

## Source Property Information

**BRRTS #:**  (No Dashes)

**ACTIVITY NAME:**

**PROPERTY ADDRESS:**

**MUNICIPALITY:**

**PARCEL ID #:**

**CLOSURE DATE:**

**FID #:**

**DATCP #:**

**PECFA#:**

### \*WTM COORDINATES:

X:  Y:

*\* 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)

### Contaminated Media:

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Groundwater Contamination > ES (236)                     | <input checked="" type="checkbox"/> Soil Contamination > *RCL or **SSRCL (232)               |
| <input checked="" type="checkbox"/> Contamination in ROW                                     | <input checked="" type="checkbox"/> Contamination in ROW                                     |
| <input checked="" type="checkbox"/> Off-Source Contamination                                 | <input type="checkbox"/> Off-Source Contamination  |
| <i>(note: for list of off-source properties<br/>see "Impacted Off-Source Property" form)</i> | <i>(note: for list of off-source properties<br/>see "Impacted Off-Source Property" form)</i> |

### Continuing Obligations:

- |   |   |
|---|---|
| <input type="checkbox"/> N/A (Not Applicable)   | <input type="checkbox"/> Cover or Barrier (222)   |
| <input type="checkbox"/> Soil: maintain industrial zoning (220)                                   | <i>(note: maintenance plan for<br/>groundwater or direct contact)</i>   |
| <i>(note: soil contamination concentrations<br/>between non-industrial and industrial levels)</i> | <input type="checkbox"/> Vapor Mitigation (226)   |
| <input type="checkbox"/> Structural Impediment (224)  | <input type="checkbox"/> Maintain Liability Exemption (230)   |
| <input type="checkbox"/> Site Specific Condition (228)  | <i>(note: local government unit or economic<br/>development corporation was directed to<br/>take a response action)</i> |

**Note:** Comments will not print out.

### Monitoring Wells:

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

- Yes     No     N/A

*\* Residual Contaminant Level  
\*\*Site Specific Residual Contaminant Level*

This Adobe Fillable form is intended to provide a list of information that is required for evaluation for case closure. It is to be used in conjunction with Form 4400-202, Case Closure Request. The closure of a case means that the Department has determined that no further response is required at that time based on the information that has been submitted to the Department.

**NOTICE: Completion of this form is mandatory** for applications for case closure pursuant to ch. 292, Wis. Stats. and ch. NR 726, Wis. Adm. Code, including cases closed under ch. NR 746 and ch. NR 726. The Department will not consider, or act upon your application, unless all applicable sections are completed on this form and the closure fee and any other applicable fees, required under ch. NR 749, Wis. Adm. Code, Table 1 are included. It is not the Department's intention to use any personally identifiable information from this form for any purpose other than reviewing closure requests and determining the need for additional response action. The Department may provide this information to requesters as required by Wisconsin's Open Records law [ss. 19.31 - 19.39, Wis. Stats.].

BRRTS #: 0351120869 (No Dashes) PARCEL ID #: 271-1014-09

ACTIVITY NAME: Mark Cummins School for Drummers-Former Ande WTM COORDINATES: X: 484898 Y: 606931

**CLOSURE DOCUMENTS** (the Department adds these items to the final GIS packet for posting on the Registry)

- Closure Letter**
- Maintenance Plan** (if activity is closed with a land use limitation or condition (land use control) under s.292.12, Wis. Stats.)
- Continuing Obligation Cover Letter** (for property owners affected by residual contamination and/or continuing obligations)
- Conditional Closure Letter**
- Certificate of Completion (COC)** (for VPLE sites)

**SOURCE LEGAL DOCUMENTS**

- Deed:** The most recent deed as well as legal descriptions, for the **Source Property** (where the contamination originated). Deeds for other, off-source (off-site) properties are located in the **Notification** section.  
**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. (lots on subdivided or platted property (e.g. lot 2 of xyz subdivision)).  
**Figure #: 0 Title: Park Falls Lumber Company's Plat of the Village-Block 16**
- Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes that the attached legal description accurately describes the correct contaminated property.

**MAPS** (meeting the visual aid requirements of s. NR 716.15(2)(h))

Maps must be no larger than 11 x 17 inches unless the map is submitted electronically.

- 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 parcels. If groundwater standards are exceeded, include the location of all potable wells within 1200 feet of the site.  
**Note:** Due to security reasons municipal wells are not identified on GIS Packet maps. However, the locations of these municipal wells must be identified on Case Closure Request maps.  
**Figure #: 1 Title: Site Location Map**
- Detailed Site Map:** A map that shows all relevant features (buildings, roads, individual property boundaries, 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) or a Site Specific Residual Contaminant Levels (SSRCL) as determined under s. NR 720.09, 720.11 and 720.19.  
**Figure #: 2 Title: Site Map**
- Soil Contamination Contour Map:** For sites closing with residual soil contamination, this map is to show the location of all 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) or a Site Specific Residual Contaminant Level (SSRCL) as determined under s. NR 720.09, 720.11 and 720.19.  
**Figure #: 3 Title: Excavation Map**

BRRTS #: 0351120869

ACTIVITY NAME: Mark Cummins School for Drummers-Former And

**MAPS (continued)**

- Geologic Cross-Section Map:** A map showing the source location and vertical extent of residual soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL). If groundwater contamination exceeds a ch. NR 140 Enforcement Standard (ES) when closure is requested, show the source location and vertical extent, water table and piezometric elevations, and locations and elevations of geologic units, bedrock and confining units, if any.

Figure #: 4 Title: Cross Section

Figure #: Title:

- Groundwater Isoconcentration Map:** For sites closing with residual groundwater contamination, this map shows the horizontal extent of all groundwater contamination exceeding a ch. NR140 Preventive Action Limit (PAL) and an Enforcement Standard (ES). Indicate the direction and date of groundwater flow, based on the most recent sampling data.

*Note: This is intended to show the total area of contaminated groundwater.*

Figure #: 6 Title: Estimated Extent of Impacted Ground Water

- Groundwater Flow Direction Map:** A map that represents groundwater movement at the site. If the flow direction varies by more than 20° over the history of the site, submit 2 groundwater flow maps showing the maximum variation in flow direction.

Figure #: 5 Title: Ground Water Table Contour Map (7/28/11)

Figure #: Title:

**TABLES (meeting the requirements of s. NR 716.15(2)(h)(3))**

Tables must be no larger than 11 x 17 inches unless the table is submitted electronically. Tables must not contain shading and/or cross-hatching. The use of **BOLD** or *ITALICS* is acceptable.

- Soil Analytical Table:** A table showing remaining soil contamination with analytical results and collection dates.  
*Note:* This is one table of results for the contaminants of concern. Contaminants of concern are those that were found during the site investigation, that remain after remediation. It may be necessary to create a new table to meet this requirement.

Table #: 1 Title: Soil Sample Analytical Results

- Groundwater Analytical Table:** Table(s) that show the most recent analytical results and collection dates, for all monitoring wells and any potable wells for which samples have been collected.

Table #: 2 Title: Ground Water Analytical Data

- Water Level Elevations:** Table(s) that show the previous four (at minimum) water level elevation measurements/dates from all monitoring wells. If present, free product is to be noted on the table.

Table #: 3 Title: Ground Water Level Measurements

**IMPROPERLY ABANDONED MONITORING WELLS**

For each monitoring well not properly abandoned according to requirements of s. NR 141.25 include the following documents.

*Note: If the site is being listed on the GIS Registry for only an improperly abandoned monitoring well you will only need to submit the documents in this section for the GIS Registry Packet.*

- Not Applicable**

- Site Location Map:** A map showing all surveyed monitoring wells with specific identification of the monitoring wells which have not been properly abandoned.

*Note: If the applicable monitoring wells are distinctly identified on the Detailed Site Map this Site Location Map is not needed.*

Figure #: Title:

- Well Construction Report:** Form 4440-113A for the applicable monitoring wells.

- Deed:** The most recent deed as well as legal descriptions for each property where a monitoring well was not properly abandoned.

- Notification Letter:** Copy of the notification letter to the affected property owner(s).

BRRS #: 0351120869

ACTIVITY NAME: Mark Cummins School for Drummers-Former Ande

## NOTIFICATIONS

### Source Property

**Not Applicable**

**Letter To Current Source Property Owner:** If the source property is owned by someone other than the person who is applying for case closure, include a copy of the letter notifying the current owner of the source property that case closure has been requested.

**Return Receipt/Signature Confirmation:** Written proof of date on which confirmation was received for notifying current source property owner.

### Off-Source Property

Group the following information per individual property and label each group according to alphabetic listing on the "Impacted Off-Source Property" attachment.

**Not Applicable**

**Letter To "Off-Source" Property Owners:** Copies of all letters sent by the Responsible Party (RP) to owners of properties with groundwater exceeding an Enforcement Standard (ES), and to owners of properties that will be affected by a land use control under s. 292.12, Wis. Stats.

**Note:** Letters sent to off-source properties regarding residual contamination must contain standard provisions in Appendix A of ch. NR 726.

**Number of "Off-Source" Letters:** 1

**Return Receipt/Signature Confirmation:** Written proof of date on which confirmation was received for notifying any off-source property owner.

**Deed of "Off-Source" Property:** The most recent deed(s) as well as legal descriptions, for all affected deeded **off-source** property(ies). This does not apply to right-of-ways.

**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. (lots on subdivided or platted property (e.g. lot 2 of xyz subdivision)).

**Figure #:** 0      **Title:** Park Falls Lumber Company's Plat of the Village-Block 16

**Letter To "Governmental Unit/Right-Of-Way" Owners:** Copies of all letters sent by the Responsible Party (RP) to a city, village, municipality, state agency or any other entity responsible for maintenance of a public street, highway, or railroad right-of-way, within or partially within the contaminated area, for contamination exceeding a groundwater Enforcement Standard (ES) and/or soil exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL).

**Number of "Governmental Unit/Right-Of-Way Owner" Letters:** 1





**STATE OF WISCONSIN**  
Department of Safety and Professional Services

375 City Center, Suite J  
Oshkosh, Wisconsin 54901-1805

Email: [dsps@wisconsin.gov](mailto:dsps@wisconsin.gov)  
Web: <http://dsps.wi.gov>

**Governor Scott Walker**

**Secretary Dave Ross**

June 12, 2013

Mr. Mark Cummins  
889 Saunders Ave.  
Park Falls, WI 54552

RE: **Final Closure**

**PECFA # 54552-1164-99-A** DNR BRRTS # 03-51-120869

Mark Cummins School for Drummers-Former Anderson Upholstery, 499 Division Street, Park Falls

Dear Mr. Cummins:

The Wisconsin Department of Safety and Professional Services (DPS) received all items required as the conditions for closure of the site referenced above. This site is now listed as "closed" on the DPS database and will be included on the Department of Natural Resources (DNR) Geographic Information System (GIS) Registry of Closed Remediation Sites to address residual soil and groundwater contamination. To review all sites on the GIS Registry web page, visit <http://dnr.wi.gov/topic/Brownfields/rasm.html>. If you intend to construct or reconstruct a potable well on this property, you must get prior DNR approval.

All current and future owners and occupants of the property need to be aware that excavation of contaminated soil may pose a hazard. If soil is excavated, the property owner at the time of excavation must determine whether the material would be considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable statutes and rules.

Costs for sampling and excavation activities conducted after case closure are not eligible for PECFA reimbursement. However, if it is determined that any undisturbed remaining petroleum contamination poses a threat, the case may be reopened and further investigation or remediation may be required. If this case is reopened, any original claim under the PECFA fund would also reopen and you may apply for assistance to the extent of remaining eligibility. It is in your best interest to keep all documentation related to environmental activities at your site.

Thank you for your efforts to bring this case to closure. If you have any questions, please contact me in writing at the letterhead address or by telephone at (920) 303-5410.

Sincerely,

Beth A. Erdman  
Hydrogeologist  
PECFA Site Review Section

cc: Kenneth Shimko-Meridian Environmental Consulting, LLC



**STATE OF WISCONSIN**  
Department of Safety and Professional Services

375 City Center, Suite J  
Oshkosh, Wisconsin 54901-1805

Email: [dsps@wisconsin.gov](mailto:dsps@wisconsin.gov)  
Web: <http://dsps.wi.gov>

**Governor Scott Walker**      **Secretary Dave Ross**

May 15, 2013

Mr. Mark Cummins  
889 Saunders Ave.  
Park Falls, WI 54552

RE: **Conditional Case Closure**

**PECFA # 54552-1164-99-A**      DNR BRRTS # 03-51-120869  
Mark Cummins School for Drummers-Former Anderson Upholstery, 499 Division Street, Park Falls

Dear Mr. Cummins:

The Wisconsin Department of Safety and Professional Services (DPS) reviewed the request for case closure prepared by your consultant, Meridian Environmental Consulting, LLC, for the site referenced above. It is understood that residual soil and groundwater contamination remains on site. DPS has determined that this site does not pose a significant threat to human health or the environment. No further investigation or remedial action is necessary.

**The following condition must be satisfied to obtain final closure:**

- Temporary wells T-8 and T-9, monitoring wells MW-1 through MW-4, MW-20 and piezometers PZ-1 through PZ-3 must be properly abandoned within 60 days and the appropriate documentation forwarded to DPS at the letterhead address within 120 days of the date of this letter. Noncompliance with the abandonment requirement and deadline can result in enforcement action and financial penalties.

Information submitted with your closure request will be included on the Department of Natural Resources (DNR) GIS Registry of Closed Remediation Sites. All sites on the Registry can be viewed via the Remediation and Redevelopment (RR) Sites Map at <http://dnr.wi.gov/topic/Brownfields/rrsm.html>. Because residual contamination remains at the time of case closure, if you intend to construct or reconstruct a potable well on this property, you must get prior DNR approval.

All current and future owners and occupants of the property need to be aware that excavation of contaminated soil may pose a hazard. If soil is excavated, the property owner at the time of excavation must determine whether the material would be considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable statutes and rules. Costs for sampling and excavation activities conducted after the date of this letter are not eligible for PECFA reimbursement.

Timely filing of your final PECFA claim (if applicable) is encouraged. If your claim is not received within 120 days of the date of this letter, interest costs incurred after 60 days from the date of this letter will not be eligible for PECFA reimbursement.

Thank you for your efforts to protect Wisconsin's environment. If you have any questions, please contact me in writing at the letterhead address or by telephone at (920) 303-5410.

Sincerely,

*Beth A. Erdman*  
Beth A. Erdman  
Hydrogeologist  
PECFA Site Review Section

*5/28/13 MW-20 is already  
abandoned from a different  
cleanup + road construction  
per Phil Richard DNR. BAE*

cc: Kenneth Shimko-Meridian Environmental Consulting, LLC

322635

WARRANTY DEED

Document No.

Document Title

Dorothy Anderson, a widow conveys and warrants to Robert M. Cummins and Nicole J. Cummins, husband and wife, as survivorship marital property, the following described real estate in Price County, State of Wisconsin:

The East Forty (40) feet of the West Sixty (60) feet of Lots Two (2) and Three (3), Block Sixteen (16), Park Falls Lumber Company's Plat of the Village, now City of Park Falls.

This is NOT homestead property.

Exception to warranties:

1. Subject to easements, exceptions, reservations and restrictions of record, if any.
2. Subject to town and Price County Zoning, Sanitary Code and Subdivision Control Ordinances.
3. Subject to Flood Plain Zoning Ordinances, if any.

REGISTER OF DEEDS OFFICE  
PRICE COUNTY, WIS.  
Received for Record

DEC 3 2003

9:35  
AT 9:35 O'CLOCK A.M. DULY RECORDED IN  
VOL 531 OF RECORDS ON PAGE 128  
J. H. [Signature]  
REGISTER OF DEEDS

Name and Return Address

Coldwell Banker/Larson Realty  
Post Office Box 108  
Park Falls, WI 54552

271-1014-09  
Parcel Identification Number

Dated this 1st day of December, 2003.

TRANSFER  
\$ 4.00  
FEE

Dorothy Anderson (SEAL)  
Dorothy Anderson

ACKNOWLEDGMENT

STATE OF WISCONSIN )  
                                  ) ss.  
COUNTY OF \*PRICE )

Personally came before me this 1st day of December, 2003, the above named, Dorothy Anderson, to me known to be the person(s) who executed the foregoing instrument and acknowledge the same.

Elaine M. Sandorice

Notary Public Price County, State of Wisconsin  
My Commission expires 06-07-03

THIS INSTRUMENT WAS DRAFTED BY:  
Scott A. Reinhard  
Slaby, Dede, Marshall & Reinhard LLP  
Park Falls, WI 54552  
(715) 782-3258

coldwellanderson-cummins wd



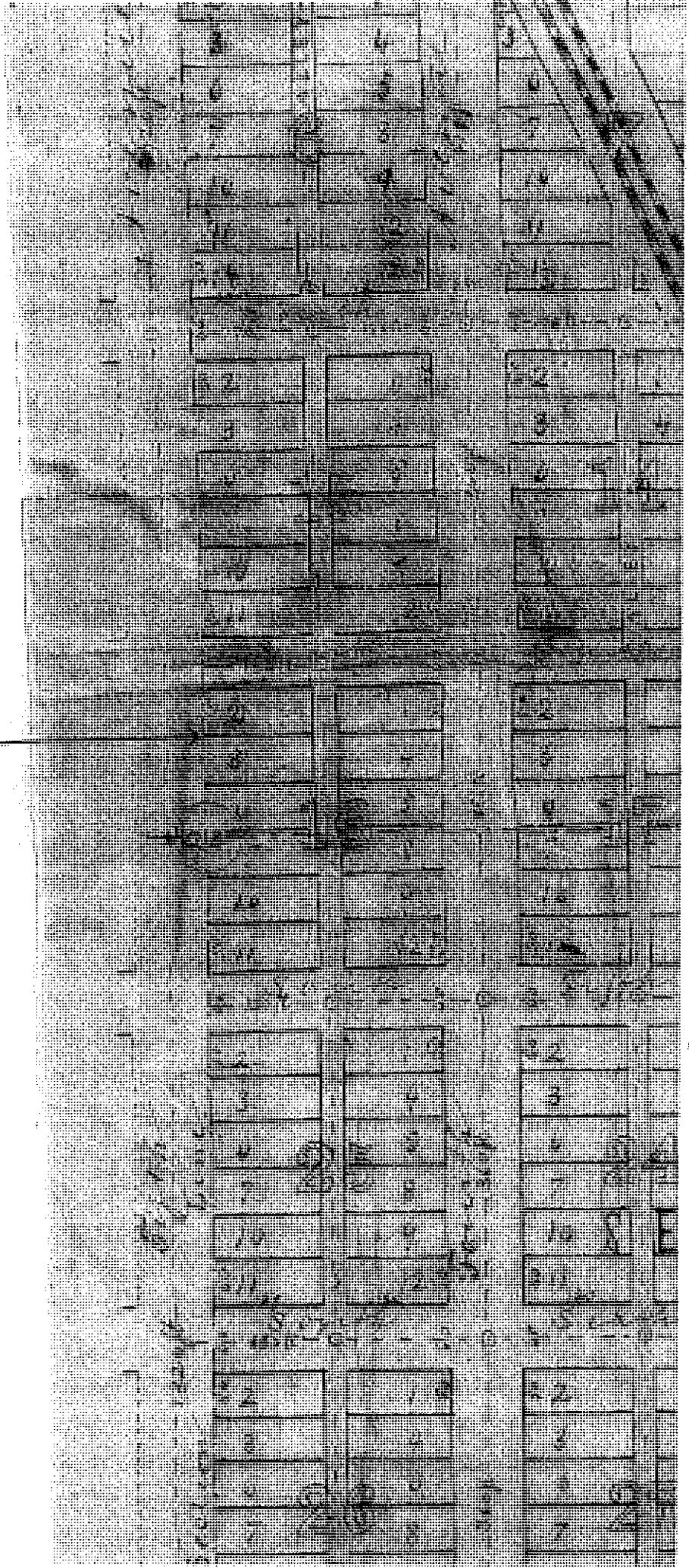
THIS INSTRUMENT WAS DRAFTED BASED UPON  
INFORMATION PROVIDED BY AND AT THE DIRECTION OF:  
Coldwell Banker/Larson Realty  
Post Office Box 108  
Park Falls, Wisconsin 54552  
(715) 762-2232

Figure 0

Park Falls Lumber  
Company's Plat A, the  
U. Mage - Block 16

Site →

Block 16 →



To the best of my knowledge, the attached Warranty Deed (No. 322635) is for the property known as 499 Division Street, Park Falls, Wisconsin 54552 where environmental work was completed.

R. Mark Amis

Date 2-24-13

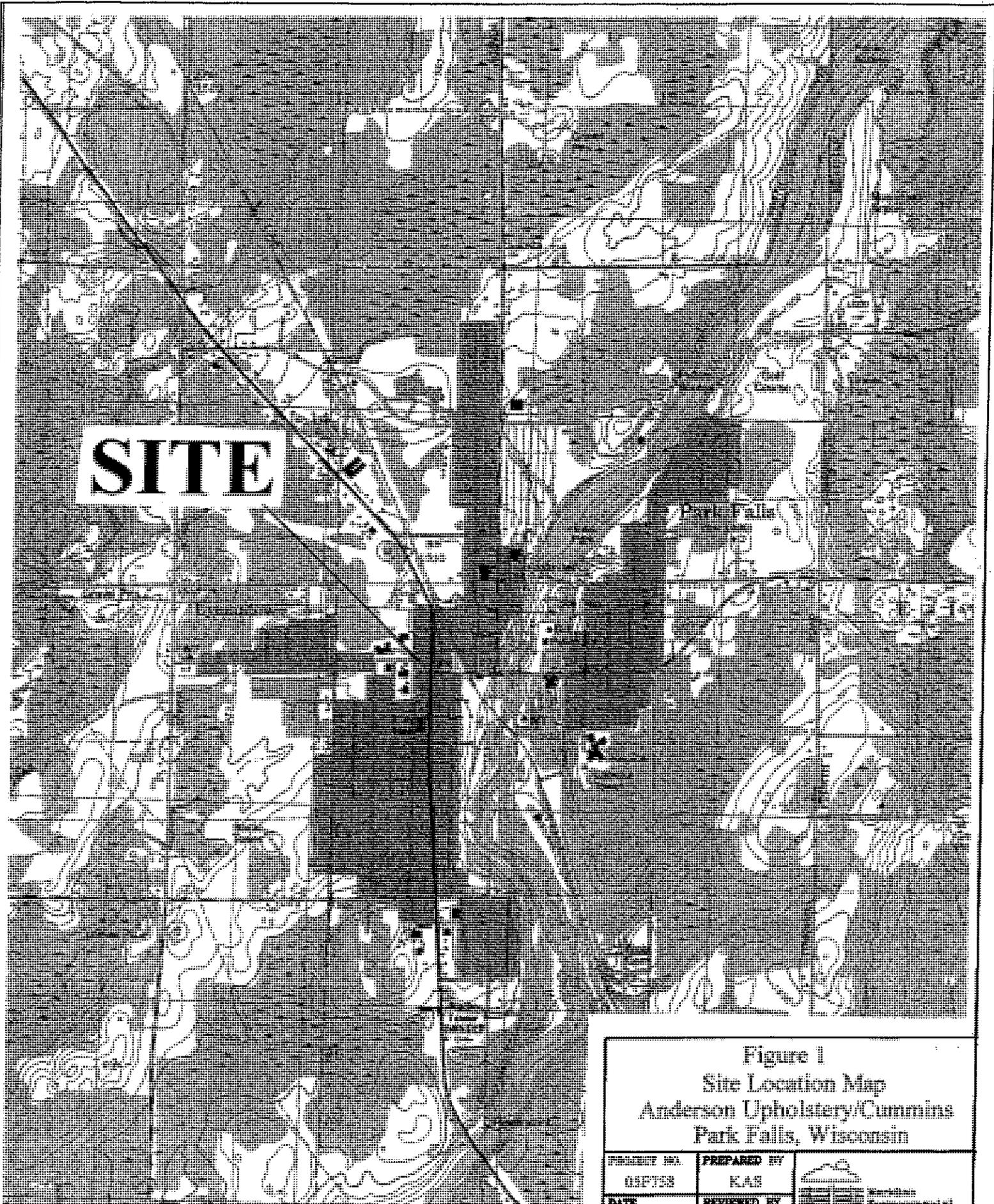
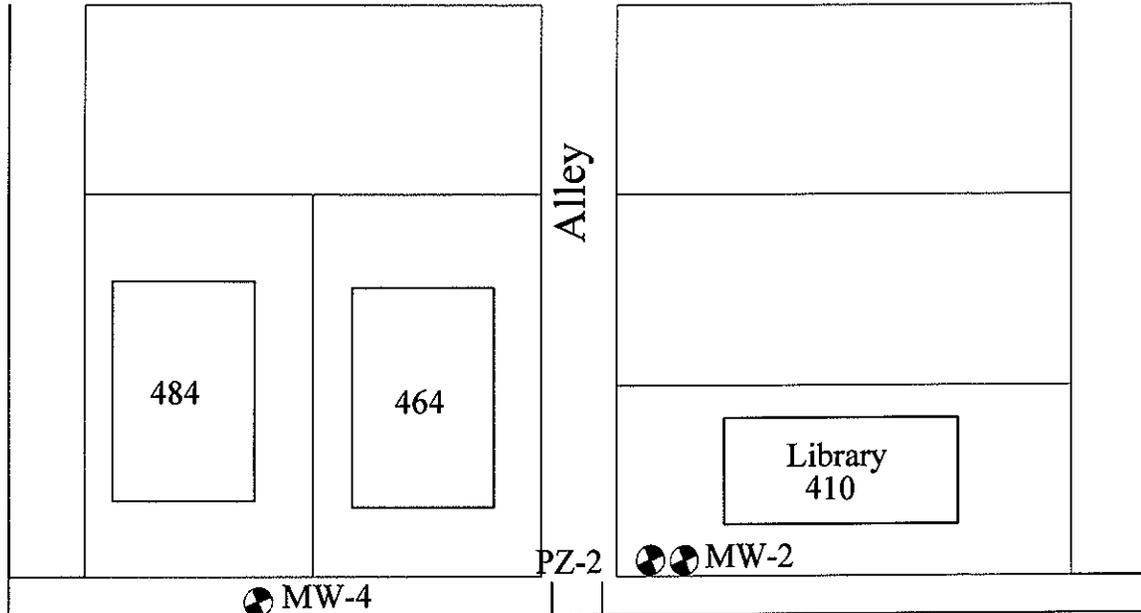


Figure 1  
 Site Location Map  
 Anderson Upholstery/Cummins  
 Park Falls, Wisconsin

PROJECT NO.	PREPARED BY	 Northern Environmental Consulting, LLC
05FT58	KAS	
DATE	REVIEWED BY	
10/6/09	KAS	

5th Ave.

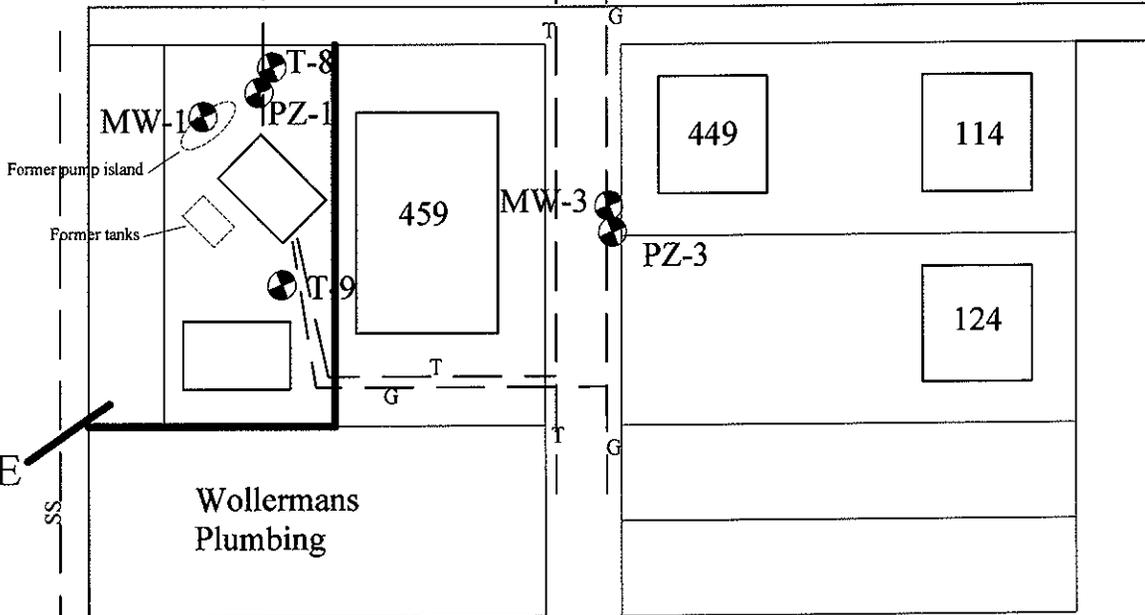


water/sewer

water/sewer

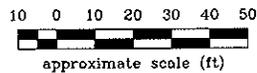
Division St.

MW-20



4th Ave (Hwy 13)

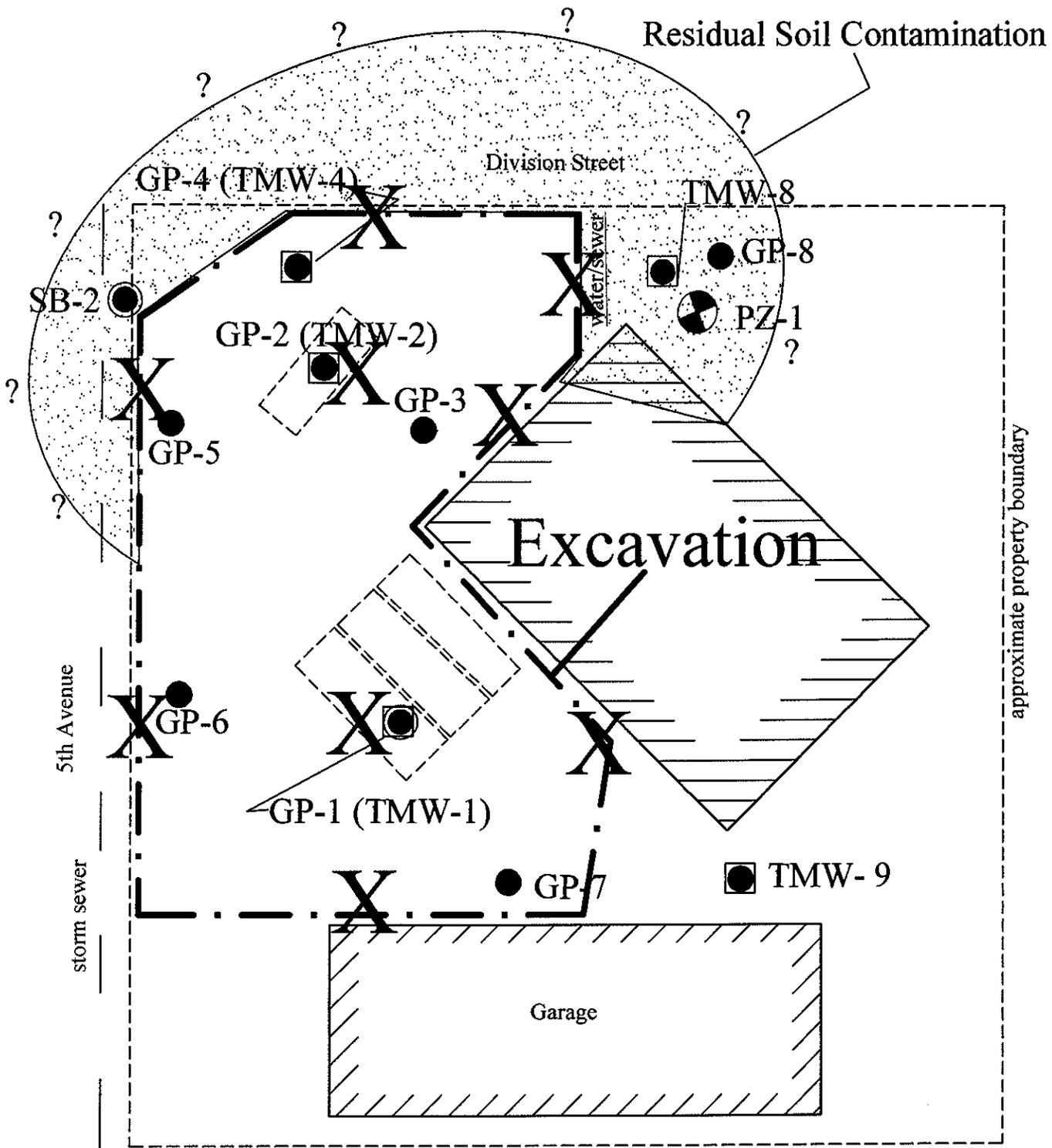
Approximate Lot Boundaries Shown



Buried utilities (G - gas, T - telephone, SS - storm sewer)

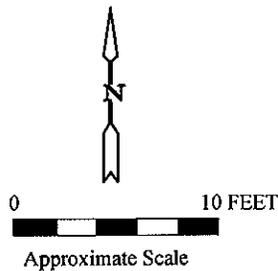
Figure 2  
 Site Map  
 Anderson Upholstery/Cummins  
 Park Falls, WI

PROJECT NO. 05F758	PREPARED BY KAS	 Meridian Environmental Consulting, LLC
DATE 3/31/11	REVIEWED BY KAS	



**Legend**

- X Confirmation Sample
- Geoprobe boring
- ◐ Geoprobe boring/Temporary Well
- ◑ Monitoring well



**Figure 3**  
**Excavation Map**  
 Anderson Upholstery/Cummins  
 Park Falls, Wisconsin

PROJECT NO. 05F758	PREPARED BY KAS	 Meridian Environmental Consulting, LLC
DATE 4/11/11	REVIEWED BY KAS	

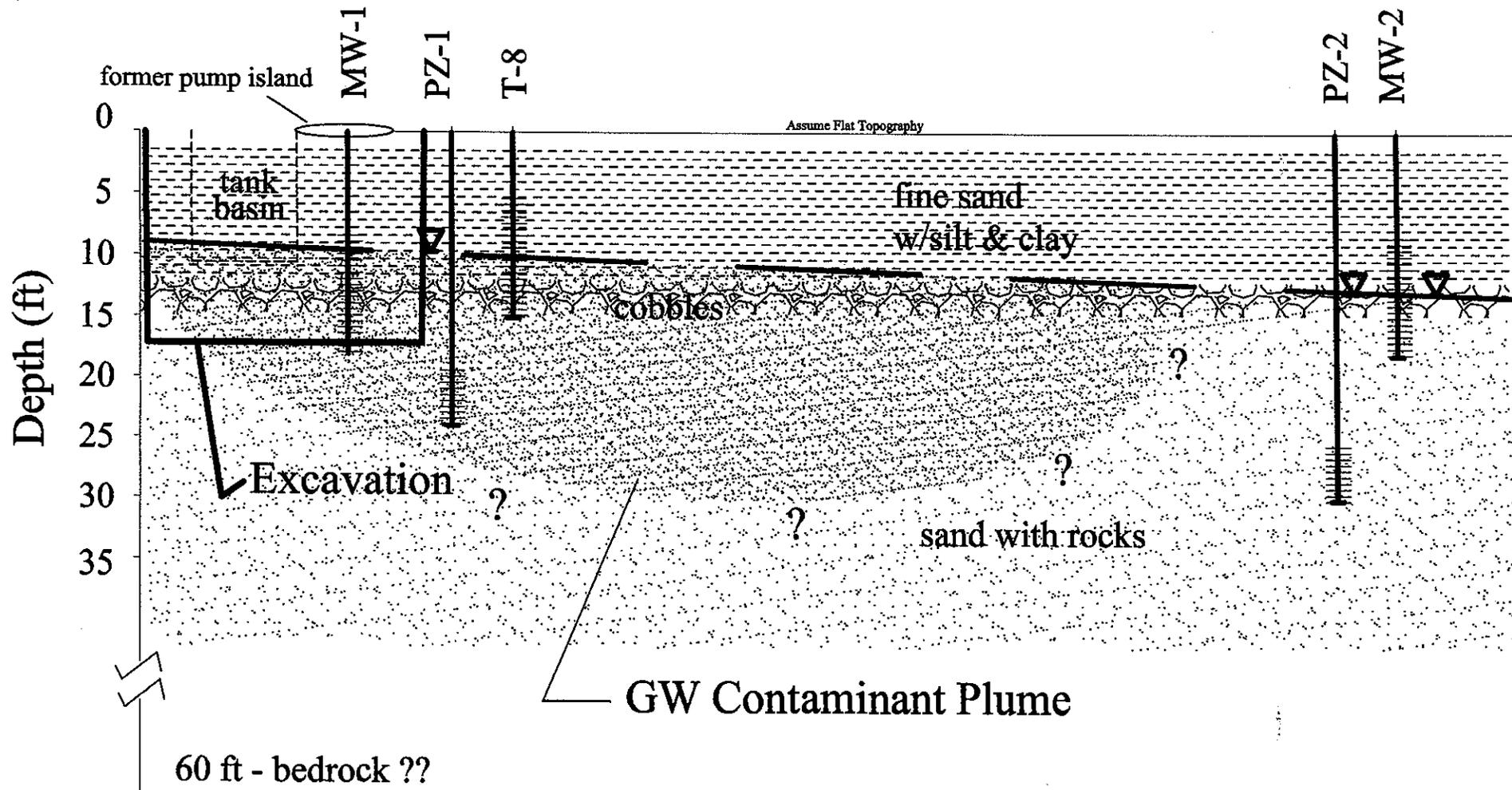
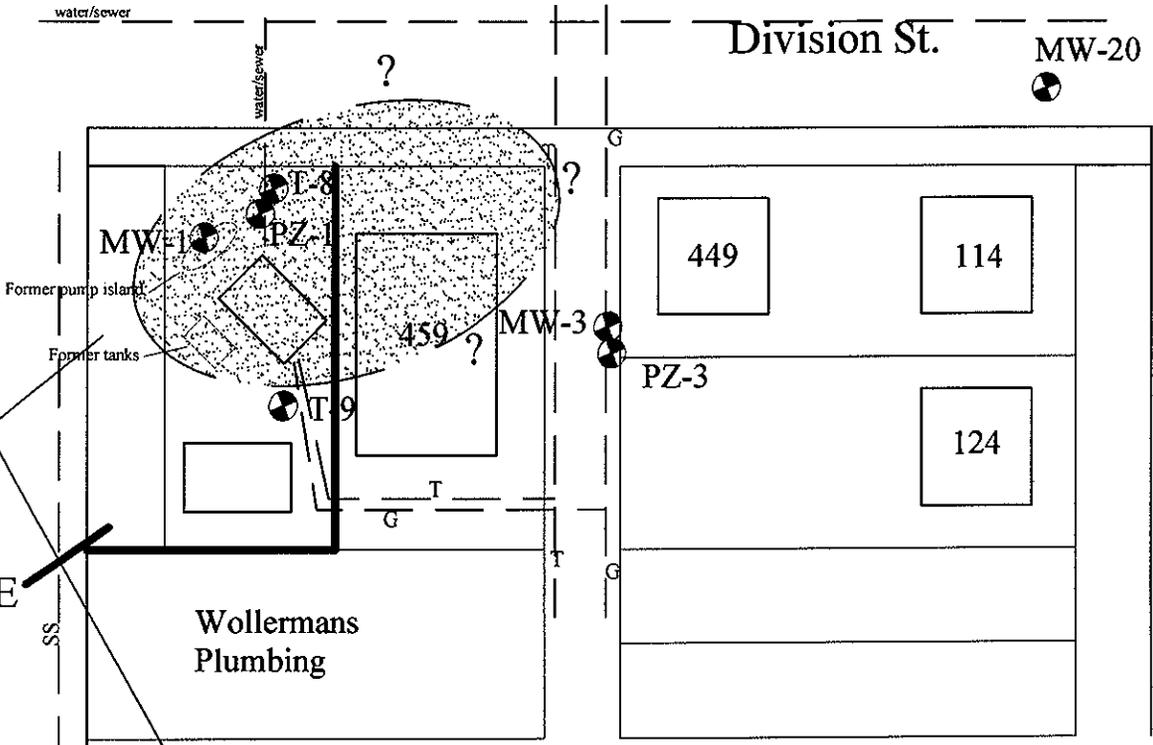
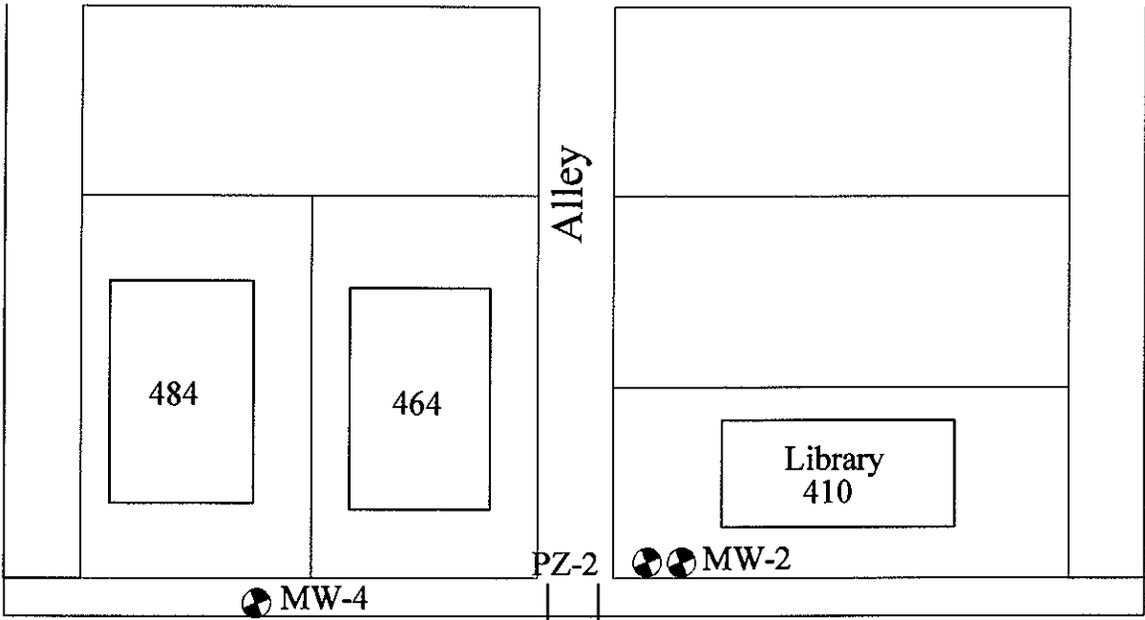


Figure 4  
 Cross Section  
 Anderson Upholstery/Cummins  
 Park Falls, WI

PROJECT NO. 05F758	PREPARED BY KAS	 Meridian Environmental Consulting, LLC
DATE 3/31/11	REVIEWED BY KAS	



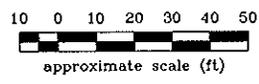
5th Ave.



4th Ave (Hwy 13)

SITE

Estimated Extent of Impacted Ground Water



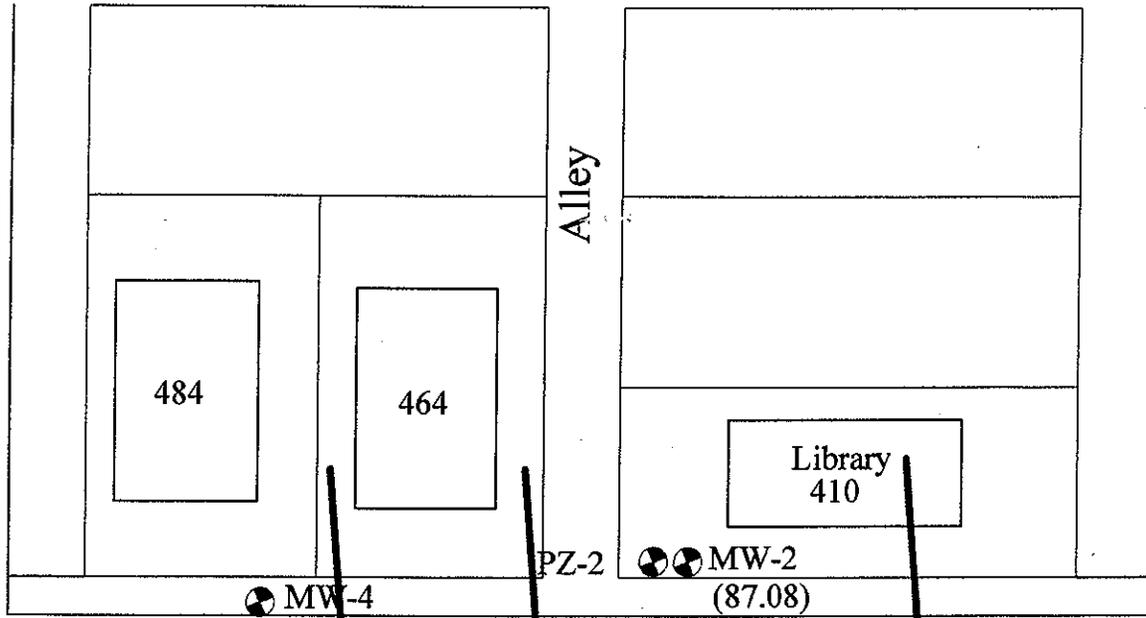
— — Buried utilities  
(G - gas, T - telephone, SS - storm sewer)

Figure 6  
Estimated Extent of Impacted Ground Water  
Anderson Upholstery/Cummins  
Park Falls, WI

PROJECT NO. 05F758	PREPARED BY KAS	 Meridian Environmental Consulting, LLC
DATE 2/12/12	REVIEWED BY KAS	



5th Ave.



Alley

484

464

Library  
410

MW-4  
(90.2)

PZ-2 MW-2  
(87.08)

Division St.

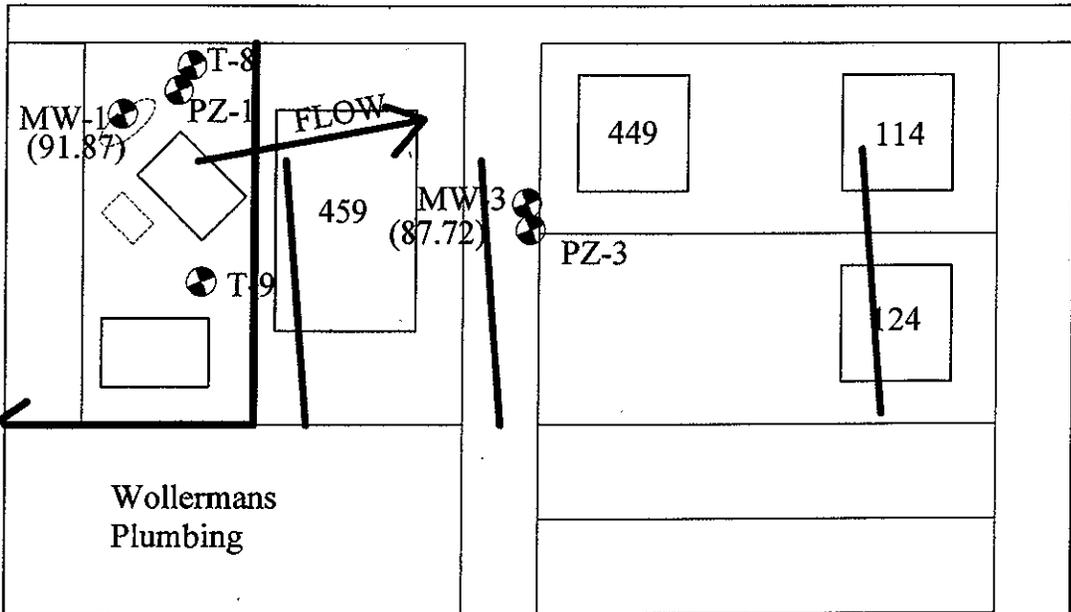
MW-20  
(85.5)

90

88

86

4th Ave (Hwy 13)



MW-1  
(91.87)

T-8

PZ-1

FLOW

459

MW-3  
(87.72)

T-9

449

114

PZ-3

24

SITE

Wollermans  
Plumbing

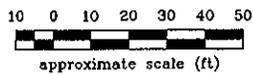


Figure 5  
Ground Water Table Contour Map (7/28/11)  
(Monitoring Wells Only)  
Anderson Upholstery/Cummins  
Park Falls, WI

PROJECT NO. 05F758	PREPARED BY KAS	
DATE 2/12/12	REVIEWED BY KAS	

Meridian  
Environmental  
Consulting, LLC

**Table 1: Soil Sample Analytical Results**

Former Anderson Upholstery  
Park Falls, Wisconsin  
Meridian No. 05F758

Sample	Units	1,2,4-TMB	1,3,5-TMB	1,2-dibromo ethane	1,2 DCA	Benzene	Ethyl benzene	m,p-Xylenes	o-xylenes	Total Xylenes	MTBE	Naphthalene	Toluene	1,2,3-trichloro propane	4-isopropyltoluene	chloro benzene	dibromo chloro methane	hexa chloro butadiene	isopropyl benzene (cumene)	Trichloro fluoro methane
GP-1: 3-4	ug/kg	<36	<14	<27	<20	<10	<15	<50	<50	<50	<84	<17	45.4	<49	<35	<11	<29	<35	<14	34.4
GP-1: 7-8	ug/kg	11100	3680	<27	<20	<10	255	600	87.6	687.6	<84	506	<41	<49	522	140	57.2	<35	416	<28
GP-1: 11-12	ug/kg	486	141	<27	<20	<10	228	834	193	1027	<84	90.9	237	<49	<35	<11	<29	<35	31.1	<28
GP-2: 3-4	ug/kg	92500	39600	<270	<200	<100	1370	35100	33700	68800	<840	11200	3900	<490	3760	<110	<290	425	<140	<280
GP-2: 7-8	ug/kg	321000	107000	<270	<200	1150	15600	19800	132000	151800	<840	41700	28600	5630	17000	<110	787	<350	2210	<280
GP-2: 10-12	ug/kg	7830	2300	<27	<20	2090	3120	12400	4500	16900	<84	1290	8440	<49	244	<11	<29	<35	311	<28
GP-2: 14-15	ug/kg	261	64.1	56.5	<20	1710	226	728	366	1094	<84	73.2	1970	<49	<35	<11	<29	<35	<14	<28
GP-3: 3-4	ug/kg	49.8	<14	NA	<20	<10	<15	58.9	<50	58.9	<84	<17	<41	NA	NA	NA	NA	NA	NA	NA
GP-3: 7-8	ug/kg	1820	587	NA	<20	127	341	1200	637	1837	<84	404	359	NA	NA	NA	NA	NA	NA	NA
GP-4: 3-4	ug/kg	<36	<14	NA	<20	<10	<15	<50	<50	<50	<84	53.5	<41	NA	NA	NA	NA	NA	NA	NA
GP-4: 7-8	ug/kg	92200	28300	NA	<200	2720	41300	160000	65300	225300	<840	14400	57700	NA	NA	NA	NA	NA	NA	NA
GP-5: 7-8	ug/kg	178000	49700	NA	<500	7690	76400	298000	114000	412000	<2100	33700	144000	NA	NA	NA	NA	NA	NA	NA
GP-6: 3-4	ug/kg	56	<14	NA	<20	<10	<15	60.2	<50	60.2	<84	<17	<41	NA	NA	NA	NA	NA	NA	NA
GP-6: 7-8	ug/kg	84400	29100	NA	<200	<100	10700	41400	6950	48250	<840	4370	4600	NA	NA	NA	NA	NA	NA	NA
GP-7: 3-4	ug/kg	<36	<14	NA	<20	<10	<15	<50	<50	<50	<84	<17	<41	NA	NA	NA	NA	NA	NA	NA
GP-7: 7-8	ug/kg	<36	<14	NA	<20	<10	<15	<50	<50	<50	<84	<17	<41	NA	NA	NA	NA	NA	NA	NA
GP-7: 11-12	ug/kg	1150	2550	NA	<20	<10	1090	1690	<50	1690	<84	297	52.5	NA	NA	NA	NA	NA	NA	NA
GP-8: 3-4	ug/kg	<36	<14	NA	<20	<10	<15	<50	<50	<50	<84	<17	<41	NA	NA	NA	NA	NA	NA	NA
GP-8: 7-8	ug/kg	<36	<14	NA	<20	<10	<15	<50	<50	<50	<84	<17	<41	NA	NA	NA	NA	NA	NA	NA
GP-8: 11-12	ug/kg	1860	4750	NA	<40	<20	272	305	<100	305	<168	433	<82	NA	NA	NA	NA	NA	NA	NA
<b>Excavation Confirmation Samples</b>																				
Tank S (4 ft)	mg/kg	0.092	<0.019	NA	NA	<0.017	<0.019	0.185	<0.017	0.185	<0.012	<0.019	0.098	NA	NA	NA	NA	NA	NA	NA
Tank W (4 ft)	mg/kg	5.76	3.11	NA	NA	<0.086	0.756	1.63	<0.086	1.63	<0.059	0.488	0.748	NA	NA	NA	NA	NA	NA	NA
Tank Bottom (17 ft)	mg/kg	0.127	0.087	NA	NA	0.164	0.113	0.309	0.134	0.443	<0.012	<0.019	0.56	NA	NA	NA	NA	NA	NA	NA
Tank E (4 ft)	mg/kg	0.138	0.116	NA	NA	<0.018	<0.02	0.187	<0.018	0.187	<0.012	0.107	0.098	NA	NA	NA	NA	NA	NA	NA
Bldg Door (4 ft)	mg/kg	<0.013	<0.018	NA	NA	<0.016	0.079	0.198	<0.016	0.198	<0.011	<0.018	0.095	NA	NA	NA	NA	NA	NA	NA
P.I. E (4 ft)	mg/kg	295	102	NA	NA	<1.78	26.9	219	125	344	<1.22	48	29.1	NA	NA	NA	NA	NA	NA	NA
P.I. N (4 ft)	mg/kg	244	83.7	NA	NA	<1.67	29.6	144	67.5	211.5	<1.15	39.7	28.5	NA	NA	NA	NA	NA	NA	NA
P.I. Floor (16 ft)	mg/kg	2.49	0.861	NA	NA	0.385	0.617	2.19	0.912	3.102	<0.014	0.722	1.14	NA	NA	NA	NA	NA	NA	NA
P.I. W (4 ft)	mg/kg	340	113	NA	NA	10.3	104	398	138	536	<1.21	49	115	NA	NA	NA	NA	NA	NA	NA

**Regulatory Standards**

NR720	ug/kg				4.9	5.5	2900			4100			4100							
NR746 Table 1	ug/kg	83000	11000		600	8500	4600			42000		2700	38000							
NR746 Table 2	ug/kg				540	1100														

100 concentration exceeds regulatory standard

**Table 2: Ground Water Analytical Data**

Former Anderson Upholstery  
Park Falls, Wisconsin  
Meridian No. 05F758

Well	Date	Depth to Water (ft)	Screened Interval (ft)	1,2,4 TMB	1,3,5 TMB	Total TMBs	Benzene	Ethylbenzene	m&p-Xylene	o-Xylene	Total Xylenes	MTBE	Naphthalene	Toluene	EDB
Units				ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
NR140 ES						480	5	700			2000	60	100	800	0.05
NR140 PAL						96	0.5	140			400	12	10	160	0.005
TMW-1	Installed 10/27/09		2-12												
	11/13/2009	4.65		17.4	15.6	33	2.66	<5	3.37	2.63	6	<.3	<.8	<.37	NA
	3/23/2010	5.06		<.4	<.44	<.44	<.31	<.5	<.62	<.77	<.77	<.3	<.8	<.37	NA
	Abandoned 9/27/10 for excavation														
TMW-2	Installed 10/27/09		7-17												
	11/13/2009	8.78		11700	3530	16230	17700	7170	27300	11100	38400	675	2050	37900	NA
	3/23/2010	10.6		16900	6000	21900	18000	8520	33400	14200	47600	245	4030	34900	NA
	Abandoned 9/27/10 for excavation														
TMW-4	Installed 10/27/09		3-8												
	11/13/2009	5.6		3350	1110	4470	223	607	3630	2810	5840	<15	675	1070	NA
	3/23/2010	5.41		643	563	1212	143	279	1050	1230	2280	<15	262	801	NA
	Abandoned 9/27/10 for excavation														
TMW-8	Installed 2/23/10		5-15												
	3/23/2010	11.48		902	307	1209	<.1	608	1670	403	2073	31.9	223	685	NA
	10/13/2010	6.9		2.24	1.9	4.14	<.31	<.5	<.62	<.77	<.77	<.3	<.2	<.37	NA
	1/31/2011	could not locate													
	4/25/2011	6.22		<.4	<.44	<.44	<.31	<.5	<.62	<.77	<.77	<.3	<.2	<.37	NA
TMW-9	Installed 3/9/10														
	3/23/2010	10.32	3.5-13.5	722	250	972	<.1	76.6	854	203	1057	48.3	137	47.2	NA
	10/13/2010	6.53		0.722	<.44	0.722	<.31	<.5	0.89	<.77	0.89	<.3	<.2	<.37	NA
	1/31/2011	10.2		15.2	2.66	17.86	0.805	11	40.5	2.27	42.77	2.24	12.4	5.03	NA
	4/25/2011	6.48		<.4	<.44	<.44	<.31	<.5	<.62	<.77	<.77	<.3	<.2	<.37	NA
	7/28/2011	8.98		2.72	0.539	3.259	<.31	2.54	5.95	<.77	5.95	<.3	<.2	0.432	NA
MW-1	Installed 10/6/10		8-18												
	10/13/2010	6.6		348	133	481	229	169	653	414	1067	<10	56.9	472	14.9
	1/31/2011			Inaccessible											
	4/25/2011	6.69		186	93.7	279.7	473	288	641	553	1194	<6	76.6	616	NA
	7/28/2011	7.65		18.1	34.3	52.4	69.6	31.4	39.5	1.37	40.87	2.91	34	4.23	NA
MW-2	Installed 10/6/10		8-18												
	10/13/2010	10.68		<.2	<.2	<.2	<.2	<.2	<.4	<.2	<.4	<.5	<.1	<.4	<.3
	1/31/2011	13		<.4	<.44	<.44	<.31	<.5	<.62	<.77	<.77	<.3	<.2	<.37	NA
	4/25/2011	11.37		<.4	<.44	<.44	<.31	<.5	<.62	<.77	<.77	<.3	<.2	<.37	NA
	7/28/2011	12.05		<.4	<.44	<.44	<.31	<.5	<.62	<.77	<.77	<.3	<.2	<.37	NA
MW-3	Installed 10/6/10		10-20												
	10/13/2010	12.5		<.2	<.2	<.2	<.2	<.2	<.4	<.2	<.4	<.5	<.1	<.4	<.3
	1/31/2011	15.09		<.4	<.44	<.44	<.31	<.5	<.62	<.77	<.77	<.3	<.2	<.37	NA
	4/25/2011	13.88		<.4	<.44	<.44	<.31	<.5	<.62	<.77	<.77	<.3	<.2	<.37	NA
MW-4	Installed 10/6/10		8-18												
	10/13/2010	8.28		<.2	<.2	<.2	<.2	<.2	<.4	<.2	<.4	<.5	<.1	<.4	<.3
	1/31/2011	10.36		<.4	<.44	<.44	<.31	<.5	<.62	<.77	<.77	<.3	<.2	<.37	NA
	4/25/2011	8.41		<.4	<.44	<.44	<.31	<.5	<.62	<.77	<.77	<.3	<.2	<.37	NA
PZ-1	Installed 2/23/10		19-24												
	3/23/2010	12.08		1440	378	1818	7630	2540	7830	3440	11270	59.1	506	12100	NA
	10/13/2010	7.46		1470	328	1798	5310	1870	7420	3140	10560	40.5	586	7550	NA
	1/31/2011	9.14		1590	434	2024	4770	1850	8580	3200	11780	63	664	14100	NA
	4/25/2011	8.48		1670	513	2183	5520	2170	8110	3240	11350	167	753	15200	NA
	7/28/2011	8.98		1480	432	1912	4710	2340	7460	2840	10100	<7.5	586	13400	NA
PZ-2	Installed 10/6/10		25-30												
	10/13/2010	10.8		0.27	<.2	0.27	<.2	<.2	<.4	<.2	<.4	<.5	<.1	<.4	<.3
	1/31/2011	13.02		<.4	<.44	<.44	<.31	<.5	<.62	<.77	<.77	<.3	<.2	<.37	NA
	4/25/2011	11.41		<.4	<.44	<.44	<.31	<.5	<.62	<.77	<.77	<.3	<.2	<.37	NA
PZ-3	Installed 10/6/10		25-30												
	10/13/2010	12.7		0.2	<.2	0.2	<.2	<.2	<.4	<.2	<.4	<.5	<.1	<.4	<.3
	1/31/2011	15.15		<.4	<.44	<.44	<.31	<.5	<.62	<.77	<.77	<.3	<.2	<.37	NA
	4/25/2011	13.91		<.4	<.44	<.44	<.31	<.5	<.62	<.77	<.77	<.3	<.2	<.37	NA
MW-20	Installed by Flambeau Oil prior to this site investigation														
	7/28/2011	12.78	11.5 - 21.5	<.4	<.44	<.44	<.31	<.5	<.62	<.77	<.77	<.3	<.2	<.37	NA

1 Concentration present above method detection limit  
100 concentration exceeds regulatory standard  
Additional parameters detected below NR140 Enforcement Standards - see lab reports

**Table 3: Ground Water Level Measurements**

Former Anderson Upholstery  
Park Falls, Wisconsin  
Meridian No. 05F758

MW-1			MW-2			MW-3					
Surface Elevation (ft)			99.5			99.25			102		
Top of Casing elevation (ft)			99.52			99.13			101.8		
Top of Screen Elevation (ft)			91.52			91.13			91.8		
Bottom of Screen Elevation (ft)			81.52			81.13			81.8		
Well Diameter			2 inch			2 inch			2 - inch		
<i>Installed</i>			10/6/2010			<i>Installed</i>			10/6/2010		
Meas. Date	Depth to Water (ft)	GW Elev (ft)	Meas. Date	Depth to Water (ft)	GW Elev (ft)	Meas. Date	Depth to Water (ft)	GW Elev (ft)			
10/13/2010	6.6	92.92	10/13/2010	10.68	88.45	10/13/2010	12.5	89.3			
1/31/2011	inaccessible - frozen gravel		1/31/2011	13	86.13	1/31/2011	15.09	86.71			
4/25/2011	6.69	92.83	4/25/2011	11.37	87.76	4/25/2011	13.88	87.92			
7/28/2011	7.65	91.87	7/28/2011	12.05	87.08	7/28/2011	14.08	87.72			

MW-4			T-8			T-9					
Surface Elevation (ft)			99.75			99.5			100.2		
Top of Casing elevation (ft)			99.6			99.43			99.93		
Top of Screen Elevation (ft)			91.6			94.43			96.43		
Bottom of Screen Elevation (ft)			81.6			84.43			86.43		
Well Diameter			2 inch			1 inch			2 - inch		
<i>Installed</i>			10/6/2010			<i>Installed</i>			3/9/2010		
Meas. Date	Depth to Water (ft)	GW Elev (ft)	Meas. Date	Depth to Water (ft)	GW Elev (ft)	Meas. Date	Depth to Water (ft)	GW Elev (ft)			
			3/23/2010	11.48	87.95	3/23/2010	10.32	89.61			
10/13/2010	8.28	91.32	10/13/2010	6.9	92.53	10/13/2010	6.53	93.4			
1/31/2011	10.36	89.24	1/31/2011	Could not locate		1/31/2011	10.2	89.73			
4/25/2011	8.41	91.19	4/25/2011	6.22	93.21	4/25/2011	6.48	93.45			
7/28/2011	9.4	90.2	7/28/2011	8.05	91.38	7/28/2011	8.98	90.95			

PZ-1			PZ-2			PZ-3					
Surface Elevation (ft)			100			99.25			102		
Top of Casing elevation (ft)			99.26			99.11			101.75		
Top of Screen Elevation (ft)			81			74.11			76.75		
Bottom of Screen Elevation (ft)			76			69.11			71.75		
Well Diameter			1 - inch			1 -inch			2 - inch		
<i>Installed</i>			2/23/2010			<i>Installed</i>			2/23/2010		
Meas. Date	Depth to Water (ft)	GW Elev (ft)	Meas. Date	Depth to Water (ft)	GW Elev (ft)	Meas. Date	Depth to Water (ft)	GW Elev (ft)			
3/23/2010	12.08	87.18				10/13/2010	12.7	89.05			
10/13/2010	7.46	91.8	10/13/2010	10.8	88.31	1/31/2011	15.15	86.6			
1/31/2011	9.14	90.12	1/31/2011	13.02	86.09	4/25/2011	13.91	87.84			
4/25/2011	8.48	90.78	4/25/2011	11.41	87.7	7/28/2011	14.2	87.55			
7/28/2011	8.98	90.28	7/28/2011	12.1	87.01						

**MW-20 (installed by Flambeau Oil)**

Surface Elevation (ft)			98.5		
Top of Casing elevation (ft)			98.28		
Top of Screen Elevation (ft)			87		
Bottom of Screen Elevation (ft)			77		
Well Diameter			2 - inch		
<i>Installed</i>			5/29/1992		
Meas. Date	Depth to Water (ft)	GW Elev (ft)			
7/28/2011	12.78	85.5			

March 7, 2013

Mr. Mark S. Tuma  
P.O. Box 1793  
Elko, NV 89803

Subject: **GIS Notification for 459 Division St, Park Falls, Wisconsin 54552**  
DNR BRRTS No. 03-51-120869  
PECFA No. 54552-1164-99  
Meridian No. 05F758

Dear Mr. Tuma:

I am writing because you own the property located at 459 Division St, Park Falls, Wisconsin 54552. This property is adjacent to 499 Division St, Park Falls, Wisconsin. The adjacent property (499 Division St) formerly sold gasoline. Over the years, the petroleum system released gasoline into the soil and ground water. The impacted ground water appears to extend eastward underneath your property (at 459 Division St). Therefore, I am required to send you this notification. You do not need to do anything in response to this letter. However, if you have any questions, please do not hesitate to contact me.

The remainder of this letter provides standard language required for this notification.

I have conducted an investigation and cleanup in cooperation with the Wisconsin Department of Natural Resources (DNR) and the Wisconsin Department of Safety and Professional Services (DSPS). I am requesting the DSPS grant "Closure" of this case. Closure means that the DSPS will not be requiring any further investigation or cleanup action be taken.

The DSPS will not review the Closure Request for at least 30 days after the date of this letter. As an affected property owner, you have a right to contact DSPS to provide any technical information that indicates Closure should not be granted. If you would like to submit any information to DSPS that is relevant to this Closure request, you should mail that information to Beth Erdman, Wisconsin DSPS, 375 City Center, Suite I, Oshkosh, WI 54901-4877. You can also call her at 920-303-5410.

If closure is approved, the following continuing obligation (re: well construction) applies to your property.

Ground water contamination that appears to have originated on the property located at 499 Division St has migrated onto your property at 459 Division St. The levels of ground water contamination are above the state ground water enforcement standards found in chapter NR140, Wisconsin Administrative Code.

The environmental consultants who have investigated this contamination have informed me that this ground water contamination is stable or receding and will naturally degrade over time. They

Notification to 459 Division St, Park Falls, Wisconsin  
Page 2

believe allowing natural attenuation to complete the cleanup at this site will meet the requirements for case closure that are found in chapter NR726, Wisconsin Administrative Code. Therefore, I am requesting DSPS accept natural attenuation as the final remedy for this site and grant case closure.

The following DNR fact sheet (RR671 – “What Landowners Should Know: Information about Using Natural Attenuation to Clean Up Contaminated Ground Water”) has been included with this letter, to help explain the use of natural attenuation as a remedy. If the fact sheet is lost, you may obtain a copy at <http://dnr.wi.gov/files/PDF/pubs/rr/RR671.pdf>

The continuing obligation referenced herein is: *Should you or any subsequent property owner wish to construct or reconstruct a well on your property, special well construction standards may be necessary to protect the well from the remaining contamination.* Any well driller who proposes to construct a well on your property in the future will first need to obtain approval from a regional water supply specialist in DNR’s Drinking Water and Ground Water Program. The well construction application, form 3300-254, is on the internet at <http://dnr.wi.gov/org/water/dwg/forms/3300254.pdf> or may be accessed through the GIS Registry web address.

Before I request closure, I will need to inform the Department as to who will be responsible for the continuing obligation on your property regarding construction of water supply wells. Under s. 292.12, Wis. Stats., the responsibility for maintaining all necessary continuing obligations for your property (i.e., contact DNR prior to constructing a water supply well) will fall on you or any subsequent property owner, unless another person has a legally enforceable responsibility to comply with the requirements of the final closure letter. If you need more time to finalize an agreement for this responsibility, you will need to request additional time from DSPS.

Under s. 292.12(5), Wis. Stats., occupants of this property are also responsible for complying with any continuing obligations. Please notify any current and future occupants that may be affected by this continuing obligation, by supplying them with a copy of this letter. The DNR Fact Sheet, RR-819, “Continuing Obligations for Environmental Protection” has been included with this letter, to help explain a property owner’s responsibility for continuing obligations on their property. If the fact sheet is lost, you may obtain a copy at <http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf>

Once the Department makes a decision on my Closure request, it will be documented in a letter. If the Department grants Closure, you will receive a copy of the Closure letter. If you need to, you may also obtain a copy of the Closure letter by requesting a copy from me, by writing to the DSPS contact (Beth Erdman), or by accessing the DNR Geographic Information System (GIS) Registry (via RR Sites Map) at <http://dnr.wi.gov/topic/Brownfields/clean.html>. The final closure letter will contain a description of the continuing obligation. The final closure letter and a map of the properties affected will be included as part of the site file attached on the GIS Registry.

If this case is closed, all properties within the site boundaries where ground water contamination attains or exceeds chapter NR140 ground water enforcement standards will be listed on the publically accessible Bureau of Remediation and Redevelopment Tracking System on the Web (BOTW) to provide public notice of remaining contamination and of any continuing obligations. In addition, information will be displayed on the RR Sites Map under the GIS Registry theme. This GIS Registry is available to the general public on the DNR web site. DNR approval prior to well construction or reconstruction is required for all sites shown on the GIS Registry.

Notification to 459 Division St, Park Falls, Wisconsin  
Page 3

Please review the following legal description of your property, and notify me within the next 30 days if the legal description is incorrect.

*East half (1/2) of Lots 2&3, Block 16, Park Falls Lumber Co. Plat of the Village, now City of Park Falls, Wisconsin, Price County*

If you need more information about the proposed cleanup completion and request for closure, you may contact me at 889 Saunders Ave, Park Falls, WI 54552. Or you may also contact the DSPS Project Manager: Beth Erdman, Wisconsin DSPS, 375 City Center, Suite I, Oshkosh, WI 54901-4877. You can also call her at 920-303-5410.

Sincerely,



Mark Cummins  
889 Saunders Ave  
Park Falls, WI 54552



# Using Natural Attenuation to Clean Up Contaminated Groundwater: What Landowners Should Know

PUB-RR-671

September 2012

## What Is Natural Attenuation?

Natural attenuation makes use of natural processes in soil and groundwater to contain the spread of contamination and to reduce the amount of contamination from chemical releases.

Natural attenuation is an *in-situ* treatment method. This means that contaminants are left in place while natural attenuation works on them. Natural attenuation is relied upon to clean up contamination that remains after the source of the contamination is removed. An example of a source of contamination would be a leaking underground petroleum tank.

## How Does Natural Attenuation Work?

Natural attenuation processes work at many sites, but the rate and degree of effectiveness varies from property to property, depending upon the type of contaminants present and the physical, chemical and biological characteristics of the soil and groundwater.

Natural attenuation processes can be divided into two broad categories – destructive and non-destructive. Destructive processes destroy contaminants. The most common destructive process is **biodegradation**.

Non-destructive processes do not destroy the contaminant, but reduce contaminant concentrations in groundwater through **dilution**, **dispersion** or **adsorption**.

## Biodegradation

Biodegradation is a process in which microorganisms that naturally occur in soil and

groundwater (e.g. yeast, fungi, or bacteria), break down, or degrade, hazardous substances to less toxic or non-toxic substances. Microorganisms, like humans, eat and digest organic compounds for nutrition and energy (organic compounds contain carbon and hydrogen atoms).

Some types of microorganisms can digest organic substances such as fuels or solvents that are hazardous to humans. Microorganisms break down the organic contaminants into harmless products – mainly carbon dioxide and water. Once the contaminants are degraded, the microorganism populations decline because they have used their food sources. These small populations of microorganisms pose no contaminant or health risk.

Many organic contaminants, like petroleum, can be biodegraded by microorganisms in the underground environment. For example, biodegradation processes can effectively cleanse soil and groundwater of hydrocarbon fuels such as gasoline and benzene, toluene, ethylbenzene, and xylene – known as the BTEX compounds, under certain conditions.

Biodegradation can also breakdown other contaminants in groundwater such as trichloroethylene (TCE), a chlorinated solvent used in metal cleaning. However, the processes involved are harder to predict and are less effective at contaminant removal compared to petroleum-contaminated sites



Wisconsin Department of Natural Resources  
P.O. Box 7921, Madison, WI 53707  
[dnr.wi.gov/topic/Brownfields](http://dnr.wi.gov/topic/Brownfields)



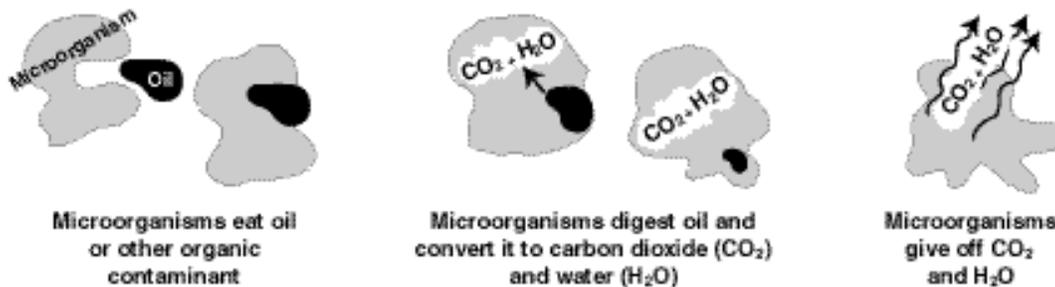


Figure 1. Schematic Diagram of Aerobic Biodegradation in Soil

### Dilution and Dispersion

The effects of dilution and dispersion reduce contaminant concentrations but do not destroy contaminants. Clean water from the surface seeps underground to mix with and dilute contaminated groundwater.

Other processes that lead to reduced concentrations of contaminants include clean groundwater flowing into contaminated areas, and the dispersion of pollutants as they spread out and away from the main path of the contaminated plume.

### Adsorption

Adsorption occurs when contaminants attach or “sorb” to underground particles. Most oily substances (like petroleum compounds) repel water and escape from the groundwater by attaching to organic matter and clay minerals in the subsurface.

This process holds back or retards contaminant movement and reduces the concentration of contaminants in the groundwater. However, like dilution and dispersion, adsorption does not destroy contaminants.

### Why Consider Natural Attenuation To Clean Up Soil And Groundwater?

In certain situations, natural attenuation is an effective, inexpensive cleanup option and the most appropriate way to remediate some contamination problems. Natural attenuation focuses on confirming and monitoring natural remediation processes rather than relying on engineered or “active” technologies (such as pumping groundwater, treating it above ground, then disposing of the treated water).

Contaminants from petroleum are good candidates for natural attenuation because they are among the most easily destroyed by biodegradation. Natural attenuation is non-invasive, which allows treatment to go on below ground, while the surface can continue to be used.

Natural attenuation can also be less costly than active engineered treatment options, and requires no special equipment, energy source, or disposal of treated soil or groundwater.

### Will Natural Attenuation Work At My Property?

Whether natural attenuation will work at a particular location is determined by investigating the soil and groundwater. These investigations determine the type of contaminants present, the levels of contamination, and the physical and chemical conditions that lead to biodegradation of the contaminants.

In order to rely on natural attenuation, responsible parties are required to confirm that natural attenuation processes are working by monitoring the soil and groundwater over a period of time to show that the contaminant concentrations are decreasing and that the contamination is no longer spreading.

Those conducting the cleanup need to know whether natural attenuation, or any proposed remedy, will reduce the contaminant concentrations in the soil and groundwater to legally acceptable limits within a reasonable period of time.

Natural attenuation may be an acceptable option for sites where active remediation has occurred and has reduced the concentration of contaminants (for instance, removing leaking underground tanks and contaminated soil).

However, natural attenuation is not an appropriate option at all sites. If the contamination has affected a drinking water well, or has entered a stream or lake, active cleanup options may be necessary to make sure people and the environment are protected from direct contact with the contamination.

The speed or rate of natural attenuation processes is typically slow. Monitoring is necessary to show that concentrations decrease at a sufficient rate to ensure that contaminants will not become a health threat in the future.

### **Closure Of Contaminated Sites Using Natural Attenuation As A Final Remedy**

When contamination is discovered at a property (such as a gas station with leaking underground tanks), the person who is responsible for causing the contamination, and persons having possession or control of hazardous substances that have been discharged, have the responsibility to remove the source of contamination and investigate and clean up the contamination that has escaped into the soil and groundwater.

The contaminant release must be reported to the Wisconsin Department of Natural Resources (DNR) and the site investigation and cleanup are overseen by a state agency. Depending on the type of contaminant, the oversight agency could be the Department of Agriculture, Trade and Consumer Protection; Department of

Commerce; or Department of Natural Resources.

When the cleanup has complied with state standards, the person responsible for the contamination will ask the state agency for closure of the case. If natural attenuation is relied upon to finish cleaning up a contaminated property after closure, the responsible person will need to show that contaminant concentrations are not spreading, that contaminant concentrations are stable or decreasing, and that the concentrations will decrease in the future until state groundwater standards are met.

Because natural attenuation processes are slow, it may take many years before the properties with contamination are clean. State rules require that all owners of properties where groundwater contamination has spread must be informed of the contamination below their property.

In addition, the properties with groundwater contamination exceeding state groundwater enforcement standards must be listed on a database to notify future owners and developers of the presence of contamination. If future monitoring occurs and shows that natural attenuation processes have removed the contaminants to state-required cleanup levels, then the properties can be removed from the database.

The state agency will grant closure if the site investigation and monitoring shows that natural attenuation will clean up groundwater to state standards within a reasonable period of time. All state rules for cleanup must be met and the person who is responsible for the contamination must comply with all conditions of the state's closure approval.

### **For More Information**

The following publications provide additional information on natural attenuation. Web sites where these can be downloaded free of charge are also listed.

- *A Citizen's Guide to Bioremediation*, April 2001, EPA 542-F-01-001; <http://www.epa.gov/swertio1/download/citizens/bioremediation.pdf>

- *Commonly Asked Questions Regarding the Use of Natural Attenuation for Petroleum-Contaminated Sites at Federal Facilities*, <http://www.afcee.af.mil/shared/media/document/AFD-071211-036.PDF>
- *Monitored Natural Attenuation of Petroleum Hydrocarbons: U.S. EPA Remedial Technology Fact Sheet*, May 1999, EPA 600-F-98-021; <http://www.clu-in.org/download/remed/pet-hyd.pdf>
- *Monitored Natural Attenuation of Chlorinated Solvents*, May 1999, EPA 600-F-98-0022; <http://www.clu-in.org/download/remed/chl-solv.pdf>
- *Guidance on Natural Attenuation for Petroleum Releases, WI DNR, Bureau for Remediation and Redevelopment*, March 2003, PUB-RR-614; <http://dnr.wi.gov/files/PDF/pubs/rr/RR614.pdf>

### DNR Contacts

#### Central Office

Terry Evanson, Hydrogeologist  
608-266-0941  
theresa.evanson@wisconsin.gov

#### Northern Region

Chris Saari, Hydrogeologist  
715-685-2920  
christopher.saari@wisconsin.gov

#### Northeast Region

Keld Lauridsen  
920-662-5420  
Keld.lauridsen@wisconsin.gov

#### South Central Region

Denise Nettesheim, Hydrogeologist  
608-275-3209

#### Southeast Region

Pam Mylotta, Hydrogeologist  
414-263-8758  
pamela.mylotta@wisconsin.gov

#### West Central Region

Lisa Gutknecht, Hydrogeologist  
715-359-6514  
lisa.gutknecht@wisconsin.gov



\* Note: For remediation assistance in Sheboygan County, contact our Northeast Regional Office. For Walworth County, contact our South Central Regional Office.

This document may contain some information about certain state statutes and rules but does not necessarily include all of the details found in the statutes/rules. Readers should consult the actual language of the statutes/rules to answer specific questions.

The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240.

This publication is available in alternative format upon request. Please call 608-267-3543 for more information.



# Continuing Obligations for Environmental Protection

## Responsibilities of Wisconsin Property Owners

PUB-RR-819

August 2012

This fact sheet is intended to help property owners understand their legal requirements under s. 292.12, Wis. Stats., regarding continuing obligations that arise due to the environmental condition of their property.

The term “continuing obligations” refers to certain actions for which property owners are responsible following a completed environmental cleanup. They are sometimes called environmental land use controls or institutional controls. These legal obligations, such as a requirement to maintain pavement over contaminated soil, are most often found in a cleanup approval letter from the state.

Less commonly, a continuing obligation may apply where a cleanup is not yet completed but a cleanup plan has been approved, or at a property owned by a local government that is exempt from certain cleanup requirements.

### What Are Continuing Obligations?

Continuing obligations are legal requirements designed to protect public health and the environment in regard to contamination that remains on a property.

Continuing obligations still apply after a property is sold. Each new owner is responsible for complying with the continuing obligations.

## Background

Wisconsin, like most states, allows some contamination to remain after cleanup of soil or groundwater contamination (residual contamination). This minimizes the transportation of contamination and reduces cleanup costs while still ensuring that public health and the environment are protected.

The Department of Natural Resources (DNR), through its Remediation and Redevelopment (RR) Program, places sites or properties with residual contamination on a public database in order to provide notice to interested parties about the residual contamination and any associated continuing obligations. Please see the “Public Information” section on page 3 to learn more about the database. (Prior to June 3, 2006, the state used deed restrictions recorded at county courthouses to establish continuing obligations, and those deed restrictions have also been added into the database.)



## Types of Continuing Obligations

### 1. Manage Contaminated Soil that is Excavated

If the property owner intends to dig up an area with contaminated soil, the owner must ensure that proper soil sampling, followed by appropriate treatment or disposal, takes place. Managing contaminated soil must be done in compliance with state law and is usually done under the guidance of a private environmental professional.

### 2. Manage Construction of Water Supply Wells

If there is soil or groundwater contamination and the property owner plans to construct or reconstruct a water supply well, the owner must obtain prior DNR approval to ensure that well construction is designed to protect the water supply from contamination.

### Other Types of Continuing Obligations

Some continuing obligations are designed specifically for conditions on individual properties. Examples include:

- keeping clean soil and vegetation over contaminated soil;
- keeping an asphalt “cap” over contaminated soil or groundwater;
- maintaining a vapor venting system; and
- notifying the state if a structural impediment (e.g. building) that restricted the cleanup is removed. The owner may then need to conduct additional state-approved environmental work.

It is common for properties with approved cleanups to have continuing obligations because the DNR generally does not require removal of all contamination.

Property owners with the types of continuing obligations described above will find these requirements described in the state’s cleanup approval letter or cleanup plan approval, and *must*:

- comply with these property-specific requirements; and
- obtain the state’s permission before changing portions of the property where these requirements apply.

The requirements apply whether or not the person owned the property at the time that the continuing obligations were placed on the property.

## Changing a Continuing Obligation

A property owner has the option to modify a continuing obligation if environmental conditions change. For example, petroleum contamination can degrade over time and property owners may collect new samples showing that residual contamination is gone. They may then request that DNR modify or remove a continuing obligation. A fee is required for DNR’s review of this request (\$500 or \$750, depending on the nature of the request). Fees are subject to change; current fees are found in Chapter NR 749, Wis. Admin. Code, on the web at [www.legis.state.wi.us/rsb/code/nr/nr749.pdf](http://www.legis.state.wi.us/rsb/code/nr/nr749.pdf).

## Public Information

The DNR provides public information about continuing obligations on the Internet. This information helps property owners, purchasers, lessees and lenders understand legal requirements that apply to a property.

Properties with continuing obligations can generally be located in DNR's *GIS Registry*, part of the *RR Sites Map*. The information includes maps, deeds, contaminant data and the state's closure letter. The closure letter states that no additional environmental cleanup is needed for past contamination and includes information on property-specific continuing obligations. If a cleanup has not been completed, the state's approval of the remedial action plan will contain the information about continuing obligations.

However, some older cleanups may not be listed in the *GIS Registry*, so please consult DNR's comprehensive database of contaminated and cleaned up sites, *BRRTS on the Web*. This database shows all contamination activities known to DNR.

*BRRTS on the Web* and  
*RR Sites Map* are part of  
**CLEAN**  
(the Contaminated Lands  
Environmental Action Network) at  
[dnr.wi.gov/topic/Brownfields/clean.html](http://dnr.wi.gov/topic/Brownfields/clean.html)

If a completed cleanup is shown in *BRRTS on the Web* but the site documents can not be found in the *GIS Registry*, DNR's closure letter can still be obtained from a regional office. For assistance, please contact a DNR Environmental Program Associate (see the RR Program's Staff Contact web page at [dnr.wi.gov/topic/Brownfields/Contact.html](http://dnr.wi.gov/topic/Brownfields/Contact.html)).

## Off-Site Contamination: When Continuing Obligations Cross the Property Line

An off-site property owner is someone who owns property that has been affected by contamination that moved through soil, sediment or groundwater from another property. Wisconsin law, s. 292.13, Wis. Stats., provides an exemption from environmental cleanup requirements for owners of "off-site" properties. The DNR will generally not ask off-site property owners to investigate or clean up contamination that came from a different property, as long as the off-site owner allows access to his or her property so that others who are responsible for the contamination may complete the cleanup.

However, off-site property owners are legally obligated to comply with continuing obligations on their property, even though they did not cause the contamination. For example, if the state approved a cleanup where the person responsible for the contamination placed clean soil over contamination on an off-site property, the owner of the off-site property must either keep that soil in place or obtain state approval before disturbing it.

Property owners and others should check the *Public Information* section above if they need to:

- determine whether and where continuing obligations exist on a property;
- review the inspection, maintenance and reporting requirements, and
- contact the DNR regarding changing that portion of the property. The person to contact is the person that approved the closure or remedial action plan.

## Option for an Off-Site Liability Exemption Letter

In general, owners of off-site properties have a legal exemption from environmental cleanup requirements. This exemption does not require a state approval letter. Nonetheless, they may request a property-specific liability exemption letter from DNR if they have enough information to show that the source of the contamination is not on their property. This letter may be helpful in real estate transactions. The fee for this letter is \$500 under Chapter NR 749, Wis. Adm. Code. For more information about this option, please see the RR Program's Liability web page at [dnr.wi.gov/topic/Brownfields/Liability.html](http://dnr.wi.gov/topic/Brownfields/Liability.html).

### Legal Obligations of Off-Site Property Owners

- Allow access so the person cleaning up the contamination may work on the off-site property (unless the off-site owner completes the cleanup independently).
- Comply with any required continuing obligations on the off-site property.

## Required Notifications to Off-Site Property Owners

1. The person responsible for cleaning up contamination must notify affected off-site property owners of any proposed continuing obligations on their off-site property **before** asking the DNR to approve the cleanup. This is required by law and allows the off-site owners to provide the DNR with any technical information that may be relevant to the cleanup approval.

When circumstances are appropriate, an off-site neighbor and the person responsible for the cleanup may enter into a "legally enforceable agreement" (i.e. a contract). Under this type of private agreement, the person responsible for the contamination may also take responsibility for maintaining a continuing obligation on an off-site property. This agreement would not automatically transfer to future owners of the off-site property. The state is not a party to the agreement and can not enforce it.

2. If a cleanup proposal that includes off-site continuing obligations is approved, DNR will send a letter to the off-site owners detailing the continuing obligations that are required for their property. Property owners should inform anyone interested in buying their property about maintaining these continuing obligations. For residential property, this would be part of the real estate disclosure obligation.

## More Information

For more information, please visit the RR Program's Continuing Obligations web site at [dnr.wi.gov/topic/Brownfields/Residual.html](http://dnr.wi.gov/topic/Brownfields/Residual.html).

For more information about DNR's Remediation and Redevelopment Program, see our web site at [dnr.wi.gov/org/aw/rr/](http://dnr.wi.gov/org/aw/rr/). This document contains information about certain state statutes and administrative rules but does not include all of the details found in the statutes and rules. Readers should consult the actual language of the statutes and rules to answer specific questions.

The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240. This publication is available in alternative format upon request. Please call 608-267-3543 for more information.

**Ken Shimko**

---

**From:** "Erdman, Beth A - DSPS" <Beth.Erdman@Wisconsin.gov>  
**To:** "Ken Shimko" <kshimko.meridianenv@gmail.com>  
**Sent:** Tuesday, April 02, 2013 12:37 PM  
**Subject:** RE: Cummins - Park Falls 54552-1164-99  
Thank you Ken,

I spoke with DNR. We believe that by doing what you have done you have fulfilled your obligation to notify the offsite property owner.

That said, include a copy of this email in your submittal and that portion of the requirement is done.

Have a good day,

Beth

*Beth A. Erdman*

Wisconsin Department of Safety and Professional Services  
375 City Center, Suite J  
Oshkosh, WI 54901  
phone: 920-303-5410  
fax: 920-424-0217  
email: [beth.erdman@wisconsin.gov](mailto:beth.erdman@wisconsin.gov)

---

**From:** Ken Shimko [mailto:kshimko.meridianenv@gmail.com]  
**Sent:** Monday, April 01, 2013 3:46 PM  
**To:** Erdman, Beth A - DSPS  
**Subject:** Cummins - Park Falls 54552-1164-99

Beth

got your letter re: revisions. pretty straight-forward...will get to you as soon as I can

I have question re: Return Receipt/Signature Confirmation for adjacent property. I sent letter Certified Mail to address (Nevada) listed on tax roll (house is empty). No response received. Not sure what more we can do...I have documentation that letter was sent Certified Mail (included with material sent to you).

Please let me know what is done in this situation.

thanks

Kenneth Shimko, P.G.  
Meridian Environmental Consulting, LLC  
2711 North Elco Road  
Fall Creek, WI 54742  
(715)832-6608  
(715)832-6797 FAX  
(715)579-0723 Cell  
email: [kshimko.meridianenv@gmail.com](mailto:kshimko.meridianenv@gmail.com)

OFF-SOURCE  
A  
PROPERTY

*E1/2*

320131

STATE BAR OF WISCONSIN FORM 2 - 1998  
WARRANTY DEED

DOCUMENT NO.

REGISTER OF DEEDS OFFICE  
PRICE COUNTY, WIS.  
Received for Record

JUL 30 2003

This Deed, made between GERALD G. BOETTCHER, DAVID M. BOETTCHER,  
and ROBERT J. BOETTCHER

and MARK S. TUMA

Grantor,

3:25  
AT 5:19 P M JULY RECORDED IN  
VOL 519 OF RECORDS ON PAGE 375  
*J. H. Hill* 377  
REGISTER OF DEEDS

Grantee.

Recording Area

Grantor, for a valuable consideration, conveys and warrants to Grantee the following  
described real estate in Price County, State of Wisconsin:

NAME AND RETURN ADDRESS  
Birchland Realty Inc.  
P.O. Box 388  
Park Falls, Wisconsin 54552

The East One-half (E1/2) of Lots Two (2) and Three (3) of Block Sixteen (16) of Park Falls  
Lumber Company's Plat of the Village, now City, of Park Falls.

271-1014-08  
Parcel Identification Number (PIN)  
This is not homestead property.

TRANSFER  
\$ 75<sup>00</sup>  
FEE

Exceptions to warranties: Subject to Price County Sanitary Code and Subdivision Control Ordinances; 2. Subject to easements,  
exceptions, reservations and restrictions of record, if any; and 3. Subject to flood plain zoning ordinances.

Dated this 23<sup>rd</sup> day of July A.D., 2003.

(SEAL)

*Robert J. Boettcher*

(SEAL)

\* ROBERT J. BOETTCHER

(SEAL)

(SEAL)

AUTHENTICATION

ACKNOWLEDGMENT

Signature(s) \_\_\_\_\_

State of Minnesota WI )

authenticated this \_\_\_\_\_ day of \_\_\_\_\_ 2003.

) ss. Emilia Sabian County. )

Personally came before me this 23<sup>rd</sup> day of  
July 2003, the above named

Robert J. Boettcher

TITLE: MEMBER STATE BAR OF WISCONSIN  
(If not, \_\_\_\_\_  
authorized by §706.6, Wis. Stats.)

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

THIS INSTRUMENT WAS DRAFTED BY  
Birchland Realty Inc.  
P.O. Box 388, Park Falls, WI 54552  
By Pete Bushman per instructions by the Grantor.  
(Signatures may be authenticated or acknowledged.  
Both are not necessary.)

*Emilia Sabian*  
Notary Public, State of Minnesota WI  
My commission is permanent. (If not, state expiration date:  
3/12/06)

\* Names of persons signing in any capacity must be typed or printed below their signature.

STATE BAR OF WISCONSIN  
FORM NO. 2-1998

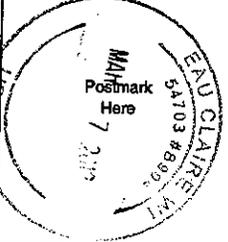
OFF-SOURCE  
A  
PROPERTY

**U.S. Postal Service™**  
**CERTIFIED MAIL™ RECEIPT**  
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

**OFFICIAL USE**

Postage	\$ 1.32
Certified Fee	3.00
Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
<b>Total Postage &amp; Fees</b>	<b>\$ 6.97</b>



7011 0110 0002 4176 1884

Sent To Mr Mark Tumg  
Street, Apt. No.,  
or PO Box No. PO Box 1793  
City, State, ZIP+4 EIKO NV 89803

March 7, 2013

Scott Hilgart  
City of Park Falls  
P.O. Box 146  
Park Falls, WI 54552

Subject: **GIS Notification for 5<sup>th</sup> Avenue and Division St, Park Falls, Wisconsin  
54552**  
DNR BRRTS No. 03-51-120869  
PECFA No. 54552-1164-99  
Meridian No. 05F758

Dear Scott:

I am writing to provide notification of petroleum impacted soil and ground water beneath 5<sup>th</sup> Avenue and Division St in Park Falls. As you know, the adjacent property (499 Division St) formerly sold gasoline. Over the years, the petroleum system released gasoline into the soil and ground water. The impacted soil and ground water appears to extend underneath 5<sup>th</sup> Avenue and Division St. (see enclosed maps). Therefore, I am required to send you this notification. You do not need to do anything in response to this letter. However, if you have any questions, please do not hesitate to contact me.

The remainder of this letter provides standard language required for this notification.

I have conducted an investigation and cleanup in cooperation with the Wisconsin Department of Natural Resources (DNR) and the Wisconsin Department of Safety and Professional Services (DSPS). I am requesting the DSPS grant "Closure" of this case. Closure means that the DSPS will not be requiring any further investigation or cleanup action be taken.

The DSPS will not review the Closure Request for at least 30 days after the date of this letter. As an affected property owner, you have a right to contact DSPS to provide any technical information that indicates Closure should not be granted. If you would like to submit any information to DSPS that is relevant to this Closure request, you should mail that information to Beth Erdman, Wisconsin DSPS, 375 City Center, Suite I, Oshkosh, WI 54901-4877. You can also call her at 920-303-5410.

If closure is approved, the following continuing obligation (re: well construction and soil excavation) applies to your property.

Ground water contamination that appears to have originated on the property located at 499 Division St has migrated onto your property (beneath 5<sup>th</sup> Avenue and Division St). The levels of ground water contamination are above the state ground water enforcement standards found in chapter NR140, Wisconsin Administrative Code.

The environmental consultants who have investigated this contamination have informed me that this ground water contamination is stable or receding and will naturally degrade over time. They believe allowing natural attenuation to complete the cleanup at this site will meet the requirements for case closure that are found in chapter NR726, Wisconsin Administrative Code. Therefore, I am requesting DSPS accept natural attenuation as the final remedy for this site and grant case closure.

The following DNR fact sheet (RR671 – “What Landowners Should Know: Information about Using Natural Attenuation to Clean Up Contaminated Ground Water”) has been included with this letter, to help explain the use of natural attenuation as a remedy. If the fact sheet is lost, you may obtain a copy at <http://dnr.wi.gov/files/PDF/pubs/rr/RR671.pdf>

In addition, residual soil contamination remains at 499 Division St and beneath 5<sup>th</sup> Avenue and Division St. The remaining contaminants include petroleum. Please recall that most of the impacted soil was excavated from the site in September 2010.

If soil in the specific locations described above is excavated, the property owner (City of Park Falls) at the time of excavation must sample and analyze the excavated soil to determine if residual contamination remains. If sampling confirms that contamination is present the property owner at the time of excavation will need to determine whether the material would be considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable statutes and rules. In addition, all current and future owners and occupants of the property 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 during excavation activities to prevent a health threat to humans.

The continuing obligations referenced in this letter are: 1) *Should you or any subsequent property owner wish to construct or reconstruct a well on your property, special well construction standards may be necessary to protect the well from the remaining contamination and 2) properly handle excavated soil from the affected area.*

Any well driller who proposes to construct a well on your property in the future will first need to obtain approval from a regional water supply specialist in DNR's Drinking Water and Ground Water Program. The well construction application, form 3300-254, is on the internet at <http://dnr.wi.gov/org/water/dwg/forms/3300254.pdf> or may be accessed through the GIS Registry web address.

Before I request closure, I will need to inform the Department as to who will be responsible for the continuing obligation on your property regarding construction of water supply wells. Under s. 292.12, Wis. Stats., the responsibility for maintaining all necessary continuing obligations for your property (i.e., contact DNR prior to constructing a water supply well) will fall on you or any subsequent property owner, unless another person has a legally enforceable responsibility to comply with the requirements of the final closure letter. If you need more time to finalize an agreement for this responsibility, you will need to request additional time from DSPS.

Under s. 292.12(5), Wis. Stats., occupants of this property are also responsible for complying with any continuing obligations. Please notify any current and future occupants that may be affected by this continuing obligation, by supplying them with a copy of this letter. The DNR Fact Sheet, RR-819, “Continuing Obligations for Environmental Protection” has been included with this letter, to help explain a property owner's responsibility for continuing obligations on

their property. If the fact sheet is lost, you may obtain a copy at <http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf>

Once the Department makes a decision on my Closure request, it will be documented in a letter. If the Department grants Closure, you will receive a copy of the Closure letter. If you need to, you may also obtain a copy of the Closure letter by requesting a copy from me, by writing to the DSPS contact (Beth Erdman), or by accessing the DNR Geographic Information System (GIS) Registry (via RR Sites Map) at <http://dnr.wi.gov/topic/Brownfields/clean.html>. The final closure letter will contain a description of the continuing obligation. The final closure letter and a map of the properties affected will be included as part of the site file attached on the GIS Registry.

If this case is closed, all properties within the site boundaries where ground water contamination attains or exceeds chapter NR140 ground water enforcement standards will be listed on the publically accessible Bureau of Remediation and Redevelopment Tracking System on the Web (BOTW) to provide public notice of remaining contamination and of any continuing obligations. In addition, information will be displayed on the RR Sites Map under the GIS Registry theme. This GIS Registry is available to the general public on the DNR web site. DNR approval prior to well construction or reconstruction is required for all sites shown on the GIS Registry.

Please review the following legal description of your property, and notify me within the next 30 days if the legal description is incorrect.

*Division Street and 5<sup>th</sup> Avenue, Block 16, Park Falls Lumber Co. Plat of the Village, now City of Park Falls, Wisconsin, Price County*

If you need more information about the proposed cleanup completion and request for closure, you may contact me at 889 Saunders Ave, Park Falls, WI 54552. Or you may also contact the DSPS Project Manager: Beth Erdman, Wisconsin DSPS, 375 City Center, Suite I, Oshkosh, WI 54901-4877. You can also call her at 920-303-5410.

Sincerely,



Mark Cummins  
889 Saunders Ave  
Park Falls, WI 54552



# Using Natural Attenuation to Clean Up Contaminated Groundwater: What Landowners Should Know

PUB-RR-671

September 2012

## What Is Natural Attenuation?

Natural attenuation makes use of natural processes in soil and groundwater to contain the spread of contamination and to reduce the amount of contamination from chemical releases.

Natural attenuation is an *in-situ* treatment method. This means that contaminants are left in place while natural attenuation works on them. Natural attenuation is relied upon to clean up contamination that remains after the source of the contamination is removed. An example of a source of contamination would be a leaking underground petroleum tank.

## How Does Natural Attenuation Work?

Natural attenuation processes work at many sites, but the rate and degree of effectiveness varies from property to property, depending upon the type of contaminants present and the physical, chemical and biological characteristics of the soil and groundwater.

Natural attenuation processes can be divided into two broad categories – destructive and non-destructive. Destructive processes destroy contaminants. The most common destructive process is **biodegradation**.

Non-destructive processes do not destroy the contaminant, but reduce contaminant concentrations in groundwater through **dilution**, **dispersion** or **adsorption**.

## Biodegradation

Biodegradation is a process in which microorganisms that naturally occur in soil and

groundwater (e.g. yeast, fungi, or bacteria), break down, or degrade, hazardous substances to less toxic or non-toxic substances. Microorganisms, like humans, eat and digest organic compounds for nutrition and energy (organic compounds contain carbon and hydrogen atoms).

Some types of microorganisms can digest organic substances such as fuels or solvents that are hazardous to humans. Microorganisms break down the organic contaminants into harmless products – mainly carbon dioxide and water. Once the contaminants are degraded, the microorganism populations decline because they have used their food sources. These small populations of microorganisms pose no contaminant or health risk.

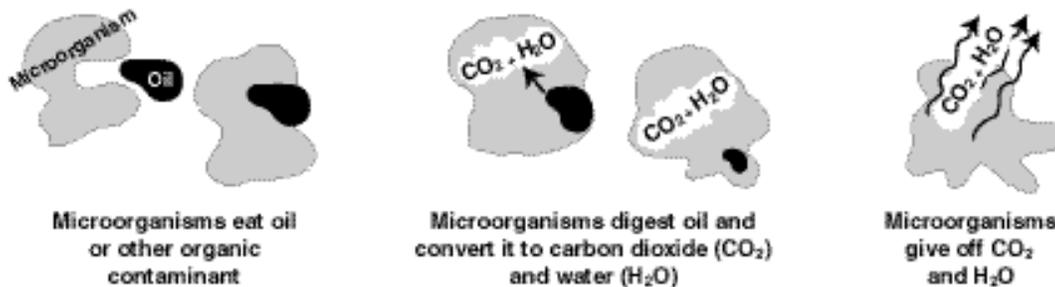
Many organic contaminants, like petroleum, can be biodegraded by microorganisms in the underground environment. For example, biodegradation processes can effectively cleanse soil and groundwater of hydrocarbon fuels such as gasoline and benzene, toluene, ethylbenzene, and xylene – known as the BTEX compounds, under certain conditions.

Biodegradation can also breakdown other contaminants in groundwater such as trichloroethylene (TCE), a chlorinated solvent used in metal cleaning. However, the processes involved are harder to predict and are less effective at contaminant removal compared to petroleum-contaminated sites



Wisconsin Department of Natural Resources  
P.O. Box 7921, Madison, WI 53707  
[dnr.wi.gov/topic/Brownfields](http://dnr.wi.gov/topic/Brownfields)





**Figure 1. Schematic Diagram of Aerobic Biodegradation in Soil**

### **Dilution and Dispersion**

The effects of dilution and dispersion reduce contaminant concentrations but do not destroy contaminants. Clean water from the surface seeps underground to mix with and dilute contaminated groundwater.

Other processes that lead to reduced concentrations of contaminants include clean groundwater flowing into contaminated areas, and the dispersion of pollutants as they spread out and away from the main path of the contaminated plume.

### **Adsorption**

Adsorption occurs when contaminants attach or “sorb” to underground particles. Most oily substances (like petroleum compounds) repel water and escape from the groundwater by attaching to organic matter and clay minerals in the subsurface.

This process holds back or retards contaminant movement and reduces the concentration of contaminants in the groundwater. However, like dilution and dispersion, adsorption does not destroy contaminants.

### **Why Consider Natural Attenuation To Clean Up Soil And Groundwater?**

In certain situations, natural attenuation is an effective, inexpensive cleanup option and the most appropriate way to remediate some contamination problems. Natural attenuation focuses on confirming and monitoring natural remediation processes rather than relying on engineered or “active” technologies (such as pumping groundwater, treating it above ground, then disposing of the treated water).

Contaminants from petroleum are good candidates for natural attenuation because they are among the most easily destroyed by biodegradation. Natural attenuation is non-invasive, which allows treatment to go on below ground, while the surface can continue to be used.

Natural attenuation can also be less costly than active engineered treatment options, and requires no special equipment, energy source, or disposal of treated soil or groundwater.

### **Will Natural Attenuation Work At My Property?**

Whether natural attenuation will work at a particular location is determined by investigating the soil and groundwater. These investigations determine the type of contaminants present, the levels of contamination, and the physical and chemical conditions that lead to biodegradation of the contaminants.

In order to rely on natural attenuation, responsible parties are required to confirm that natural attenuation processes are working by monitoring the soil and groundwater over a period of time to show that the contaminant concentrations are decreasing and that the contamination is no longer spreading.

Those conducting the cleanup need to know whether natural attenuation, or any proposed remedy, will reduce the contaminant concentrations in the soil and groundwater to legally acceptable limits within a reasonable period of time.

Natural attenuation may be an acceptable option for sites where active remediation has occurred and has reduced the concentration of contaminants (for instance, removing leaking underground tanks and contaminated soil).

However, natural attenuation is not an appropriate option at all sites. If the contamination has affected a drinking water well, or has entered a stream or lake, active cleanup options may be necessary to make sure people and the environment are protected from direct contact with the contamination.

The speed or rate of natural attenuation processes is typically slow. Monitoring is necessary to show that concentrations decrease at a sufficient rate to ensure that contaminants will not become a health threat in the future.

### **Closure Of Contaminated Sites Using Natural Attenuation As A Final Remedy**

When contamination is discovered at a property (such as a gas station with leaking underground tanks), the person who is responsible for causing the contamination, and persons having possession or control of hazardous substances that have been discharged, have the responsibility to remove the source of contamination and investigate and clean up the contamination that has escaped into the soil and groundwater.

The contaminant release must be reported to the Wisconsin Department of Natural Resources (DNR) and the site investigation and cleanup are overseen by a state agency. Depending on the type of contaminant, the oversight agency could be the Department of Agriculture, Trade and Consumer Protection; Department of

Commerce; or Department of Natural Resources.

When the cleanup has complied with state standards, the person responsible for the contamination will ask the state agency for closure of the case. If natural attenuation is relied upon to finish cleaning up a contaminated property after closure, the responsible person will need to show that contaminant concentrations are not spreading, that contaminant concentrations are stable or decreasing, and that the concentrations will decrease in the future until state groundwater standards are met.

Because natural attenuation processes are slow, it may take many years before the properties with contamination are clean. State rules require that all owners of properties where groundwater contamination has spread must be informed of the contamination below their property.

In addition, the properties with groundwater contamination exceeding state groundwater enforcement standards must be listed on a database to notify future owners and developers of the presence of contamination. If future monitoring occurs and shows that natural attenuation processes have removed the contaminants to state-required cleanup levels, then the properties can be removed from the database.

The state agency will grant closure if the site investigation and monitoring shows that natural attenuation will clean up groundwater to state standards within a reasonable period of time. All state rules for cleanup must be met and the person who is responsible for the contamination must comply with all conditions of the state's closure approval.

### **For More Information**

The following publications provide additional information on natural attenuation. Web sites where these can be downloaded free of charge are also listed.

- *A Citizen's Guide to Bioremediation*, April 2001, EPA 542-F-01-001; <http://www.epa.gov/swertio1/download/citizens/bioremediation.pdf>

- *Commonly Asked Questions Regarding the Use of Natural Attenuation for Petroleum-Contaminated Sites at Federal Facilities*, <http://www.afcee.af.mil/shared/media/document/AFD-071211-036.PDF>
- *Monitored Natural Attenuation of Petroleum Hydrocarbons: U.S. EPA Remedial Technology Fact Sheet*, May 1999, EPA 600-F-98-021; <http://www.clu-in.org/download/remed/pet-hyd.pdf>
- *Monitored Natural Attenuation of Chlorinated Solvents*, May 1999, EPA 600-F-98-0022; <http://www.clu-in.org/download/remed/chl-solv.pdf>
- *Guidance on Natural Attenuation for Petroleum Releases, WI DNR, Bureau for Remediation and Redevelopment*, March 2003, PUB-RR-614; <http://dnr.wi.gov/files/PDF/pubs/rr/RR614.pdf>

### DNR Contacts

#### Central Office

Terry Evanson, Hydrogeologist  
608-266-0941  
theresa.evanson@wisconsin.gov

#### Northern Region

Chris Saari, Hydrogeologist  
715-685-2920  
christopher.saari@wisconsin.gov

#### Northeast Region

Keld Lauridsen  
920-662-5420  
Keld.lauridsen@wisconsin.gov

#### South Central Region

Denise Nettesheim, Hydrogeologist  
608-275-3209

#### Southeast Region

Pam Mylotta, Hydrogeologist  
414-263-8758  
pamela.mylotta@wisconsin.gov

#### West Central Region

Lisa Gutknecht, Hydrogeologist  
715-359-6514  
lisa.gutknecht@wisconsin.gov



\* Note: For remediation assistance in Sheboygan County, contact our Northeast Regional Office. For Walworth County, contact our South Central Regional Office.

This document may contain some information about certain state statutes and rules but does not necessarily include all of the details found in the statutes/rules. Readers should consult the actual language of the statutes/rules to answer specific questions.

The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240.

This publication is available in alternative format upon request. Please call 608-267-3543 for more information.



# Continuing Obligations for Environmental Protection

## Responsibilities of Wisconsin Property Owners

PUB-RR-819

August 2012

This fact sheet is intended to help property owners understand their legal requirements under s. 292.12, Wis. Stats., regarding continuing obligations that arise due to the environmental condition of their property.

The term “continuing obligations” refers to certain actions for which property owners are responsible following a completed environmental cleanup. They are sometimes called environmental land use controls or institutional controls. These legal obligations, such as a requirement to maintain pavement over contaminated soil, are most often found in a cleanup approval letter from the state.

Less commonly, a continuing obligation may apply where a cleanup is not yet completed but a cleanup plan has been approved, or at a property owned by a local government that is exempt from certain cleanup requirements.

### What Are Continuing Obligations?

Continuing obligations are legal requirements designed to protect public health and the environment in regard to contamination that remains on a property.

Continuing obligations still apply after a property is sold. Each new owner is responsible for complying with the continuing obligations.

## Background

Wisconsin, like most states, allows some contamination to remain after cleanup of soil or groundwater contamination (residual contamination). This minimizes the transportation of contamination and reduces cleanup costs while still ensuring that public health and the environment are protected.

The Department of Natural Resources (DNR), through its Remediation and Redevelopment (RR) Program, places sites or properties with residual contamination on a public database in order to provide notice to interested parties about the residual contamination and any associated continuing obligations. Please see the “Public Information” section on page 3 to learn more about the database. (Prior to June 3, 2006, the state used deed restrictions recorded at county courthouses to establish continuing obligations, and those deed restrictions have also been added into the database.)



## Types of Continuing Obligations

### 1. Manage Contaminated Soil that is Excavated

If the property owner intends to dig up an area with contaminated soil, the owner must ensure that proper soil sampling, followed by appropriate treatment or disposal, takes place. Managing contaminated soil must be done in compliance with state law and is usually done under the guidance of a private environmental professional.

### 2. Manage Construction of Water Supply Wells

If there is soil or groundwater contamination and the property owner plans to construct or reconstruct a water supply well, the owner must obtain prior DNR approval to ensure that well construction is designed to protect the water supply from contamination.

### Other Types of Continuing Obligations

Some continuing obligations are designed specifically for conditions on individual properties. Examples include:

- keeping clean soil and vegetation over contaminated soil;
- keeping an asphalt “cap” over contaminated soil or groundwater;
- maintaining a vapor venting system; and
- notifying the state if a structural impediment (e.g. building) that restricted the cleanup is removed. The owner may then need to conduct additional state-approved environmental work.

It is common for properties with approved cleanups to have continuing obligations because the DNR generally does not require removal of all contamination.

Property owners with the types of continuing obligations described above will find these requirements described in the state’s cleanup approval letter or cleanup plan approval, and *must*:

- comply with these property-specific requirements; and
- obtain the state’s permission before changing portions of the property where these requirements apply.

The requirements apply whether or not the person owned the property at the time that the continuing obligations were placed on the property.

## Changing a Continuing Obligation

A property owner has the option to modify a continuing obligation if environmental conditions change. For example, petroleum contamination can degrade over time and property owners may collect new samples showing that residual contamination is gone. They may then request that DNR modify or remove a continuing obligation. A fee is required for DNR’s review of this request (\$500 or \$750, depending on the nature of the request). Fees are subject to change; current fees are found in Chapter NR 749, Wis. Admin. Code, on the web at [www.legis.state.wi.us/rsb/code/nr/nr749.pdf](http://www.legis.state.wi.us/rsb/code/nr/nr749.pdf).

## Public Information

The DNR provides public information about continuing obligations on the Internet. This information helps property owners, purchasers, lessees and lenders understand legal requirements that apply to a property.

Properties with continuing obligations can generally be located in DNR's *GIS Registry*, part of the *RR Sites Map*. The information includes maps, deeds, contaminant data and the state's closure letter. The closure letter states that no additional environmental cleanup is needed for past contamination and includes information on property-specific continuing obligations. If a cleanup has not been completed, the state's approval of the remedial action plan will contain the information about continuing obligations.

However, some older cleanups may not be listed in the *GIS Registry*, so please consult DNR's comprehensive database of contaminated and cleaned up sites, *BRRTS on the Web*. This database shows all contamination activities known to DNR.

*BRRTS on the Web* and  
*RR Sites Map* are part of  
**CLEAN**  
(the Contaminated Lands  
Environmental Action Network) at  
[dnr.wi.gov/topic/Brownfields/clean.html](http://dnr.wi.gov/topic/Brownfields/clean.html)

If a completed cleanup is shown in *BRRTS on the Web* but the site documents can not be found in the *GIS Registry*, DNR's closure letter can still be obtained from a regional office. For assistance, please contact a DNR Environmental Program Associate (see the RR Program's Staff Contact web page at [dnr.wi.gov/topic/Brownfields/Contact.html](http://dnr.wi.gov/topic/Brownfields/Contact.html)).

## Off-Site Contamination: When Continuing Obligations Cross the Property Line

An off-site property owner is someone who owns property that has been affected by contamination that moved through soil, sediment or groundwater from another property. Wisconsin law, s. 292.13, Wis. Stats., provides an exemption from environmental cleanup requirements for owners of "off-site" properties. The DNR will generally not ask off-site property owners to investigate or clean up contamination that came from a different property, as long as the off-site owner allows access to his or her property so that others who are responsible for the contamination may complete the cleanup.

However, off-site property owners are legally obligated to comply with continuing obligations on their property, even though they did not cause the contamination. For example, if the state approved a cleanup where the person responsible for the contamination placed clean soil over contamination on an off-site property, the owner of the off-site property must either keep that soil in place or obtain state approval before disturbing it.

Property owners and others should check the *Public Information* section above if they need to:

- determine whether and where continuing obligations exist on a property;
- review the inspection, maintenance and reporting requirements, and
- contact the DNR regarding changing that portion of the property. The person to contact is the person that approved the closure or remedial action plan.

## Option for an Off-Site Liability Exemption Letter

In general, owners of off-site properties have a legal exemption from environmental cleanup requirements. This exemption does not require a state approval letter. Nonetheless, they may request a property-specific liability exemption letter from DNR if they have enough information to show that the source of the contamination is not on their property. This letter may be helpful in real estate transactions. The fee for this letter is \$500 under Chapter NR 749, Wis. Adm. Code. For more information about this option, please see the RR Program's Liability web page at [dnr.wi.gov/topic/Brownfields/Liability.html](http://dnr.wi.gov/topic/Brownfields/Liability.html).

### Legal Obligations of Off-Site Property Owners

- Allow access so the person cleaning up the contamination may work on the off-site property (unless the off-site owner completes the cleanup independently).
- Comply with any required continuing obligations on the off-site property.

## Required Notifications to Off-Site Property Owners

1. The person responsible for cleaning up contamination must notify affected off-site property owners of any proposed continuing obligations on their off-site property **before** asking the DNR to approve the cleanup. This is required by law and allows the off-site owners to provide the DNR with any technical information that may be relevant to the cleanup approval.

When circumstances are appropriate, an off-site neighbor and the person responsible for the cleanup may enter into a "legally enforceable agreement" (i.e. a contract). Under this type of private agreement, the person responsible for the contamination may also take responsibility for maintaining a continuing obligation on an off-site property. This agreement would not automatically transfer to future owners of the off-site property. The state is not a party to the agreement and can not enforce it.

2. If a cleanup proposal that includes off-site continuing obligations is approved, DNR will send a letter to the off-site owners detailing the continuing obligations that are required for their property. Property owners should inform anyone interested in buying their property about maintaining these continuing obligations. For residential property, this would be part of the real estate disclosure obligation.

## More Information

For more information, please visit the RR Program's Continuing Obligations web site at [dnr.wi.gov/topic/Brownfields/Residual.html](http://dnr.wi.gov/topic/Brownfields/Residual.html).

For more information about DNR's Remediation and Redevelopment Program, see our web site at [dnr.wi.gov/org/aw/rr/](http://dnr.wi.gov/org/aw/rr/). This document contains information about certain state statutes and administrative rules but does not include all of the details found in the statutes and rules. Readers should consult the actual language of the statutes and rules to answer specific questions.

The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240. This publication is available in alternative format upon request. Please call 608-267-3543 for more information.

RIGHT-OF-WAY

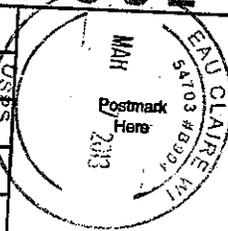
7010 3090 0002 5808 5477

U.S. Postal Service™  
**CERTIFIED MAIL™ RECEIPT**  
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

**OFFICIAL USE**

Postage	\$ 1.32
Certified Fee	3.16
Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 6.97



Sent To Scott Hlgart  
Street, Apt. No.,  
or PO Box No. PO Box 146  
City, State, ZIP+4 Park Falls WI 54552