or Route 4080 North 20th Avenue	Telephone Number (715) 675-9784	Comments		
City Wausau	State WI	ZIP Code 54401	Signature of Person Doing Work 	Date Signed 05/11/2023

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

- Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County Marathon	WI Unique Well # of Removed Well MW-2	Hicap #
Latitude / Longitude (see instructions) _____ N _____ W	Format Code <input type="checkbox"/> DD <input type="checkbox"/> DDM	Method Code <input type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001
¼ / ¼ NW ¼ NW or Gov't Lot #	Section 36	Township 28 N
Well Street Address 120 Forest Street	Range 07	Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W
Well City, Village or Town City of Wausau	Well ZIP Code 54403	
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Facility Name Former Mall Parking Facility #1		
Facility ID (FID or PWS)		
License/Permit/Monitoring # BRRTS #: 02-37-589640		
Original Well Owner City of Wausau		
Present Well Owner City of Wausau		
Mailing Address of Present Owner 407 Grant Street		
City of Present Owner Wausau	State WI	ZIP Code 54403

Reason for Removal from Service Sampling complete	WI Unique Well # of Replacement Well
---	--------------------------------------

3. Filled & Sealed Well / Drillhole / Borehole Information

<input checked="" type="checkbox"/> Monitoring Well	Original Construction Date (mm/dd/yyyy) 03/02/2022
<input type="checkbox"/> Water Well	
<input type="checkbox"/> Borehole / Drillhole	If a Well Construction Report is available, please attach.

Construction Type:
<input checked="" type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug
<input type="checkbox"/> Other (specify): _____

Formation Type:
<input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock

Total Well Depth From Ground Surface (ft.) 48	Casing Diameter (in.) 2
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Lower Drillhole Diameter (in.) 8	Casing Depth (ft.) 38
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Was well annular space grouted?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
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If yes, to what depth (feet)?	Depth to Water (feet) 40.23
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4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Liner(s) removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Liner(s) perforated?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Screen removed?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Casing left in place?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Was casing cut off below surface?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Did sealing material rise to surface?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Did material settle after 24 hours?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
If yes, was hole retopped?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A

Required Method of Placing Sealing Material
<input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped
<input checked="" type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain): _____

Sealing Materials
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<input type="checkbox"/> Sand-Cement (Concrete) Grout <input checked="" type="checkbox"/> Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
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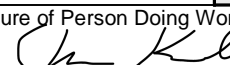
5. Material Used to Fill Well / Drillhole

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Concrete	0	0.5	1.5 gal	
3/8" Holeplug Bentonite	0.5	43	77 lbs	

6. Comments

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Name of Person or Firm Doing Filling & Sealing REI Engineering, Inc.	License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 05/10/2023	Date Received	Noted By
Street or Route 4080 North 20th Avenue	Telephone Number (715) 675-9784	Comments		
City Wausau	State WI	ZIP Code 54401	Signature of Person Doing Work 	Date Signed 05/11/2023