

GIS REGISTRY  
Cover Sheet

May, 2009  
(RR 5367)

Source Property Information

**REVISED**

11:16 am, Jul 08, 2009

BRRTS #: 03-71-001183

CLOSURE DATE: Apr 20, 2000

ACTIVITY NAME: Ryf Heating & Air Conditioning

FID #: 471114930

PROPERTY ADDRESS: 240 W Main St

DATCP #:

MUNICIPALITY: Winneconne

COMM #: 54986045040A

PARCEL ID #: 1910470

\*WTM COORDINATES:

WTM COORDINATES REPRESENT:

X: 622865 Y: 405025

\* Coordinates are in  
WTM83, NAD83 (1991)

Approximate Center Of Contaminant Source

Approximate Source Parcel Center

Please check as appropriate: (BRRTS Action Code)

Contaminated Media:

Groundwater Contamination > ES (236)

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

Contamination in ROW

Contamination in ROW

Off-Source Contamination

Off-Source Contamination

(note: for list of off-source properties  
see "Impacted Off-Source Property")

(note: for list of off-source properties  
see "Impacted Off-Source Property")

Land Use Controls:

N/A (Not Applicable)

Cover or Barrier (222)

Soil: maintain industrial zoning (220)

(note: maintenance plan for  
groundwater or direct contact)

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

Vapor Mitigation (226)

Structural Impediment (224)

Maintain Liability Exemption (230)

Site Specific Condition (228)

(note: local government or economic  
development corporation)

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 #:  PARCEL ID #:

ACTIVITY NAME:  WTM COORDINATES: X:  Y:

**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.)
- 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 #:**                      **Title:**
- 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 8.5 x 14 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 #: 2-1**                      **Title: Site Location**
- 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 #: 1**                      **Title: Soil Boring And Monitoring Well Location 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: Estimate Of Remaining Contaminated Soil**

BRRTS #: 03-71-001183

ACTIVITY NAME: Ryf Heating & Air Conditioning

**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 #: 2-9 Title: North to South Cross Section A to AA**

**Figure #: 2-10 Title: West to East Cross Section B to BB**

- 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 #: 2 Title: Groundwater Benzene ISO-Concentration Map**

- 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 #: 2-4 Title: Groundwater Elevation Map**

**Figure #: Title:**

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

Tables must be no larger than 8.5 x 14 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 #: 2 Title: Analytical Results - Soil - SPLP Closure Samples**

- 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 #: Title: Groundwater Sample Results**

- 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 #: Title:**

**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).

BRRTS #: 03-71-001183

ACTIVITY NAME: Ryf Heating & Air Conditioning

## NOTIFICATIONS

### Source Property

- 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.

- 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:**
- 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.
- 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:**



Code. Special well construction standards or water treatment requirements, or both, or well construction prohibitions may apply.

NOW THEREFORE, the owner hereby declares that all of the property described above is held and shall be held, conveyed or encumbered, leased, rented, used, occupied and improved subject to the following limitation and restrictions:

Anyone who proposes to construct or reconstruct a well on this property is required to contact the Department of Natural Resources' Bureau of Drinking Water and Groundwater, or its successor agency, to determine what specific requirements are applicable, prior to constructing or reconstructing a well on this property. No well may be constructed on this property unless applicable requirements are met.

If construction is proposed on this property that will require dewatering, or if groundwater is to be otherwise extracted from this property, while this groundwater use restriction is in effect, the groundwater shall be sampled and analyzed for contaminants that were previously detected on the property and any extracted groundwater shall be managed in compliance with applicable statutes and rules.

The following activities are prohibited on that portion of the property around Soil Boring SS-5 located near the sidewalk (see Figure 3 attached) where a cap or cover is currently in place (pavement and sidewalk concrete), unless prior written approval has been obtained from the Wisconsin Department of Natural Resources or its successor or assign: (1) Excavating or grading of the land surface; (2) Filling on the capped area; (3) Plowing for agricultural cultivation; and (4) Construction or installation of a building or other structure with a foundation that would sit on or be placed within the cap or cover. In addition, the cap or cover shall be maintained in compliance with a plan prepared and submitted to the Wisconsin Department of Natural Resources by a responsible party, as required by section NR 724.13(2), Wis. Adm. Code (1997).

This restriction is hereby declared to be a covenant running with the land and shall be fully binding upon all persons acquiring the above-described property whether by descent, devise, purchase or otherwise. This restriction benefits and is enforceable by the Wisconsin Department of Natural Resources, its successors or assigns. The Department, its successors or assigns, may initiate proceedings at law or in equity against any person or persons who violate or are proposing to violate this covenant, to prevent the proposed violation or to recover damages for such violation.

Any person who is or becomes owner of the property described above may request that the Wisconsin Department of Natural Resources or its successor issue a determination that one or more of the restrictions set forth in this covenant is no longer required. Upon the receipt of such a request, the Wisconsin Department of Natural Resources shall determine whether or not the restrictions contained herein can be extinguished. If the Department determines that the restrictions can be extinguished, an affidavit, attached to a copy of the Department's written determination, may be recorded to give notice that this deed restriction, or portions of this deed restriction, are no longer binding.

IN WITNESS WHEREOF, the owner of the property has executed this Declaration of Restrictions,  
this 11 day of April, 2000.

Signature: John H. Ryf

Printed Name: John H. Ryf

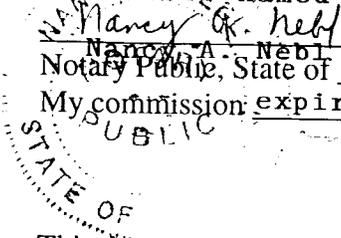
Signature: Robert R. Ryf

Printed Name: Robert R. Ryf

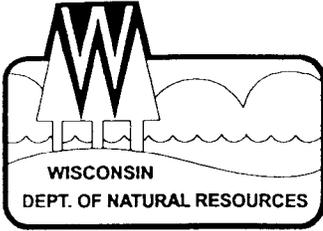
Subscribed and sworn to before me  
this 11th day of April, 2000.

the above named  
Nancy A. Nebel  
Notary Public, State of Wisconsin

My commission expires 7/1/2001



This document was drafted by the Wisconsin Department of Natural Resources based on information provided by Advent Environmental Services Inc.



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor  
George E. Meyer, Secretary  
Ronald W. Kazmierczak, Regional  
Director

Oshkosh Service Center  
625 East County Road Y, Suite 700  
Oshkosh, Wisconsin 54901-97313  
Telephone 920-424-3050  
FAX 920-424-4404

April 5, 2000

Mr. John H. Ryf and Mr. Robert R. Ryf  
Ryf Oil Company  
240 West Main Street  
Winneconne, WI 54986

SUBJECT: **Conditional** Case Closure of  
Ryf 's Heating and Air Conditioning, 240 West Main Street, Winneconne  
**WDNR BRRTS ID # 03-71-001183**

Dear Mssrs. Ryf:

The above referenced case file has been reviewed by the WDNR's Northeast Region Case Closure Committee. This panel reviews environmental remediation cases for compliance with state laws, standards, and guidelines to maintain consistency in the closeout of cases. After careful review, the Committee has decided to grant a **conditional** case closure. At this time, it appears that actions have been taken to the extent practicable to restore the environment and minimize the harmful effects from this discharge to the air, lands and waters of the state.

**First Condition: Soil or Groundwater Use Restriction**

The WDNR is requiring no further remedial action at this time on the condition that *you sign and file a "Declaration of Restriction" with your County Register of Deeds office and send proof of this filing to the Department.* Enclosed please find a draft groundwater use restriction with attachments (maps) for the above referenced property. The deed restriction includes information concerning the property impacted by the restriction that has been provided by you and/or your consultant (or attorney). The restriction is a Department standard format and has been drafted with oversight from Department attorneys. This document should be reviewed and proofread for any errors or incorrect information. If this draft is complete and accurate and you have no corrections, you may use this draft document as a final and sign the document, then file it with the Winnebago County Register of Deeds. If the draft is incomplete or inaccurate please notify me in writing and corrections will be made and a final copy then sent to you to sign and file with the Winnebago County Register of Deeds.

Please note that the restriction involves two portions: a groundwater use restriction portion and a soil restriction portion. The groundwater use restriction portion is fairly simple and straightforward. The soil restriction portion will require the submittal of a maintenance plan for the area surrounding Soil Boring SS-5. This part of the restriction requires the maintenance of a cap over this area of soil. The cap already exists as pavement and sidewalk, but must be maintained. Please discuss this maintenance plan with your consultant.

Once you have filed the restriction you should then send a copy of the filed document to the Department. Please be aware that if a groundwater use restriction is recorded for the wrong property because of an inaccurate legal description you have provided, you will be responsible for correcting the problem. Please contact me if you have any questions or concerns regarding the restriction as written.



Quality Natural Resources Management  
Through Excellent Customer Service



Please note that case closure is dependent upon the filing of this deed restriction. *If the restriction is not filed with the County Register of Deeds, the case remains active and continued sampling of the monitoring wells at the site will be required.* A workplan of the sampling schedule and maintenance of the monitoring wells will be required within 90 days of the date of this letter if verification of the restriction filing is not received as indicated above:

**Second Condition: Monitoring Well Abandonment**

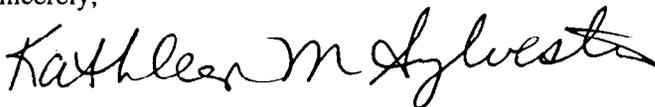
*After* filing the restriction with the appropriate county, only the following Advent monitoring wells must be abandoned according to Chapter NR 141, Wisconsin Administrative Code: MW-1, MW-4, MW-5, MW-6, MW-8, and MW-9. The abandonment forms (#3300-5B) should be sent to my attention. The remaining Advent wells (MW-2, 3, 7, 10, 11, 12, 13, PZ-12, and PZ-13) should be left accessible to Mr. Leo Esch's consultant, Omni Associates, for remedial monitoring of his site progress. I have discussed this with both your consultant and Mr. Esch's. I strongly recommend your cooperation in the continued efforts to remediate the area. If you decide to abandon these wells and/or deny access to these wells, then the State may consider you in possession and control of the remaining contamination on your property, and additional work would be required.

Until verification of **both** the restriction and abandonment documentation is received, the DNR will continue to track this facility as an active BRR site.

Please be aware that this letter does not absolve the current or any future owner of this property, from future decisions regarding this site or impacts which may be discovered and/or traced to past or future activities at this site. If additional information in the future indicates that further investigation and/or remediation is warranted, the Department will require that appropriate action be taken at that time.

The Department appreciates your efforts to protect and restore the environment at this site. If you have any questions regarding this letter, please contact me at (920) 424-0399.

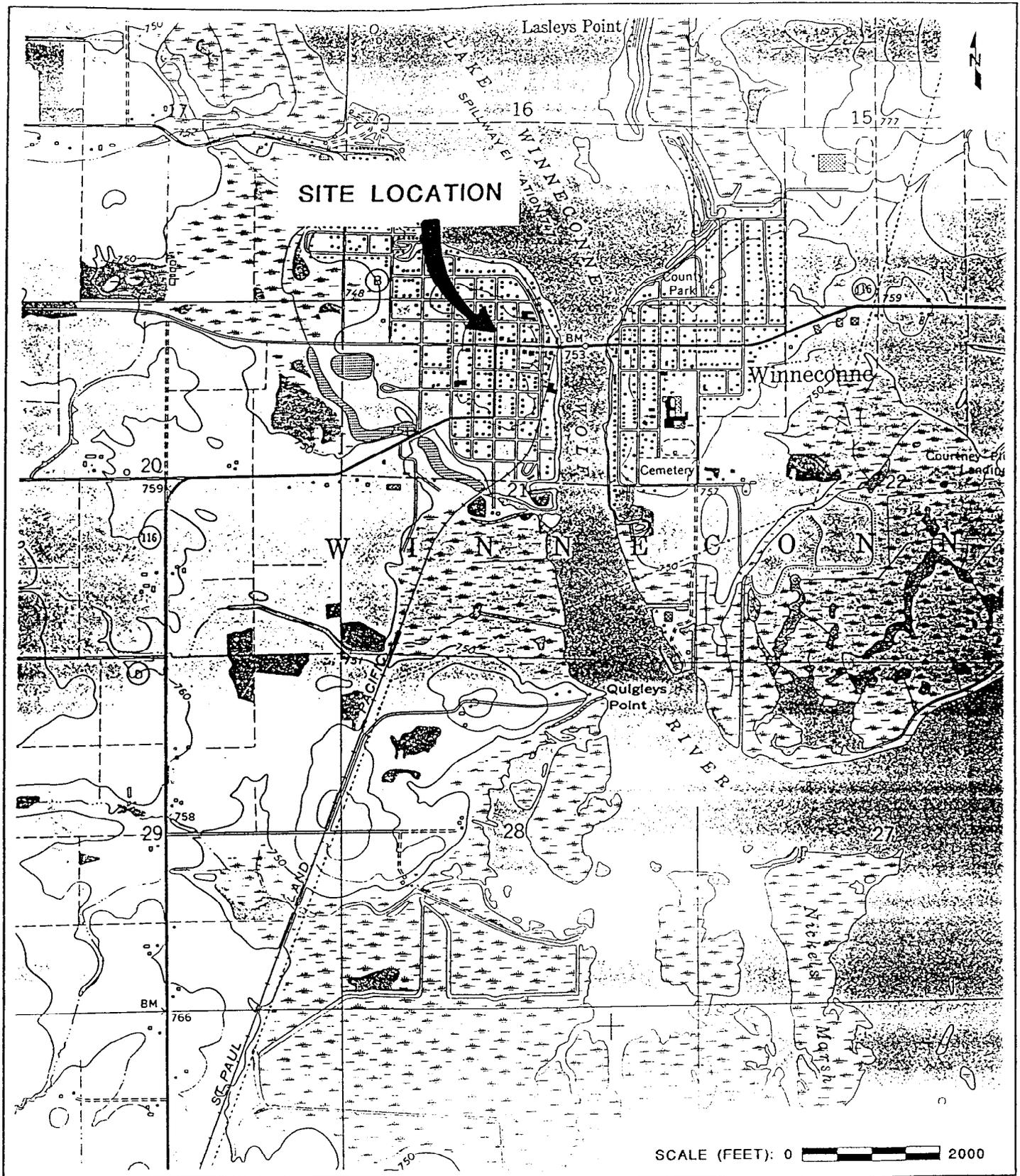
Sincerely,



Kathleen M. Sylvester, Hydrogeologist  
Bureau for Remediation & Redevelopment

cc: Case File - OSH  
Tom Verstegen - COMM  
Pete Pavalko, Advent Environmental Services Inc, P.O. Box 277, Mequon, WI 53092-0277  
Brian Wayner, Omni Associates, One Systems Drive, Appleton, WI 54914-1654  
Gary Yakes, 141 N. Sawyer Street, Oshkosh, WI 54901  
Eric Johnson, Village Administrator, P.O. Box 650, Winneconne, WI 54986





**FIGURE 2-1 SITE LOCATION**  
**RYF'S HEATING & AIR CONDITIONING**  
**WINNECONNE, WISCONSIN**



QUADRANGLE LOCATION

**A D V E N T**

ENVIRONMENTAL SERVICES, INC.  
 DATE: 6/8/93  
 DRAWING # 96856

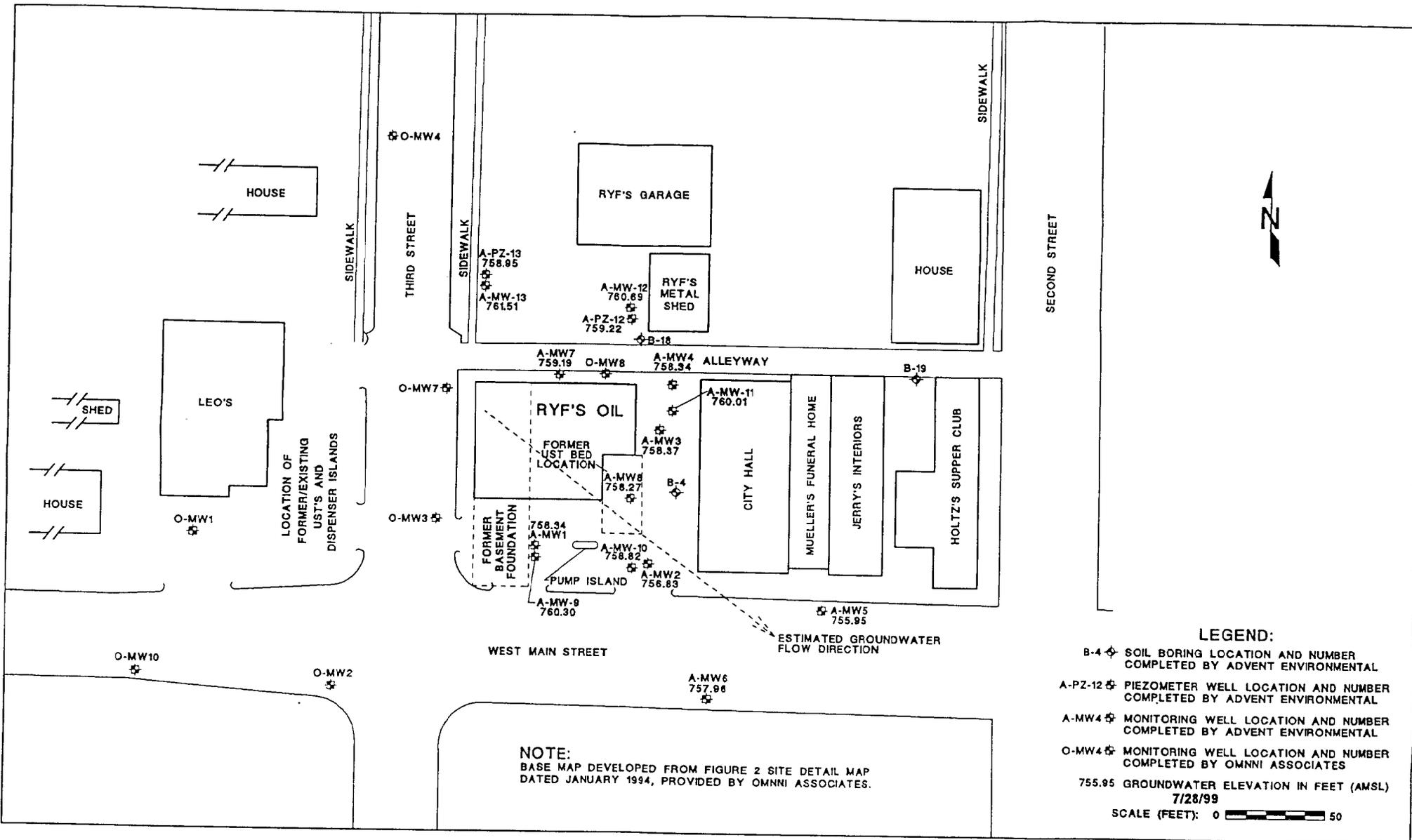
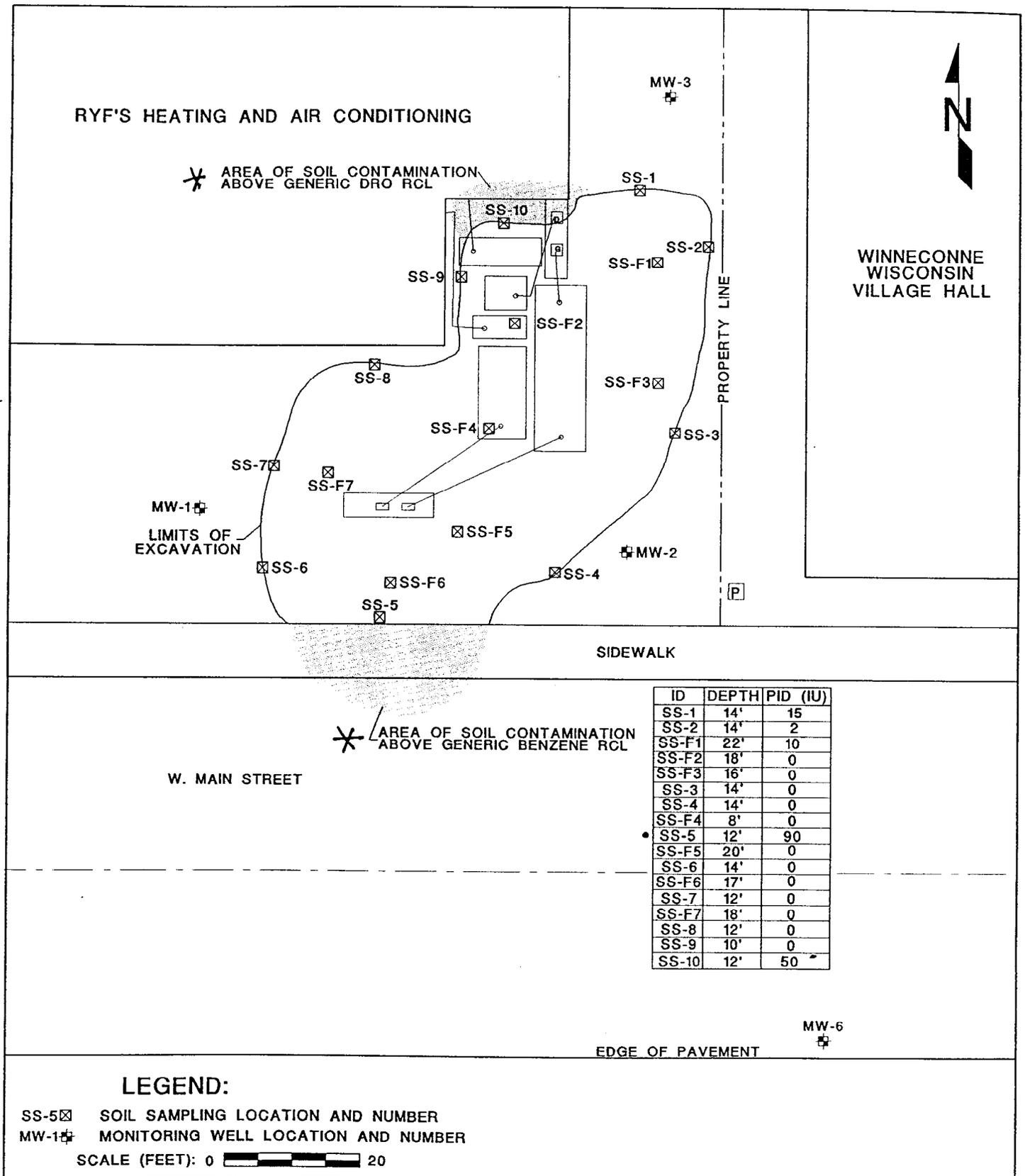


FIGURE 1 SOIL BORING AND MONITORING WELL LOCATION MAP  
RYF'S HEATING AND AIR CONDITIONING  
WINNECONNE, WISCONSIN

**A D V E N T**  
ENVIRONMENTAL SERVICES, INC.  
DATE: 9/14/99  
DRAWING # 96856.20P



**FIGURE 3 ESTIMATE OF REMAINING CONTAMINATED SOIL RYF'S HEATING & AIR CONDITIONING WINNECONNIE, WISCONSIN**

**A D V E N T**  
 ENVIRONMENTAL SERVICES, INC.  
 DATE: 11/26/96  
 DRAWING # 96856.10V

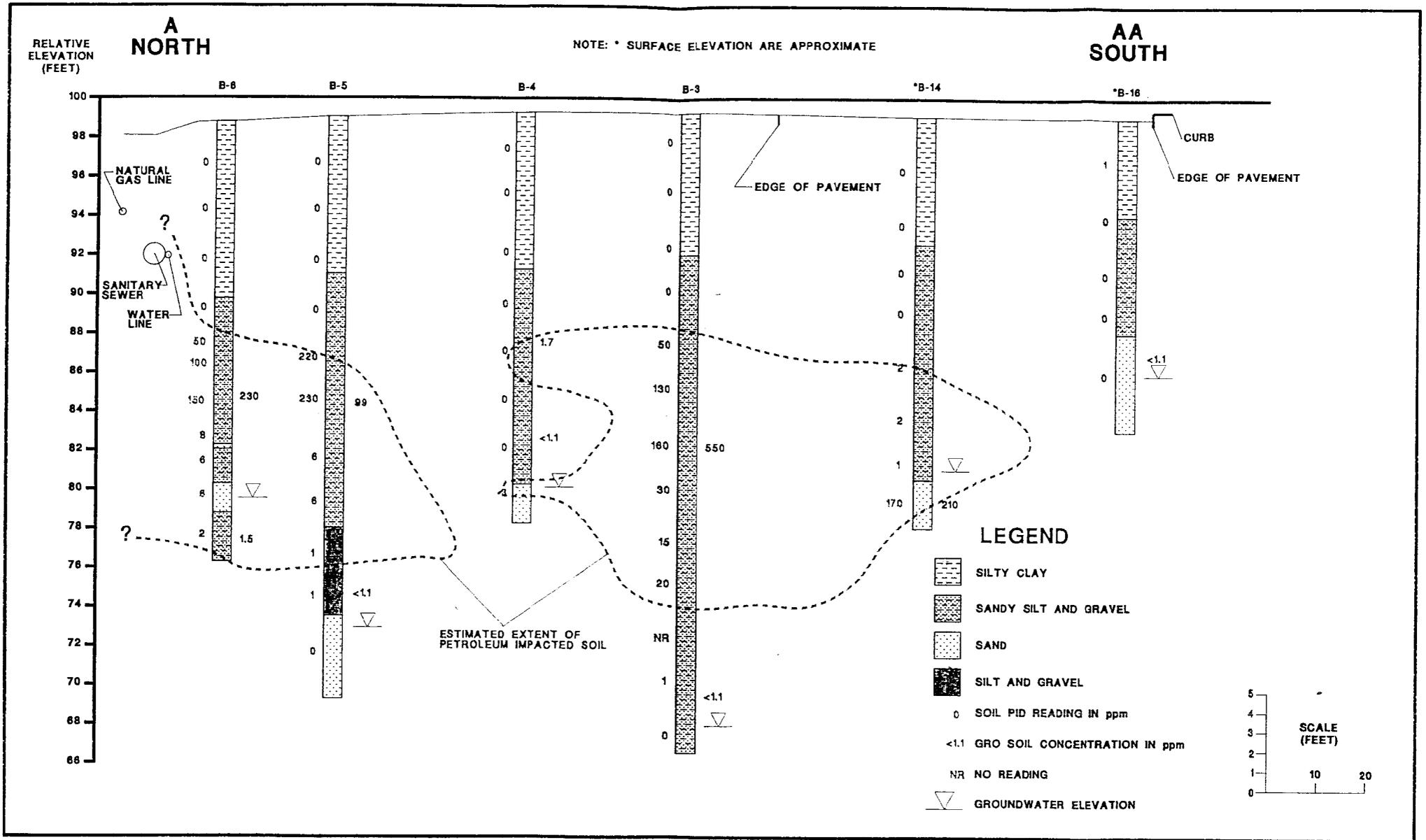
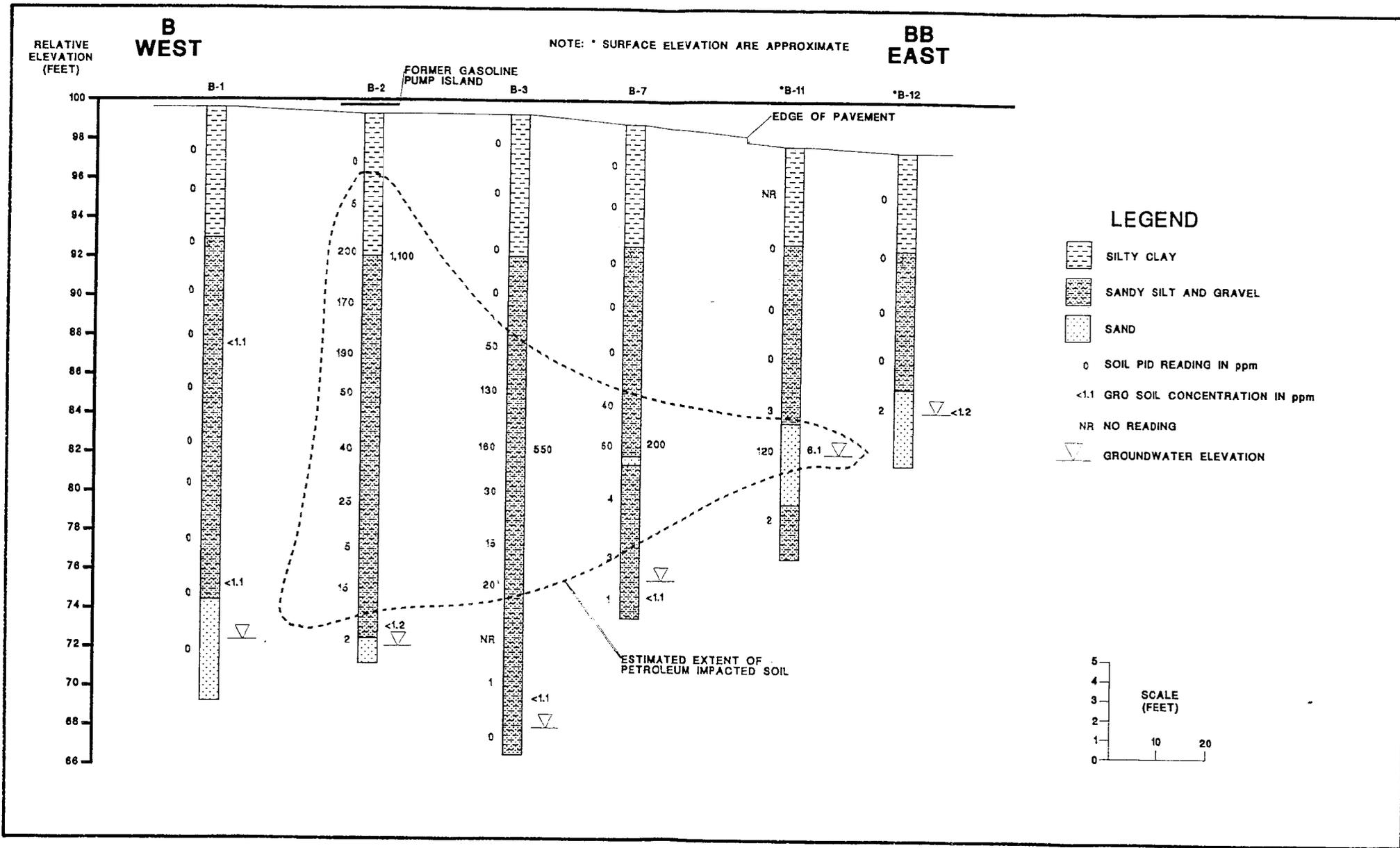


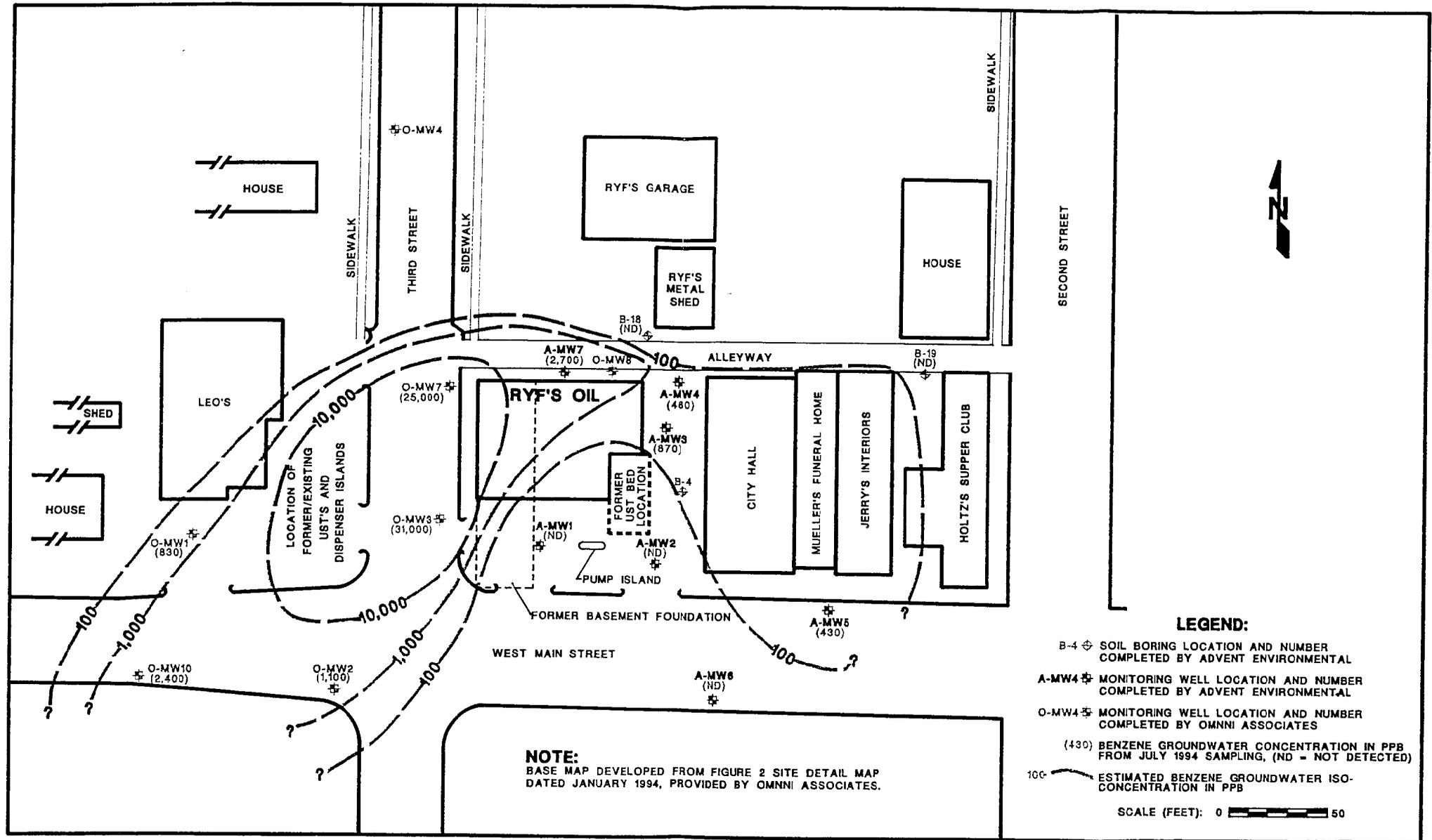
FIGURE 2-9 NORTH TO SOUTH CROSS SECTION A TO AA  
 RYF'S HEATING AND AIR CONDITIONING  
 WINNECONNIE, WISCONSIN

**A D V E N T**  
 ENVIRONMENTAL SERVICES, INC.  
 DATE: 7/14/93  
 DRAWING # 98856M



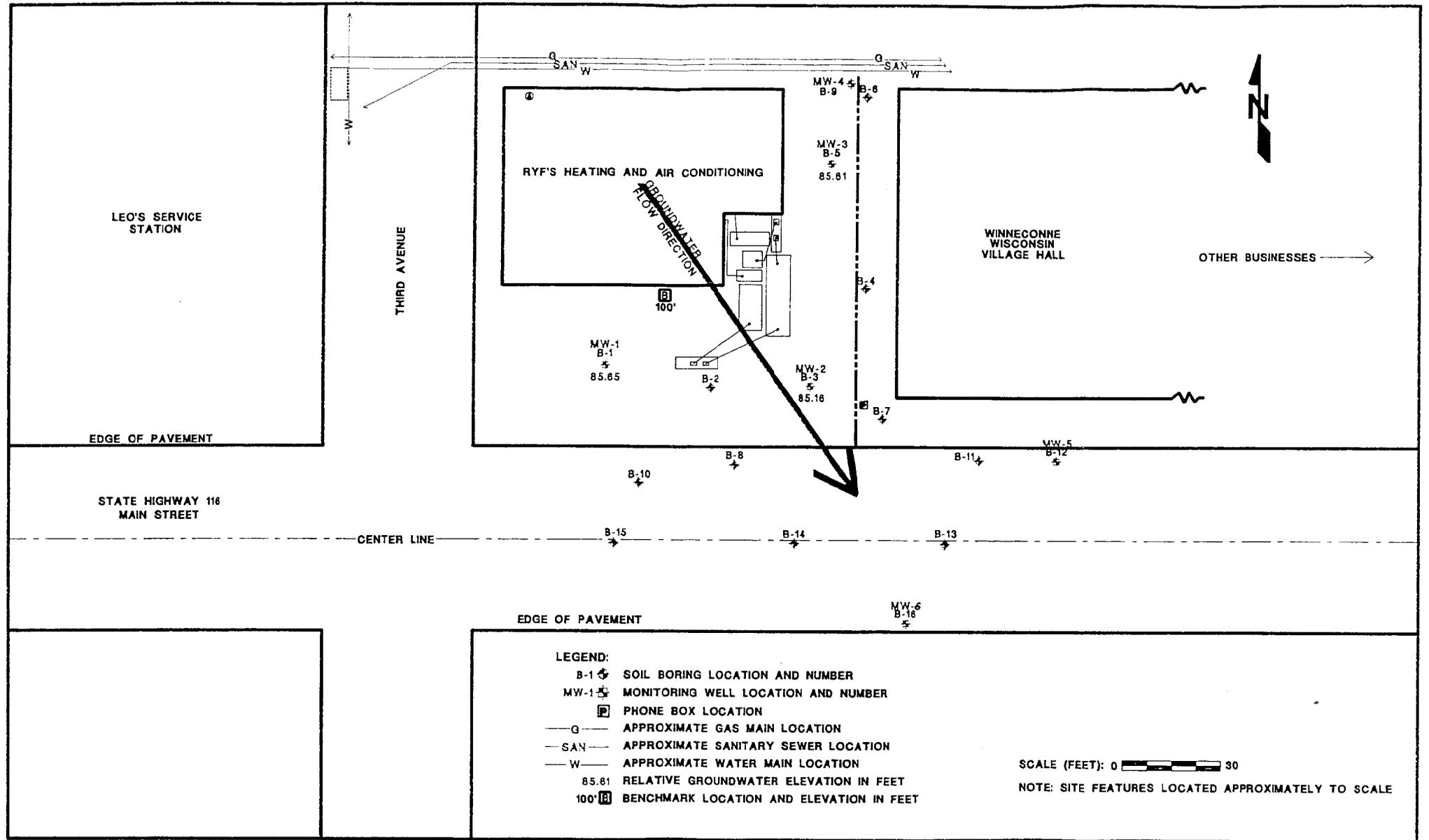
**FIGURE 2-10 WEST TO EAST CROSS SECTION B TO BB  
RYF'S HEATING AND AIR CONDITIONING  
WINNECONNIE, WISCONSIN**

**A D V E N T**  
**ENVIRONMENTAL SERVICES, INC.**  
 DATE: 7/14/93  
 DRAWING # 96858N



**FIGURE 2 GROUNDWATER BENZENE ISO-CONCENTRATION MAP** 1994  
**RYF'S HEATING AND AIR CONDITIONING**  
**WINNECONNE, WISCONSIN**

**ADVENT**  
 ENVIRONMENTAL SERVICES, INC.  
 DATE: 11/14/94  
 DRAWING # 96856.00Q



2-11

**FIGURE 2-4 GROUNDWATER ELEVATION MAP - 1993**  
**RYF'S HEATING AND AIR CONDITIONING**  
**WINNECONNE, WISCONSIN**

**A D V E N T**  
 ENVIRONMENTAL SERVICES, INC.  
 DATE: 7/12/93  
 DRAWING # 96856E

TABLE 2			
ANALYTICAL RESULTS - SOIL - <u>SPLP</u> CLOSURE SAMPLES			
RYF'S HEATING & AIR CONDITIONING			
Sample	SS-5 •	NR 140 Remedial Action Limits	
Date Sampled	10-22-96	ES	PAL
Depth (feet)	12		
PID (instrument units)	90		
SPLP PVOCs (ppb)			
Benzene	ND	5.0	0.5
Ethylbenzene	ND	700	140
Methyl-t-Butyl Ether	ND	60	12
Toluene	ND	343	68.6
1,2,4-Trimethylbenzene	ND	---	---
1,3,5-Trimethylbenzene	ND	---	---
Total Xylenes	1.5	620	124

ES = Enforcement Standard PAL = Preventive Action Limit

ND = Not Detected

--- = no limits established

**GROUNDWATER SAMPLE RESULTS  
RYF'S HEATING AND AIR CONDITIONING  
MW-1**



Analyte (ppb)	MW-1									PAL	ES
	Date										
	3/25/93	1/25/94	7/6/94	6/19/96	11/14/96	2/27/97	5/12/97	8/14/97	7/28/99		
Groundwater Elevation									758.34		
GRO	< 100	< 50	56	< 50	< 50	< 14	< 50	< 50	NA		
DRO	< 100	< 100	< 100	< 100	< 100	< 11	< 100	< 100	NA		
VOCs											
Benzene	<b>0.94</b>	< 1	< 0.50	< 0.50	< 0.5	<b>0.53</b>	<b>1.6</b>	<b>8.8</b>	<b>25</b>	0.5	5
n-Butylbenzene	< 0.50	< 1	< 0.50	NA	NA	NA	NA	NA	< 0.50		
sec-Butylbenzene	< 0.50	< 1	< 0.50	NA	NA	NA	NA	NA	< 0.50		
Chloromethane	< 0.50	< 1	< 0.50	NA	NA	NA	NA	NA	1.3		
1,2-Dichloroethane	< 0.50	< 1	< 0.50	NA	NA	NA	NA	NA	2.9	0.5	5
cis-1,2-Dichloroethene	< 0.50	< 1	< 0.50	NA	NA	NA	NA	NA	< 0.50		
Ethylbenzene	< 0.50	< 1	< 0.50	< 0.50	< 0.50	< 0.26	< 0.50	< 0.50	< 0.50	140	700
Isopropylbenzene	< 0.50	< 1	< 0.50	NA	NA	NA	NA	NA	< 0.50		
p-Isopropyltoluene	< 0.50	< 1	< 0.50	NA	NA	NA	NA	NA	< 0.50		
Methyl-tert-Butylether	< 5	3.7	< 5	< 5	< 5	2.5	2.7	<b>63</b>	4.5	12	60
Naphthalene	< 0.50	< 2	< 8	NA	NA	NA	NA	NA	< 0.50	8	40
n-Propylbenzene	< 0.50	< 1	< 0.50	NA	NA	NA	NA	NA	< 0.50		
Toluene	16	< 1	< 0.50	< 0.50	< 0.50	0.97	< 0.50	< 0.50	< 0.50	68.6	343
Trichloroethene	<b>0.53</b>	< 1	< 0.50	NA	NA	NA	NA	NA	< 0.50	0.5	5
1,2,4-Trimethylbenzene	< 0.50	< 1	< 1	< 1	< 1	< 0.30	< 1	< 1	< 0.50		
1,3,5-Trimethylbenzene	< 0.50	< 1	< 1	< 1	< 1	< 0.20	< 1	< 1	< 0.50	96	480
Vinyl Chloride	< 0.20	< 1	< 0.20	NA	NA	NA	NA	NA	< 0.50	0.02	0.2
Total Xylenes	1.3	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.62	< 0.50	124	620
PAHS											
Acenaphthene	NA	NA	< 5	NA	NA	NA	NA	NA	< 1		
Acenaphthylene	NA	NA	< 4	NA	NA	NA	NA	NA	< 1		
Benzo(a)anthracene	NA	NA	< 0.010	NA	NA	NA	NA	NA	< 1		
Benzo(a)pyrene	NA	NA	< 0.010	NA	NA	NA	NA	NA	< 0.16	0.02	0.2
Chrysene	NA	NA	< 0.050	NA	NA	NA	NA	NA	< 1		
Fluoranthene	NA	NA	< 1	NA	NA	NA	NA	NA	< 1		
Fluorene	NA	NA	< 1	NA	NA	NA	NA	NA	< 1	80	400
1-methyl Naphthalene	NA	NA	< 3	NA	NA	NA	NA	NA	< 1		
2-methyl Naphthalene	NA	NA	< 3	NA	NA	NA	NA	NA	< 1		
Naphthalene	NA	NA	< 3	NA	NA	NA	NA	NA	< 1	8	40
Phenanthrene	NA	NA	< 0.30	NA	NA	NA	NA	NA	< 1		

NA Not analyzed  
 Bolded values indicate concentrations above the NR 140.10 PAL  
 Shaded values indicate concentrations above the NR 140.10 ES

\* ↑  
 Leo's  
 Geocause Pilot  
 Test occurred in  
 April 97 and work  
 started in May-June 97  
 KMS

**GROUNDWATER SAMPLE RESULTS**  
**RYF'S HEATING AND AIR CONDITIONING**  
**MW-2**

Analyte (ppb)	MW-2									PAL	ES
	Date										
	3/25/93	1/25/94	7/6/94	6/19/96	11/14/96	2/27/97	5/12/97	8/14/97	7/28/99		
Groundwater Elevation									756.83		
GRO	< 100	330	< 50	1,000	68	95	< 50	600	NA		
DRO	< 100	540	190	140	630	120	120	140	NA		
VOCs											
Benzene	< 0.50	< 2.5	< 0.50	< 2.5	1.1	1.1	1.7	2.4	0.86	0.5	5
n-Butylbenzene	< 0.50	< 2.5	< 0.50	NA	NA	NA	NA	NA	< 0.50		
sec-Butylbenzene	< 0.50	< 2.5	< 0.50	NA	NA	NA	NA	NA	< 0.50		
Chloromethane	< 0.50	< 2.5	< 0.50	NA	NA	NA	NA	NA	0.99		
1,2-Dichloroethane	<b>20</b>	<b>21</b>	<b>37</b>	NA	NA	NA	NA	NA	<b>42</b>	0.5	5
cis-1,2-Dichloroethene	< 0.50	< 2.5	< 0.50	NA	NA	NA	NA	NA	< 0.50		
Ethylbenzene	1.2	6.9	2.5	32	1.8	1.4	1.2	3.3	0.59	140	700
Isopropylbenzene	< 0.50	2.8	0.89	NA	NA	NA	NA	NA	0.25		
p-Isopropyltoluene	< 0.50	< 2.5	< 0.50	NA	NA	NA	NA	NA	< 0.50		
Methyl-tert-Butylether	<b>27</b>	< 5	<b>28</b>	<b>160</b>	<b>58</b>	<b>41</b>	<b>69</b>	<b>72</b>	<b>66</b>	12	60
Naphthalene	< 0.50	< 5	< 8	NA	NA	NA	NA	NA	< 0.50	8	40
n-Propylbenzene	< 0.50	< 2.5	0.64	NA	NA	NA	NA	NA	< 0.50		
Toluene	1.8	< 2.5	< 0.50	< 2.5	< 0.50	1.2	< 0.50	1.1	< 0.50	68.6	343
Trichloroethene	< 0.50	< 2.5	< 0.50	NA	NA	NA	NA	NA	0.14	0.5	5
1,2,4-Trimethylbenzene	< 0.50	< 2.5	1.3	34	1.1	1.4	1.3	3.3	0.33	96	480
1,3,5-Trimethylbenzene	< 0.50	< 2.5	< 1	20	< 1	1.6	0.68	1.6	< 0.50		
Vinyl Chloride	< 0.50	< 2.5	< 0.20	NA	NA	NA	NA	NA	< 0.50	0.02	0.2
Total Xylenes	< 0.50	< 2.5	1.1	13	0.84	1.6	0.66	5.6	< 0.50	124	620
PAHS											
Acenaphthene	NA	NA	< 5	NA	NA	NA	NA	NA	< 1		
Acenaphthylene	NA	NA	< 4	NA	NA	NA	NA	NA	< 1		
Benzo(a)anthracene	NA	NA	< 0.010	NA	NA	NA	NA	NA	< 1		
Benzo(a)pyrene	NA	NA	< 0.010	NA	NA	NA	NA	NA	< 0.16	0.02	0.2
Chrysene	NA	NA	< 0.050	NA	NA	NA	NA	NA	< 1		
Fluoranthene	NA	NA	< 1	NA	NA	NA	NA	NA	< 1		
Fluorene	NA	NA	< 1	NA	NA	NA	NA	NA	< 1	80	400
1-methyl Naphthalene	NA	NA	< 3	NA	NA	NA	NA	NA	< 1		
2-methyl Naphthalene	NA	NA	< 3	NA	NA	NA	NA	NA	< 1		
Naphthalene	NA	NA	< 3	NA	NA	NA	NA	NA	0.097	8	40
Phenanthrene	NA	NA	< 0.30	NA	NA	NA	NA	NA	< 1		

NA Not analyzed

Bolded values indicate concentrations above the NR 140.10 PAL

Shaded values indicate concentrations above the NR 140.10 ES

**GROUNDWATER SAMPLE RESULTS  
RYF'S HEATING AND AIR CONDITIONING  
MW-3**

Analyte (ppb)	MW-3									PAL	ES
	Date										
	3/25/93	1/25/94	7/6/94	6/19/96 <sup>1</sup>	11/14/96	2/27/97	5/12/97	8/14/97	7/28/99		
Groundwater Elevation									758.37		
GRO	2,100	1,200	3,300	NA	3,600	13,000	6,000	4,000	NA		
DRO	700	910	810	NA	260	120,000	< 100	1,400	NA		
VOCs											
Benzene	<b>450</b>	<b>290</b>	<b>670</b>	NA	<b>310</b>	<b>390</b>	<b>220</b>	<b>650</b>	<b>120</b>	0.5	5
n-Butylbenzene	8.6	< 5	< 20	NA	NA	NA	NA	NA	34		
sec-Butylbenzene	< 5	< 5	< 20	NA	NA	NA	NA	NA	< 11		
tert-Butylbenzene	< 5	< 5	< 20	NA	NA	NA	NA	NA	99		
Chloromethane	< 5	< 5	< 20	NA	NA	NA	NA	NA	< 29		
1,2-Dichloroethane	<b>8.1</b>	<b>17</b>	< 20	NA	NA	NA	NA	NA	< 7.5	0.5	5
cis-1,2-Dichloroethene	49	44	46	NA	NA	NA	NA	NA	< 5.3		
Ethylbenzene	110	110	<b>430</b>	NA	<b>350</b>	<b>800</b>	<b>450</b>	<b>410</b>	<b>790</b>	140	700
Isopropylbenzene	6.2	6	< 20	NA	NA	NA	NA	NA	38		
p-Isopropyltoluene	< 5	< 5	< 20	NA	NA	NA	NA	NA	< 11		
Methyl-tert-Butylether	< 50	< 5	< 200	NA	<b>62</b>	<b>59</b>	< 20	<b>100</b>	< 9.6	12	60
Naphthalene	< 5	< 10	< 320	NA	NA	NA	NA	NA	<b>160</b>	8	40
n-Propylbenzene	11	8.1	30	NA	NA	NA	NA	NA	97		
Toluene	<b>370</b>	<b>42</b>	<b>39</b>	NA	<b>62</b>	<b>180</b>	<b>110</b>	<b>230</b>	<b>80</b>	68.6	343
Trichloroethene	<b>23</b>	<b>18</b>	< 20	NA	NA	NA	NA	NA	< 4.7	0.5	5
1,2,4-Trimethylbenzene	77	34	<b>250</b>	NA	<b>280</b>	<b>760</b>	<b>530</b>	<b>230</b>	<b>760</b>	96	480
1,3,5-Trimethylbenzene	20	6.4	<b>45</b>	NA	<b>61</b>	<b>300</b>	<b>160</b>	<b>56</b>	<b>220</b>		
Vinyl Chloride	< 5	< 5	< 8	NA	NA	NA	NA	NA	< 7.3	0.02	0.2
Total Xylenes	<b>380</b>	<b>136</b>	<b>1,000</b>	NA	<b>880</b>	<b>2,980</b>	<b>1,500</b>	<b>990</b>	<b>1,560</b>	124	620
PAHS											
Acenaphthene	NA	NA	< 5	NA	NA	NA	NA	NA	3.3		
Acenaphthylene	NA	NA	< 4	NA	NA	NA	NA	NA	< 1.8		
Benzo(a)anthracene	NA	NA	< 0.010	NA	NA	NA	NA	NA	< 1.1		
Benzo(a)pyrene	NA	NA	< 0.010	NA	NA	NA	NA	NA	< 0.40	0.02	0.2
Chrysene	NA	NA	< 0.050	NA	NA	NA	NA	NA	< 1		
Fluoranthene	NA	NA	< 1	NA	NA	NA	NA	NA	< 1		
Fluorene	NA	NA	< 1	NA	NA	NA	NA	NA	7	80	400
1-methyl Naphthalene	NA	NA	17	NA	NA	NA	NA	NA	100		
2-methyl Naphthalene	NA	NA	17	NA	NA	NA	NA	NA	180		
Naphthalene	NA	NA	49	NA	NA	NA	NA	NA	<b>120</b>	8	40
Phenanthrene	NA	NA	0.57	NA	NA	NA	NA	NA	12		

NA Not analyzed

Bolded values indicate concentrations above the NR 140.10 PAL

Shaded values indicate concentrations above the NR 140.10 ES

1 Sample contained free diesel product on 6/19/96; no sample was collected for analysis

**GROUNDWATER SAMPLE RESULTS**  
**RYF'S HEATING AND AIR CONDITIONING**  
**MW-4**



Analyte (ppb)	MW-4									PAL	ES
	Date										
	5/24/93	1/25/94	7/6/94	6/19/96	11/14/96	2/27/97	5/12/97	8/14/97	7/28/99		
Groundwater Elevation									758.34		
GRO	160,000	5,700	2,600	390,000	2,100	7,800	130,000	14,000	NA		
DRO	19,000	22,000	1,900	91	4,400	41,000	NA	1,400	NA		
VOCs											
Benzene	<b>280</b>	<b>530</b>	<b>460</b>	<b>110</b>	<b>180</b>	<b>340</b>	<b>500</b>	<b>190</b>	<b>33</b>	0.5	5
n-Butylbenzene	1,800	< 10	44	NA	NA	NA	NA	NA	11		
sec-Butylbenzene	380	< 10	< 20	NA	NA	NA	NA	NA	4.1		
tert-Butylbenzene	< 100	< 10	< 20	NA	NA	NA	NA	NA	16		
Chloromethane	< 100	< 10	< 20	NA	NA	NA	NA	NA	< 7.2		
1,2-Dichloroethane	< 100	< 10	< 20	NA	NA	NA	NA	NA	< 1.9	0.5	5
cis-1,2-Dichloroethene	< 100	27	< 20	NA	NA	NA	NA	NA	2.8		
Ethylbenzene	<b>1,200</b>	<b>390</b>	<b>380</b>	<b>6,500</b>	<b>180</b>	<b>540</b>	<b>870</b>	<b>280</b>	<b>110</b>	140	700
Isopropylbenzene	170	27	22	NA	NA	NA	NA	NA	7.3		
p-Isopropyltoluene	210	< 10	< 20	NA	NA	NA	NA	NA	3.5		
Methyl-tert-Butylether	< 1,000	< 10	< 200	<b>260</b>	25	< 12	< 200	< 20	< 2.4	12	60
Naphthalene	<b>1,000</b>	<b>150</b>	< 320	NA	NA	NA	NA	NA	38	8	40
n-Propylbenzene	1,100	60	58	NA	NA	NA	NA	NA	18		
Toluene	< 100	<b>120</b>	<b>81</b>	<b>17,000</b>	47	<b>380</b>	<b>1,300</b>	< 50	44	68.6	343
Trichloroethene	< 100	<b>31</b>	<b>23</b>	NA	NA	NA	NA	NA	< 1.2	0.5	5
1,2,4-Trimethylbenzene	<b>3,600</b>	<b>270</b>	<b>300</b>	<b>80,000</b>	<b>190</b>	<b>520</b>	<b>2,000</b>	<b>240</b>	<b>130</b>	96	480
1,3,5-Trimethylbenzene	<b>1,400</b>	<b>84</b>	<b>87</b>	<b>35,000</b>	<b>35</b>	<b>210</b>	<b>900</b>	< 100	<b>37</b>		
Vinyl Chloride	< 40	< 10	< 8	NA	NA	NA	NA	NA	< 1.8	0.02	0.2
Total Xylenes	<b>3,700</b>	<b>452</b>	<b>420</b>	<b>23,000</b>	<b>200</b>	<b>1,190</b>	<b>2,400</b>	<b>200</b>	<b>193</b>	124	620
PAHS											
Acenaphthene	NA	NA	5	NA	NA	NA	NA	NA	1.5		
Acenaphthylene	NA	NA	< 4	NA	NA	NA	NA	NA	< 1		
Benzo(a)anthracene	NA	NA	0.054	NA	NA	NA	NA	NA	< 1		
Benzo(a)pyrene	NA	NA	0.015	NA	NA	NA	NA	NA	< 0.16	0.02	0.2
Chrysene	NA	NA	0.076	NA	NA	NA	NA	NA	< 1		
Fluoranthene	NA	NA	4.6	NA	NA	NA	NA	NA	1.1		
Fluorene	NA	NA	3.8	NA	NA	NA	NA	NA	2.5	80	400
1-methyl Naphthalene	NA	NA	< 3	NA	NA	NA	NA	NA	46		
2-methyl Naphthalene	NA	NA	< 3	NA	NA	NA	NA	NA	58		
Naphthalene	NA	NA	< 3	NA	NA	NA	NA	NA	<b>47</b>	8	40
Phenanthrene	NA	NA	4.4	NA	NA	NA	NA	NA	3.1		

NA Not analyzed

Bolded values indicate concentrations above the NR 140.10 PAL

Shaded values indicate concentrations above the NR 140.10 ES

The laboratory broke the DRO sample from 5/12/97

**GROUNDWATER SAMPLE RESULTS**  
**RYF'S HEATING AND AIR CONDITIONING**  
**MW-5**



Analyte (ppb)	MW-5									PAL	ES
	Date										
	5/24/93	1/25/94	7/6/94	6/19/96	11/14/96	2/27/97	5/12/97	8/14/97	7/28/99		
Groundwater Elevation									755.95		
GRO	180	780	800	< 50	200	1,900	120	880	NA		
DRO	< 100	100	170	< 100	< 100	9,400	< 100	220	NA		
VOCs											
Benzene	<b>140</b>	<b>420</b>	<b>430</b>	<b>23</b>	<b>89</b>	<b>710</b>	<b>60</b>	<b>420</b>	<b>13</b>	0.5	5
n-Butylbenzene	< 2.5	< 5	< 0.50	NA	NA	NA	NA	NA	< 0.50		
sec-Butylbenzene	< 2.5	< 5	3	NA	NA	NA	NA	NA	0.49		
Chloromethane	2.8	< 5	< 0.50	NA	NA	NA	NA	NA	1.4		
1,2-Dichloroethane	<b>3.3</b>	<b>7.6</b>	<b>7.2</b>	NA	NA	NA	NA	NA	< 0.50	0.5	5
cis-1,2-Dichloroethene	< 2.5	< 5	< 0.50	NA	NA	NA	NA	NA	< 0.50		
Ethylbenzene	< 2.5	26	10	< 0.50	2	36	2.3	16	1.1	140	700
Isopropylbenzene	< 2.5	15	6	NA	NA	NA	NA	NA	1.3		
p-Isopropyltoluene	< 2.5	< 5	< 0.50	NA	NA	NA	NA	NA	< 0.50		
Methyl-tert-Butylether	< 25	< 5	< 5	38	6.8	8.3	11	27	4.2	12	60
Naphthalene	< 2.5	< 10	< 8	NA	NA	NA	NA	NA	0.32	8	40
n-Propylbenzene	< 2.5	10	3.9	NA	NA	NA	NA	NA	0.44		
Toluene	5.6	22	30	< 0.50	1	120	0.94	200	< 0.16	68.6	343
Trichloroethene	< 2.5	< 5	< 0.50	NA	NA	NA	NA	NA	< 0.50	0.5	5
1,2,4-Trimethylbenzene	< 2.5	8.4	11	< 1	4.3	53	0.52	28	0.31		
1,3,5-Trimethylbenzene	< 2.5	< 5	1.4	< 1	< 1	25	< 1	6	< 0.50	96	480
Vinyl Chloride	< 1.0	< 5	< 0.20	NA	NA	NA	NA	NA	< 0.50	0.02	0.2
Total Xylenes	< 2.5	5.4	9.7	< 0.5	1.8	43	0.57	24	< 0.50	124	620
PAHS											
Acenaphthene	NA	NA	< 5	NA	NA	NA	NA	NA	0.9		
Acenaphthylene	NA	NA	< 4	NA	NA	NA	NA	NA	< 1		
Benzo(a)anthracene	NA	NA	< 0.010	NA	NA	NA	NA	NA	< 1		
Benzo(a)pyrene	NA	NA	< 0.010	NA	NA	NA	NA	NA	< 0.016	0.02	0.2
Chrysene	NA	NA	< 0.050	NA	NA	NA	NA	NA	< 1		
Fluoranthene	NA	NA	< 1	NA	NA	NA	NA	NA	< 1		
Fluorene	NA	NA	< 1	NA	NA	NA	NA	NA	< 1	80	400
1-methyl Naphthalene	NA	NA	< 3	NA	NA	NA	NA	NA	0.48		
2-methyl Naphthalene	NA	NA	< 3	NA	NA	NA	NA	NA	< 1		
Naphthalene	NA	NA	< 3	NA	NA	NA	NA	NA	0.071	8	40
Phenanthrene	NA	NA	< 0.30	NA	NA	NA	NA	NA	< 1		

NA Not analyzed

Bolded values indicate concentrations above the NR 140.10 PAL

Shaded values indicate concentrations above the NR 140.10 ES

**GROUNDWATER SAMPLE RESULTS**  
**RYF'S HEATING AND AIR CONDITIONING** ↑  
**MW-8**

Analyte (ppb)	Date					PAL	ES
	11/14/96	2/27/97	5/12/97	8/14/97	7/28/99		
Groundwater Elevation					758.27		
GRO	760	110	< 50	62	NA		
DRO	1,800	1,300	2,100	470	NA		
VOCs							
Benzene	<b>8.5</b>	<b>6</b>	<b>7.8</b>	<b>1.4</b>	<b>17</b>	0.5	5
n-Butylbenzene	NA	NA	NA	NA	< 0.50		
sec-Butylbenzene	NA	NA	NA	NA	0.35		
Chloromethane	NA	NA	NA	NA	0.92		
1,2-Dichloroethane	NA	NA	NA	NA	< 0.50	0.5	5
cis-1,2-Dichloroethene	NA	NA	NA	NA	5.9		
Ethylbenzene	7	0.4	< 0.50	< 0.50	< 0.50	140	700
Isopropylbenzene	NA	NA	NA	NA	< 0.50		
p-Isopropyltoluene	NA	NA	NA	NA	< 0.50		
Methyl-tert-Butylether	< 10	< 0.24	< 0.20	1.2	<b>17</b>	12	60
Naphthalene	NA	NA	NA	NA	0.3	8	40
n-Propylbenzene	NA	NA	NA	NA	< 0.50		
Toluene	10	< 0.25	< 0.50	0.6	< 0.50	68.6	343
Trichloroethene	NA	NA	NA	NA	< 0.50	0.5	5
1,2,4-Trimethylbenzene	5.3	0.67	< 1.0	< 1.0	< 0.50	96	480
1,3,5-Trimethylbenzene	4	0.23	< 1.0	< 1.0	< 0.50		
Vinyl Chloride	NA	NA	NA	NA	< 0.50	0.02	0.2
Total Xylenes	6.3	0.42	< 0.50	0.67	< 0.50	124	620
PAHS							
Acenaphthene	NA	NA	NA	NA	0.11		
Acenaphthylene	NA	NA	NA	NA	< 1		
Benzo(a)anthracene	NA	NA	NA	NA	< 1		
Benzo(a)pyrene	NA	NA	NA	NA	< 0.016	0.02	0.2
Chrysene	NA	NA	NA	NA	< 1		
Fluoranthene	NA	NA	NA	NA	< 1		
Fluorene	NA	NA	NA	NA	0.17	80	400
1-methyl Naphthalene	NA	NA	NA	NA	0.15		
2-methyl Naphthalene	NA	NA	NA	NA	< 1		
Naphthalene	NA	NA	NA	NA	0.071	8	40
Phenanthrene	NA	NA	NA	NA	< 1		

NA Not analyzed

Bolded values indicate concentrations above the NR 140.10 PAL

Shaded values indicate concentrations above the NR 140.10 ES

**GROUNDWATER SAMPLE RESULTS  
RYF'S HEATING AND AIR CONDITIONING  
NEW WELLS AND PIEZOMETERS INSTALLED IN JULY 1999**

*at DNR request. ✓*

Analyte (ppb)	Date							PAL	ES
	7/28/99	7/28/99	7/28/99	7/28/99	7/28/99	7/28/99	7/28/99		
Sample ID/Location	MW-9	MW-10	MW-11	MW-12	PZ-12	MW-13	PZ-13		
Groundwater Elevation	760.30	758.82	760.01	760.69	759.22	761.51	758.95		
GRO	NA	NA	NA	NA	NA	NA	NA		
DRO	NA	NA	NA	NA	NA	NA	NA		
VOCs									
Benzene	1.7	<b>6.1</b>	<b>350</b>	< 0.50	< 2.8	< 2.8	< 2.3	0.5	5
n-Butylbenzene	< 0.50	8.1	38	< 0.50	< 8.2	48	< 6.6		
sec-Butylbenzene	< 0.50	7.6	< 27	< 0.50	< 6.8	< 6.8	< 5.4		
tert-Butylbenzene	< 0.50	0.64	71	< 0.50	< 4.2	150	13		
Chloromethane	1.3	< 1.8	< 72	1.6	< 18	< 18	< 14		
4-Chlorotoluene	< 0.50	< 0.50	< 16	< 0.50	< 3.9	37	4.9		
1,2-Dichloroethane	< 0.50	< 0.47	< 19	< 0.50	< 4.7	< 4.7	< 3.7	0.5	5
cis-1,2-Dichloroethene	< 0.50	< 0.33	< 13	< 0.50	< 3.3	< 3.3	< 2.6		
Ethylbenzene	1.2	32	<b>750</b>	1.4	200	<b>1,600</b>	140	140	700
Isopropylbenzene	< 0.50	27	38	0.25	10	58	9.2		
p-Isopropyltoluene	< 0.50	15	< 27	< 0.50	< 6.8	< 6.8	< 5.5		
Methyl-tert-Butylether	< 0.50	2.9	< 24	< 0.50	< 6.0	< 6.0	< 4.8	12	60
Naphthalene	0.8	17	<b>220</b>	0.44	35	<b>260</b>	25	8	40
n-Propylbenzene	< 0.50	28	100	0.37	25	180	26		
Toluene	3.7	12	<b>220</b>	0.45	< 4.1	39	15	68.6	343
Trichloroethene	< 0.50	< 0.50	< 12	< 0.50	< 2.9	< 2.9	< 2.3	0.5	5
1,2,4-Trimethylbenzene	1.4	4.2	<b>610</b>	1	33	<b>1,700</b>	110		
1,3,5-Trimethylbenzene	0.55	4.8	<b>180</b>	0.56	24	<b>320</b>	42	96	480
Vinyl Chloride	< 0.50	< 0.50	< 18	< 0.50	< 4.6	< 4.6	< 3.7	0.02	0.2
Total Xylenes	3.7	12.5	<b>1,390</b>	1.2	59	<b>3,481</b>	<b>289</b>	124	620
PAHS									
Acenaphthene	< 1	0.55	9.6	< 1	0.8	13	0.59		
Acenaphthylene	< 1	< 1	< 1	< 1	< 1	< 1	< 1		
Benzo(a)anthracene	< 1	< 1	< 1	< 1	< 1	< 1	< 1		
Benzo(a)pyrene	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	0.02	0.2
Chrysene	< 1	< 1	< 1	< 1	< 1	< 1	< 1		
Fluoranthene	< 1	< 1	0.86	< 1	< 1	< 1	< 1		
Fluorene	< 1	0.078	7.7	< 1	0.85	11	0.57	80	400
1-methyl Naphthalene	< 1	1.6	130	< 1	3.8	41	3.4		
2-methyl Naphthalene	< 1	0.091	250	< 1	2.8	190	3.8		
Naphthalene	< 1	0.47	<b>240</b>	< 1	<b>13</b>	<b>300</b>	2.4	8	40
Phenanthrene	< 1	0.1	6.6	< 1	< 1	< 1.6	< 1		

NA Not analyzed

Bolded values indicate concentrations above the NR 140.10 PAL

Shaded values indicate concentrations above the NR 140.10 ES



## State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor  
Matthew J. Frank, Secretary  
Ronald W. Kazmierczak, Regional Director

Wisconsin Department of Natural Resources  
Oshkosh Service Center  
625 E CTY Y, Suite 700  
Oshkosh, Wisconsin 54901  
Telephone 920-424-3050  
FAX 920-424-4404

June 24, 2009

Mr. Jeff Ryf  
PO Box 335  
Winneconne WI 54986

Subject: Monitoring Well Abandonment  
03-71-001183

Dear Mr. Ryf,

Due to the circumstances involved in the destruction of monitoring wells AMW2, AMW10, AMW12, AMW13, APZ12 and APZ13 during paving activities on your property the Department has determined that Ryf's Heating and Cooling has "taken control" of the wells as discussed in the Departments March 6, 2009 letter.

This letter is to inform you that you may be held liable for any problems associated with monitoring wells listed above if they create a conduit for contaminants to enter groundwater.

If in the future any of the lost groundwater monitoring wells are found, then you or the current property owner of the subject property will be required to notify the Department and to properly abandon the wells in compliance with the requirements in ch. NR 141, Wis. Adm. Code, and to submit the required documentation of that abandonment to the Department.

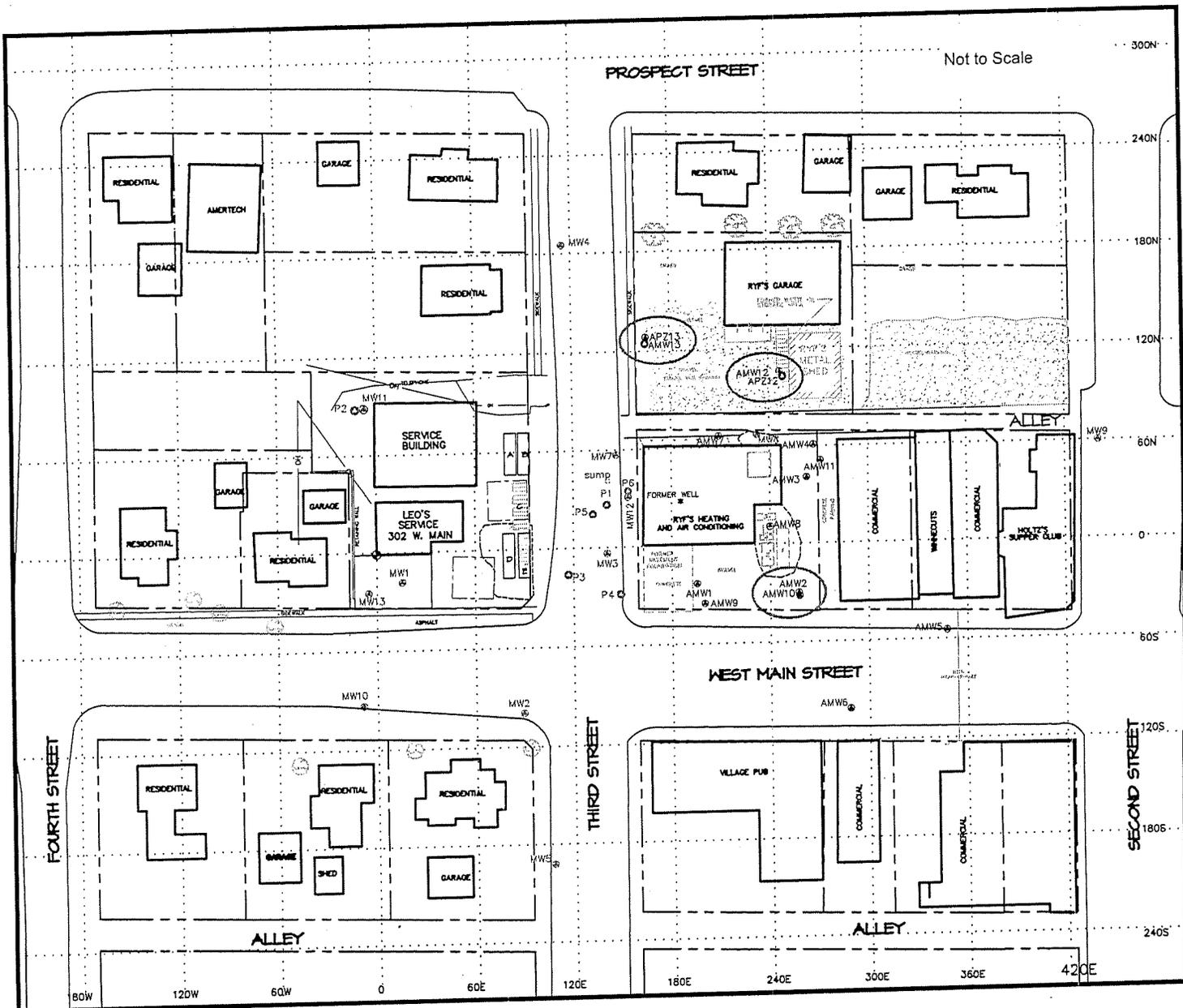
Because these monitoring wells were not properly abandoned, they will be listed on the DNR Remediation and Redevelopment GIS Registry as part of the Ryf's Heating and Cooling GIS Registry Packet.

If you have questions or would like to discuss specific issues regarding the abandonment, please feel free to contact Kevin McKnight at 920-424-7890.

Sincerely,

Bruce G. Urben  
Northeast Region Remediation & Redevelopment Team Supervisor

Cc: file  
Verstegen-COM-via email  
OMNNI- via email  
Leo Esch



LOCAL GRID NORTH N

**LEGEND:**

- MW1 ○ OMNI MONITORING WELL LOCATION
- P1 ○ PIEZOMETER LOCATION AND I.D. No.
- AMW2 ○ ADVENT MONITORING WELL LOCATION
- APZ12 ○ ADVENT PIEZOMETER WELL LOCATION
- AMW8 ○ ABANDONED ADVENT MONITORING WELL LOCATION

--- LIMITS OF EXCAVATION (APPROXIMATE LOCATION BASED ON TANK CLOSURE AND SITE ASSESSMENT REPORT)

◆ CANOPY REFERENCE POINT

--- 60N --- GRID LINE (60' INTERVAL)

\* SUMPTED SPILL CAPACITY (SEE LEAK & SEEP SURFACE)

- 4,000 GALLON DIESEL
- 4,000 GALLON DIESEL
- 16,000 GALLON UNLEADED, ABANDONED IN PLACE
- 10,000 GALLON UNLEADED
- 10,000 GALLON UNLEADED

NOTE: Property Boundary, Building Face, and Edge of Road Locations were acquired by The Winnebago GIS Information.

○ Locations of monitoring wells/piezometers that appear to be paved over.

**FIGURE 10**  
MONITORING POINTS NOT ABANDONED

**LEO'S SERVICE STATION**  
302 WEST MAIN STREET  
WINNECONNE, WI 54986

<b>OMNI</b> ASSOCIATES	PROJECT: N684C
	CAD FILE: construction
	DRAWN: DLD

ONE SYSTEMS DRIVE APPLETON, WISCONSIN 54914-1654  
PHONE : (920) 735-6900 FAX : (920) 830-6100

Facility/Project Name <b>NYF'S HEATING + AC</b>	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>MW-2 (B-3)</b>
Facility License, Permit or Monitoring Number	Grid Origin Location Lat. _____ Long. _____ or St. Plane _____ ft. N. _____ ft. E.	Wis. Unique Well Number _____ DNR Well Number _____
Type of Well Water Table Observation Well <input type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	Section Location of Waste/Source <b>NE 1/4 of NW 1/4 of Sec. 21, T. 19N, R. 15E</b>	Date Well Installed <b>03/09/93</b> m m d d y y
Distance Well Is From Waste/Source Boundary ft. _____	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	Well Installed By: (Person's Name and Firm) <b>PETE PAVALKO, ADVENT</b>
Is Well A Point of Enforcement Std. Application? <input type="checkbox"/> Yes <input type="checkbox"/> No		

Protective pipe, top elevation _____ ft. MSL	1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation _____ ft. MSL	2. Protective cover pipe: a. Inside diameter: <b>10.0</b> in. b. Length: <b>1.0</b> ft. c. Material: <b>ALUMN. FLUSH MOUNT</b> Steel <input type="checkbox"/> 04 Other <input checked="" type="checkbox"/>
Land surface elevation _____ ft. MSL	d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____
D. Surface seal, bottom _____ ft. MSL or <b>1.0</b> ft.	3. Surface seal: Bentonite <input type="checkbox"/> 30 Concrete <input checked="" type="checkbox"/> 01 Other <input type="checkbox"/>
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>	4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 30 Annular space seal <input checked="" type="checkbox"/> Other <input type="checkbox"/>
Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Annular space seal: a. Granular Bentonite <input checked="" type="checkbox"/> 33 b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 35 c. _____ Lbs/gal mud weight . . . . . Bentonite slurry <input type="checkbox"/> 31 d. _____ % Bentonite . . . . . Bentonite-cement grout <input type="checkbox"/> 50 e. _____ Ft <sup>3</sup> volume added for any of the above
Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input checked="" type="checkbox"/> 41 Other <input type="checkbox"/>	f. How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input checked="" type="checkbox"/> 08
13. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99	6. Bentonite seal: a. Bentonite granules <input checked="" type="checkbox"/> 33 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 32 c. _____ Other <input type="checkbox"/>
Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7. Fine sand material: Manufacturer, product name & mesh size a. <b>SILICA SAND</b> b. Volume added _____ ft <sup>3</sup>
Describe _____	8. Filter pack material: Manufacturer, product name and mesh size a. <b>FLINT SAND</b> b. Volume added _____ ft <sup>3</sup>
Source of water (attach analysis): _____	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>
Bentonite seal, top _____ ft. MSL or <b>8.0</b> ft.	10. Screen material: <b>Sch. 40 PVC</b> a. Screen type: Factory cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 01 Other <input type="checkbox"/>
F. Fine sand, top _____ ft. MSL or <b>10.0</b> ft.	b. Manufacturer <b>TIMCO</b>
G. Filter pack, top _____ ft. MSL or <b>12.0</b> ft.	c. Slot size: <b>0.018</b> in.
Screen joint, top _____ ft. MSL or <b>14.0</b> ft.	d. Slotted length: <b>15.0</b> ft.
I. Well bottom _____ ft. MSL or <b>29.0</b> ft.	11. Backfill material (below filter pack): None <input type="checkbox"/> 14 Other <input checked="" type="checkbox"/>
Filter pack, bottom _____ ft. MSL or <b>32.5</b> ft.	<b>FLINT SAND</b>
K. Borehole, bottom _____ ft. MSL or <b>32.5</b> ft.	
L. Borehole, diameter <b>8</b> in.	
O.D. well casing <b>2.25</b> in.	
N. I.D. well casing <b>2.00</b> in.	

I hereby certify that the information on this form is true and correct to the best of my knowledge.  
Signature: Pete Pavalok Firm: ADVENT ENVIRONMENTAL

Facility/Project Name <b>RYFS H+AC</b>	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. ft. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>MW-10</b>
Facility License, Permit or Monitoring Number	Grid Origin Location Lat. _____ Long. _____ or St. Plane ft. N. _____ ft. E. _____	Wis. Unique Well Number: DNR Well Number
Type of Well Water Table Observation Well <input type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	Section Location of Waste/Source 1/4 of _____ 1/4 of Sec. T. _____ N, R <input type="checkbox"/> E. <input type="checkbox"/> W.	Date Well Installed <b>7-15-99</b> mm dd yy
Distance Well is From Waste/Source Boundary ft. _____	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	Well Installed By: (Person's Name and Firm) <b>BRIORN</b>
Is Well A Point of Enforcement Standard Application Yes <input type="checkbox"/> No <input type="checkbox"/>		

A. Protective pipe, top elevation \_\_\_\_\_ ft. MSL  
 B. Well casing, top elevation **268.91** ft. MSL  
 C. Land surface elevation \_\_\_\_\_ ft. MSL  
 D. Surface seal, bottom \_\_\_\_\_ ft. MSL or **1** ft.

12. USCS classification of soil near screen:  
 GP  GM  GC  GW  SW  SP   
 SM  SC  ML  MH  CL  CH   
 Bedrock

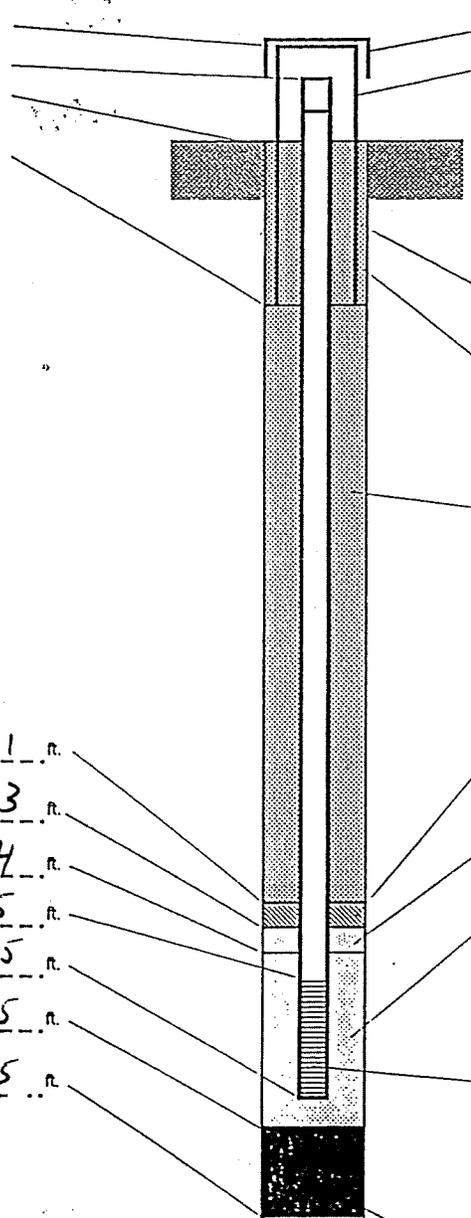
13. Sieve analysis attached?  Yes  No

14. Drilling method used: Rotary  50  
 Hollow Stem Auger  41  
 Other

15. Drilling fluid used: Water  02 Air  01  
 Drilling Mud  03 None  99

16. Drilling additives used?  Yes  No  
 Describe \_\_\_\_\_

17. Source of water (attach analysis):  
 NA



1. Cap and lock? Y  Yes  No

2. Protective cover pipe:  
 a. Inside diameter: **10** in.  
 b. Length: **1** ft.  
 c. Material: **FLUSHMOUNT** stainless steel Steel  04 Other   
 d. Additional Protection?  Yes  No  
 If yes, describe: \_\_\_\_\_

3. Surface seal: Bentonite  30  
 Concrete  01  
 Other

4. Material between well casing and protective pipe: Bentonite  30  
 Annular space seal   
**SAND** Other

5. Annular space seal:  
 a. Granular Bentonite  33  
 b. Lbs/gal bud weight, Bentonite-sand slurry  35  
 c. Lbs/gal mud weight, Bentonite slurry  31  
 d. % Bentonite, Bentonite-cement grout  50  
 e. F13 volume added from any of the above  10

6. Bentonite seal:  
 a. Bentonite granules  33  
 b.  1/4 in.  3/8 in.  1/2 in. Bentonite pellets  32  
 c. Other

7. Fine sand material: Manufacturer, product name & mesh size  
 a. **Red Sand Silica Sand #45** fines  
 b. Volume added  1 bag

8. Filter pack material: Manufacturer, product name & mesh size  
 a. **Red Sand Silica Sand #30** coarse  
 b. Volume added  2 bags

9. Well casing: Flush threaded PVC schedule 40  23  
 Flush threaded PVC schedule 80  24  
 Other

10. Screen material: PVC  
 a. Screen type: Factory cut  11  
 Continuous slot  01  
 Other

b. Manufacturer **Timco**  
 c. Slot size: **0.010** in.  
 d. Slotted length: **10** ft.

11. Backfill material (below filter pack): None  14  
 Other

E. Bentonite seal, top \_\_\_\_\_ ft. MSL or **1** ft.  
 F. Filter sand, top \_\_\_\_\_ ft. MSL or **3** ft.  
 G. Filter pack, top \_\_\_\_\_ ft. MSL or **4** ft.  
 H. Screen joint, top \_\_\_\_\_ ft. MSL or **5** ft.  
 I. Well bottom \_\_\_\_\_ ft. MSL or **15** ft.  
 J. Filter pack, bottom \_\_\_\_\_ ft. MSL or **15** ft.  
 K. Borehole, bottom \_\_\_\_\_ ft. MSL or **15** ft.  
 L. Borehole, diameter **8.5** in.  
 M. O.D. well casing **2.2** in.  
 N. I.D. well casing **2** in.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *[Signature]* Firm **Advent Environmental Services, Inc.**  
 10845 N. Buntrock Ave. 64W; Mequon, WI 53092; (414) 238-1998

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs 144, 147 & 160, Wis Stats, and ch NR 141, Wis Ad Code. In accordance with ch 144 Wis Stats, failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5000 for each day of violation. In accordance with ch 147, Wis Stats, failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

Route to: Solid Waste  Haz. Waste  Wastewater   
Environmental Response & Repair  Underground Tanks  Other

Facility/Project Name <b>RVF'S H+AC</b>	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>MW-12</b>
Facility License, Permit or Monitoring Number	Grid Origin Location Lat. _____ Long. _____ or _____	WIS Unique Well Number: DNR Well Number
Type of Well Water Table Observation Well <input type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	St. Plane _____ ft. N. _____ ft. E	Date Well Installed <b>7-15-99</b> mm dd yy
Distance Well is From Waste/Source Boundary ft. _____	Section Location of Waste/Source 1/4 of _____ 1/4 of Sec. T. _____ N, R. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Installed By: (Person's Name and Firm) <b>ERIBIAN</b>
Is Well A Point of Enforcement Standard Application Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Location of Well Relative to Waste/Source upgradient	
	u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

A. Protective pipe, top elevation \_\_\_\_\_ ft. MSL  
B. Well casing, top elevation **769.12** ft. MSL  
C. Land surface elevation \_\_\_\_\_ ft. MSL  
D. Surface seal, bottom \_\_\_\_\_ ft. MSL or **1** ft.

12. USCS classification of soil near screen:  
GP  GM  GC  GW  SW  SP   
SM  SC  ML  MH  CL  CH   
Bedrock

13. Sieve analysis attached? Yes  No

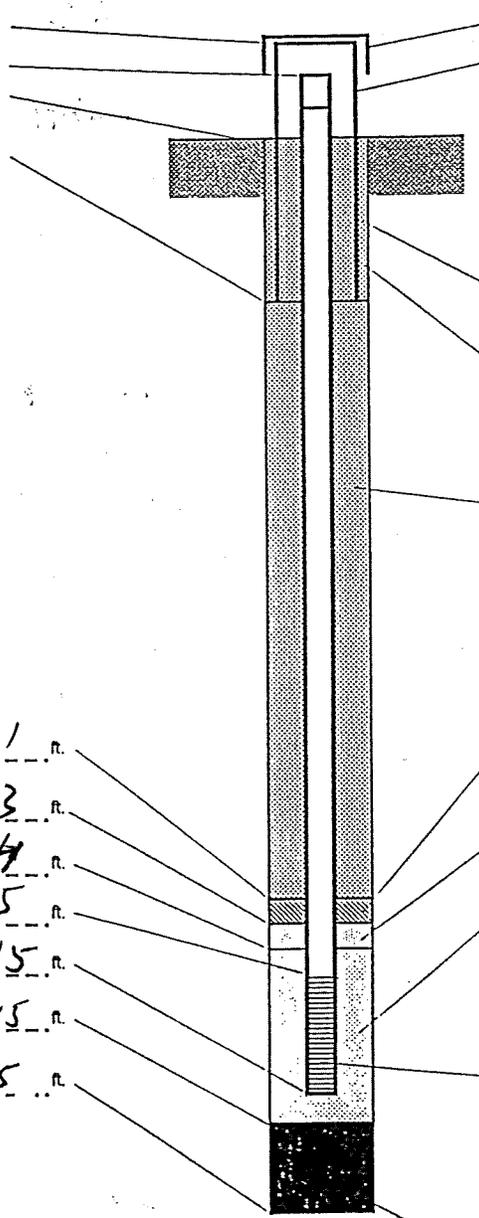
14. Drilling method used: Rotary  50  
Hollow Stem Auger  41  
Other

15. Drilling fluid used: Water  02 Air  01  
Drilling Mud  03 None  99

16. Drilling additives used? Yes  No   
Describe \_\_\_\_\_

17. Source of water (attach analysis):  
**NA**

E. Bentonite seal, top \_\_\_\_\_ ft. MSL or **1** ft.  
F. Filter sand, top \_\_\_\_\_ ft. MSL or **3** ft.  
G. Filter pack, top \_\_\_\_\_ ft. MSL or **4** ft.  
H. Screen joint, top \_\_\_\_\_ ft. MSL or **5** ft.  
I. Well bottom \_\_\_\_\_ ft. MSL or **15** ft.  
J. Filter pack, bottom \_\_\_\_\_ ft. MSL or **15** ft.  
K. Borehole, bottom \_\_\_\_\_ ft. MSL or **15** ft.  
L. Borehole, diameter **8.5** in.  
M. O.D. well casing **2.2** in.  
N. I.D. well casing **2** in.



1. Cap and lock? Y  Yes  No

2. Protective cover pipe:  
a. Inside diameter: **40** in.  
b. Length: **5** ft.  
c. Material: **STANDPIPE** stainless steel Steel  04 Other

d. Additional Protection? Yes  No   
If yes, describe: **Bumper Posts**

3. Surface seal: Bentonite  30  
Concrete  01  
Other

4. Material between well casing and protective pipe:  
Bentonite  30  
Annular space seal   
**SAND** Other

5. Annular space seal:  
a. Granular Bentonite  33  
b. Lbs/gal bud weight, Bentonite-sand slurry  35  
c. Lbs/gal mud weight, Bentonite slurry  31  
d. % Bentonite, Bentonite-cement grout  50  
e. Ft3 volume added from any of the above  10  
f. How installed: Tremie  01  
Tremie pumped  02  
Gravily  08

6. Bentonite seal:  
a. Bentonite granules  33  
b.  1/4 in.  3/8 in.  1/2 in. Bentonite pellets  32  
c. Other

7. Fine sand material: Manufacturer, product name & mesh size  
a. **Red Sand Silica Sand- 45** fines  
b. Volume added  1 bag

8. Filter pack material: Manufacturer, product name & mesh size  
a. **Red Sand Silica Sand- 30** coarse  
b. Volume added  2 bags

9. Well casing: Flush threaded PVC schedule 40  23  
Flush threaded PVC schedule 80  24  
Other

10. Screen material: PVC  
a. Screen type: Factory cut  11  
Continuous slot  01  
Other

b. Manufacturer **Timco**  
c. Slot size: **0.010** in.  
d. Slotted length: **10** ft.

11. Backfill material (below filter pack): None  14  
Other

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature **[Signature]** Firm **Advent Environmental Services, Inc.**  
10845 N. Buntrock Ave. 64W; Mequon, WI 53092; (414) 238-1998

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Route to: Solid Waste  Haz. Waste  Wastewater   
Environmental Response & Repair  Underground Tanks  Other

Facility/Project Name <b>Ryfs H+AC</b>	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. ft. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>MW-13</b>
Facility License, Permit or Monitoring Number	Grid Origin Location Lat. _____ Long. _____ or _____	Wis. Unique Well Number: _____ DNR Well Number: _____
Type of Well Water Table Observation Well <input type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	St. Plane ft. N. _____ ft. E. _____	Date Well Installed <b>7-15-99</b> mm dd yy
Distance Well is From Waste/Source Boundary ft. _____	Section Location of Waste/Source 1/4 of _____ 1/4 of Sec. T. _____ N.R. <input type="checkbox"/> E. <input type="checkbox"/> W. <input type="checkbox"/>	Well Installed By: (Person's Name and Firm) <b>Brown</b>
Is Well A Point of Enforcement Standard Application Yes <input type="checkbox"/> No <input type="checkbox"/>	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

A. Protective pipe, top elevation \_\_\_\_\_ ft. MSL  
B. Well casing, top elevation **768.85** ft. MSL  
C. Land surface elevation \_\_\_\_\_ ft. MSL  
D. Surface seal, bottom \_\_\_\_\_ ft. MSL or **1** ft.

12. USCS classification of soil near screen:  
GP  GM  GC  GW  SW  SP   
SM  SC  ML  MH  CL  CH   
Bedrock

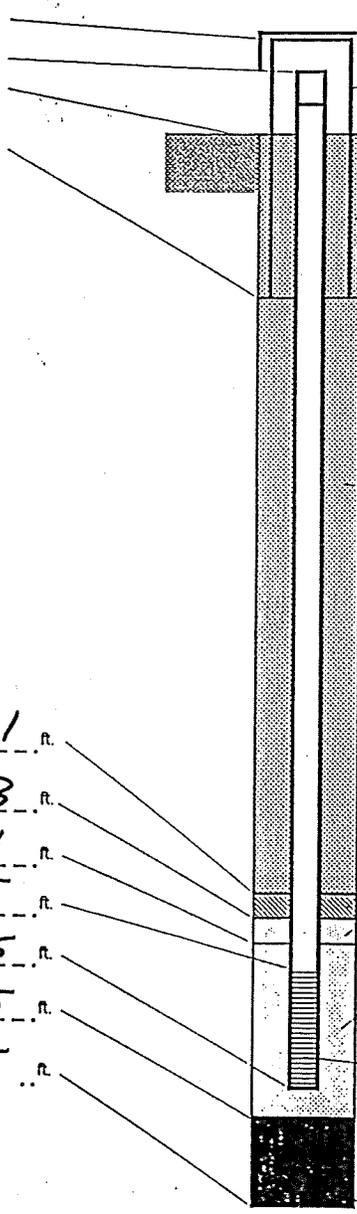
13. Sieve analysis attached?  Yes  No

14. Drilling method used: Rotary  50  
Hotlow Stem Auger  41  
Other

15. Drilling fluid used: Water  02 Air  01  
Drilling Mud  03 None  99

16. Drilling additives used?  Yes  No  
Describe \_\_\_\_\_

17. Source of water (attach analysis):  
NA



E. Bentonite seal, top \_\_\_\_\_ ft. MSL or **1** ft.  
F. Filter sand, top \_\_\_\_\_ ft. MSL or **3** ft.  
G. Filter pack, top \_\_\_\_\_ ft. MSL or **4** ft.  
H. Screen joint, top \_\_\_\_\_ ft. MSL or **5** ft.  
I. Well bottom \_\_\_\_\_ ft. MSL or **15** ft.  
J. Filter pack, bottom \_\_\_\_\_ ft. MSL or **15** ft.  
K. Borehole, bottom \_\_\_\_\_ ft. MSL or **15** ft.  
L. Borehole, diameter **8.5** in.  
M. O.D. well casing **2.2** in.  
N. I.D. well casing **2** in.

1. Cap and lock? Y  Yes  No

2. Protective cover pipe:  
a. Inside diameter: **4** in.  
b. Length: **5** ft.  
c. Material:  stainless steel  Steel  04  
Other \_\_\_\_\_

d. Additional Protection?  Yes  No  
If yes, describe: **Bumper posts**

3. Surface seal:  Bentonite  30  
 Concrete  01  
Other \_\_\_\_\_

4. Material between well casing and protective pipe:  
**SAND**  
 Bentonite  30  
 Annular space seal  Other \_\_\_\_\_

5. Annular space seal:  
a. Granular Bentonite  33  
b. Lbs/gal bud weight, Bentonite-sand slurry  35  
c. Lbs/gal mud weight, Bentonite slurry  31  
d. % Bentonite, Bentonite-cement grout  50  
e. F13 volume added from any of the above  10  
f. How installed:  Tremie  01  
 Tremie pumped  02  
 Gravity  03

6. Bentonite seal:  
a. Bentonite granules  33  
b.  1/4 in.  3/8 in.  1/2 in. Bentonite pellets  32  
c. Other \_\_\_\_\_

7. Fine sand material: Manufacturer, product name & mesh size  
a. **Red Sand Silica Sand-45** fines  
b. Volume added **1** bag

8. Filter pack material: Manufacturer, product name & mesh size  
a. **Red Sand Silica Sand-30** coarse  
b. Volume added **2** bags

9. Well casing:  
 Flush threaded PVC schedule 40  23  
 Flush threaded PVC schedule 80  24  
Other \_\_\_\_\_

10. Screen material:  PVC  
a. Screen type:  Factory cut  11  
 Continuous slot  01  
Other \_\_\_\_\_

b. Manufacturer **Timco**  
c. Slot size: **0.010** in.  
d. Slotted length: **10** ft.

11. Backfill material (below filter pack):  None  14  
Other \_\_\_\_\_

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature **[Signature]** Firm **Advent Environmental Services, Inc.**  
10845 N. Buntrock Ave. 64W; Mequon, WI 53092; (414) 238-1998

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Route to: Solid Waste  Haz. Waste  Wastewater   
Environmental Response & Repair  Underground Tanks  Other

Facility/Project Name <b>RYE'S H+AC</b>	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. ft. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>PZ-12</b>
Facility License, Permit or Monitoring Number	Grid Origin Location Lat. _____ Long. _____ or St. Plane _____ ft. N. _____ ft. E	WIS Unique Well Number: _____ DNR Well Number: _____
Type of Well Water Table Observation Well <input type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	Section Location of Waste/Source 1/4 of _____ 1/4 of Sec. T. _____ N,R <input type="checkbox"/> W.	Date Well Installed <b>7-15-99</b> mm dd yy
Distance Well is From Waste/Source Boundary ft. _____	Location of Well Relative to Waste/Source upgradient	Well Installed By: (Person's Name and Firm)
Is Well A Point of Enforcement Standard Application Yes <input type="checkbox"/> No <input type="checkbox"/>	u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

A. Protective pipe, top elevation \_\_\_\_\_ ft. MSL  
B. Well casing, top elevation **769.39** ft. MSL  
C. Land surface elevation \_\_\_\_\_ ft. MSL  
D. Surface seal, bottom \_\_\_\_\_ ft. MSL or **1** ft.

12. USCS classification of soil near screen:  
GP  GM  GC  GW  SW  SP   
SM  SC  ML  MH  CL  CH   
Bedrock

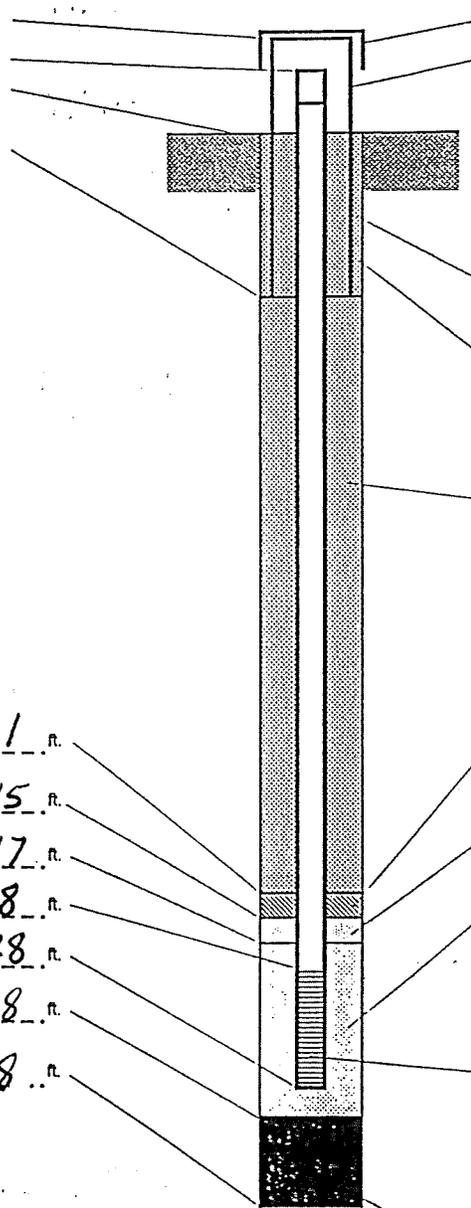
13. Sieve analysis attached?  Yes  No

14. Drilling method used: Rotary  50  
Hollow Stem Auger  41  
Other

15. Drilling fluid used: Water  02 Air  01  
Drilling Mud  03 None  99

16. Drilling additives used?  Yes  No  
Describe \_\_\_\_\_

17. Source of water (attach analysis):  
NA



1. Cap and lock? Y  Yes  No

2. Protective cover pipe:  
a. Inside diameter: **4** in.  
b. Length: **5.0** ft.  
c. Material: **Steel** 04  
stainless steel Other   
d. Additional Protection?  Yes  No  
If yes, describe: **Bump posts**

3. Surface seal: Bentonite  30  
Concrete  01  
Other

4. Material between well casing and protective pipe:  
Bentonite  30  
Annular space seal   
Other  **SAND**

5. Annular space seal:  
a. Granular Bentonite  33  
b. Lbs/gal bud weight. Bentonite-sand slurry  35  
c. Lbs/gal mud weight. Bentonite slurry  31  
d. % Bentonite. Bentonite-cement grout  50  
e. FL volume added from any of the above  10  
f. How installed: Tremie  01  
Tremie pumped  02  
Gravity  08

6. Bentonite seal:  
a. Bentonite granules  33  
b.  1/4 in.  3/8 in.  1/2 in. Bentonite pellets  32  
c. Other

7. Fine sand material: Manufacturer, product name & mesh size  
a. **Red Sand Silica Sand- 45** fines  
b. Volume added  1 bag

8. Filter pack material: Manufacturer, product name & mesh size  
a. **Red Sand Silica Sand- 30** coarse  
b. Volume added  2 bags

9. Well casing: Flush threaded PVC schedule 40  23  
Flush threaded PVC schedule 80  24  
Other

10. Screen material: PVC   
a. Screen type: Factory cut  11  
Continuous slot  01  
Other   
b. Manufacturer **Timco**  
c. Slot size: **0.010** in.  
d. Slotted length: **10** ft.

11. Backfill material (below filter pack): None  14  
Other

E. Bentonite seal, top \_\_\_\_\_ ft. MSL or **1** ft.  
F. Filter sand, top \_\_\_\_\_ ft. MSL or **15** ft.  
G. Filter pack, top \_\_\_\_\_ ft. MSL or **17** ft.  
H. Screen joint, top \_\_\_\_\_ ft. MSL or **18** ft.  
I. Well bottom \_\_\_\_\_ ft. MSL or **28** ft.  
J. Filter pack, bottom \_\_\_\_\_ ft. MSL or **28** ft.  
K. Borehole, bottom \_\_\_\_\_ ft. MSL or **28** ft.  
L. Borehole, diameter **8.5** in.  
M. O.D. well casing **2.2** in.  
N. I.D. well casing **2** in.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *[Signature]* Firm **Advent Environmental Services, Inc.**  
10845 N. Buntrock Ave. 64W; Mequon, WI 53092: (414) 238-1998

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs 144, 147 & 160, Wis Stats, and ch NR 141, Wis Ad Code. In accordance with ch 144 Wis Stats, failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5000 for each day of violation. In accordance with ch 147, Wis Stats, failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

Facility/Project Name <b>RYFS H+AC</b>	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. ft. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <b>PZ-13</b>
Facility License, Permit or Monitoring Number	Grid Origin Location Lat. _____ Long. _____ or _____	Wis. Unique Well Number: _____ DNR Well Number: _____
Type of Well Water Table Observation Well <input type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	St. Plane _____ ft. N. _____ ft. E	Date Well Installed <b>7-16-99</b> mm dd yy
Distance Well is From Waste/Source Boundary ft. _____	Section Location of Waste/Source 1/4 of _____ 1/4 of Sec. T. _____ N, R <input type="checkbox"/> E <input type="checkbox"/> W.	Well Installed By: (Person's Name and Firm) <b>BRIORN</b>
Is Well A Point of Enforcement Standard Application Yes <input type="checkbox"/> No <input type="checkbox"/>	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known <input type="checkbox"/>	

A. Protective pipe, top elevation _____ ft. MSL	1. Cap and lock? Y <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation <b>769.85</b> ft. MSL	2. Protective cover pipe: a. Inside diameter: <b>4</b> in. b. Length: <b>5</b> ft. c. Material: <input checked="" type="checkbox"/> Stainless steel <input type="checkbox"/> Steel <input type="checkbox"/> 04 <input type="checkbox"/> Other _____ d. Additional Protection? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: <b>Bumper Posts</b>
C. Land surface elevation _____ ft. MSL	3. Surface seal: <input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> 30 <input type="checkbox"/> Concrete <input type="checkbox"/> 01 <input type="checkbox"/> Other _____
D. Surface seal, bottom _____ ft. MSL or <b>1</b> ft.	4. Material between well casing and protective pipe: <input type="checkbox"/> Bentonite <input type="checkbox"/> 30 <input type="checkbox"/> Annular space seal <input type="checkbox"/> _____ <input checked="" type="checkbox"/> Other: <b>SAND</b>
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>	5. Annular space seal: a. Granular Bentonite <input checked="" type="checkbox"/> 33 b. Lbs/gal bud weight, Bentonite-sand slurry <input type="checkbox"/> 35 c. Lbs/gal mud weight, Bentonite slurry <input type="checkbox"/> 31 d. % Bentonite, Bentonite-cement grout <input type="checkbox"/> 50 e. Ft3 volume added from any of the above <input type="checkbox"/> 10 f. How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input checked="" type="checkbox"/> 08
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Bentonite seal: a. Bentonite granules <input checked="" type="checkbox"/> 33 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 32 c. Other <input type="checkbox"/> _____
14. Drilling method used: Rotary <input type="checkbox"/> 50 Hot/Wet Stem Auger <input type="checkbox"/> 41 Other <input type="checkbox"/> _____	7. Fine sand material: Manufacturer, product name & mesh size a. <b>Red Sand Silica Sand-45</b> fines b. Volume added <b>1</b> bag
15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input type="checkbox"/> 99	8. Filter pack material: Manufacturer, product name & mesh size a. <b>Red Sand Silica Sand-30</b> coarse b. Volume added <b>2</b> bags
16. Drilling additives used? <input type="checkbox"/> Yes <input type="checkbox"/> No Describe _____	9. Well casing: <input checked="" type="checkbox"/> Flush threaded PVC schedule 40 <input type="checkbox"/> 23 <input type="checkbox"/> Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/> _____
17. Source of water (attach analysis): <b>NA</b>	10. Screen material: <input checked="" type="checkbox"/> PVC a. Screen type: <input checked="" type="checkbox"/> Factory cut <input type="checkbox"/> 11 <input type="checkbox"/> Continuous slot <input type="checkbox"/> 01 Other <input type="checkbox"/> _____ b. Manufacturer <b>Timco</b> c. Slot size: <b>0.010</b> in. d. Slotted length: <b>10</b> ft.
E. Bentonite seal, top _____ ft. MSL or <b>1</b> ft.	11. Backfill material (below filter pack): <input type="checkbox"/> None <input type="checkbox"/> 14 Other <input type="checkbox"/> _____
F. Filter sand, top _____ ft. MSL or <b>16</b> ft.	
G. Filter pack, top _____ ft. MSL or <b>18.5</b> ft.	
H. Screen joint, top _____ ft. MSL or <b>20</b> ft.	
I. Well bottom _____ ft. MSL or <b>30</b> ft.	
J. Filter pack, bottom _____ ft. MSL or <b>30</b> ft.	
K. Borehole, bottom _____ ft. MSL or <b>30</b> ft.	
L. Borehole, diameter <b>8.5</b> in.	
M. O.D. well casing <b>2.2</b> in.	
N. I.D. well casing <b>2</b> in.	

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