



# Meridian Environmental Consulting, LLC

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May 30, 2017

Aaron Kent  
Wisconsin Department of Natural Resources  
1300 West Clairemont Avenue  
Eau Claire, Wisconsin 54701



Subject:       **Investigation Work Plan**  
Julson Store (former)  
W125 County Road Z  
Mondovi, Wisconsin  
PECFA No. 54755-9999-25  
DNR BRRTS No. 03-06-001296  
Meridian No. 05F823

Dear Aaron:

This Investigation Work Plan is designed to provide information regarding the current environmental conditions at the above referenced site.

The objectives of the Site Investigation are:

- 1) characterize current soil and ground water conditions
- 2) define the extent of impacted soil and ground water
- 3) prepare a Site Investigation Report summarizing our work and recommendations

Based on available information, soil borings are needed to determine the magnitude and extent of impacted soil at the site. If impacted ground water is encountered, test wells will be installed to monitor the ground water quality.

## **BACKGROUND INFORMATION**

### Site Description and History

The site is a vacant lot approximately 1 acre in size located at the southeast corner of the intersection of County Highway Z and County Highway BB in Dover Township, Buffalo County, Wisconsin (NE1/4, SE1/4, Sec. 2, Range 10 West, Township 23 North)(Figures 1 and 2). It is bordered by Hwy. Z on the north, Hwy. BB on the west, a small stream on the east, and a farm pasture to the south (Figure 3).

The site formerly had a small country store. The store sold gasoline as well as other products. A small (300 gallon) underground tank which stored gasoline was located at the northeast corner of

the building. The age of the tank is unknown. The store was in operation in the mid-1900's (1940's– 1970??). It closed in the late 1960's – early 1970's. The building burned down in the 1980's (?).

The underground storage tank was removed September 20, 1994. The tank inspector report is provided in Appendix A. According to the inspection report, the tank had a hole and petroleum impacts were observed in the soil. The release was reported to the DNR September 20, 1994.

No further environmental work was completed at the site. The lot is vacant. The Buffalo County Highway Department regraded the land surface along Hwy. Z during highway improvements several years ago.

### Regional Description

The area is characterized by valleys and ridges typical of Buffalo County. Bedrock in the area is composed of Cambrian sandstones. Farming is the predominant activity in the area including crop farming, cattle, and some dairy.

Local drainage is provided by Elk Creek which flows westerly down Bennett Valley (Figure 1) with eventual discharge into the Buffalo River about 8 miles west of the site.

The former Julson Store property is located along the south side of Bennett Valley (Figure 1). The small creek which forms the eastern boundary of the property flows northerly to Elk Creek.

### Potable Wells

Area residents utilize private wells for their water supply. Well construction forms from nearby wells are provided in Appendix B. The forms indicate area wells are drilled into the sandstone bedrock and utilize the sandstone aquifer for water supply. Typical water levels are 30 – 40 feet below grade (depending upon topographic elevation).

According to the Tank Inspector report (Appendix A), there is a water supply well located on the property about 85 feet from the former tank location. This well will be located and the well depth determined (if possible). A water sample will be collected and analyzed for petroleum parameters.

## **INVESTIGATION WORK PLAN**

Based on the information presented above, the site is underlain by shallow sediments (sand) overlying sandstone bedrock about 10 - 15 feet below grade. This Work Plan is based on this initial analysis. Additional work will be completed as needed when more information becomes available during the Site Investigation.

### Soil Investigation

Soil borings will be installed in and around the former tank basin to characterize the soil conditions and determine the horizontal extent of impacted soil. Figure 4 illustrates the planned locations for these borings. The borings will be installed with a Geoprobe. Soil samples will be collected continuously and screened with a PID. Selected soil samples will be collected every 4 feet from the unsaturated zone and analyzed for PVOC+Naphthalene. More and/or deeper soil borings may be needed to define the extent of impacted soil.

### Monitoring Wells

If ground water is encountered and it appears petroleum may have impacted the ground water, we plan to install monitoring wells. The wells will be 2-inch dia. PVC with 10 feet long screens which intersect the water table.

Ground water samples will be collected from the monitoring wells and analyzed for PVOC+Naphthalene. The well locations and elevations will be surveyed so that ground water flow can be determined.

Additional monitoring wells will be installed as needed to determine the extent of impacted ground water. A piezometer may be necessary in the future.

### Potable Well Survey

The site reportedly has a private well. An effort will be made to locate the onsite well and collect a ground water sample.

A potable well survey will be conducted to locate other potable wells in the vicinity of the site. Well construction logs will be obtained if available. The well locations will be shown on a map relative to the site. We will evaluate the potential for impacts to these wells from the site.

### Reporting

When the Site Investigation has been completed or before \$20,000 in costs are incurred, a Soil and Ground Water Investigation report will be prepared which documents the data collected and includes our recommendations for further work.

## **SITE HEALTH AND SAFETY PLAN**

Appendix C contains the Site Health and Safety Plan. A Safety Meeting is conducted onsite prior to beginning any field work. The Site Health and Safety Plan is kept onsite during the field work.

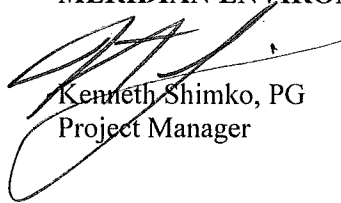
## **FIELD PROCEDURES**

Appendix D contains general field procedures that are used to complete Site Investigations. Alterations to these procedures will be conducted if necessary for site-specific objectives.

## **SCHEDULE**

We plan to begin work immediately. The initial soil borings are scheduled to be installed June 2017. Followup work will be conducted based on the findings of the initial phase of work.

Sincerely,  
**MERIDIAN ENVIRONMENTAL CONSULTING, LLC**



Kenneth Shimko, PG  
Project Manager

## **FIGURES**

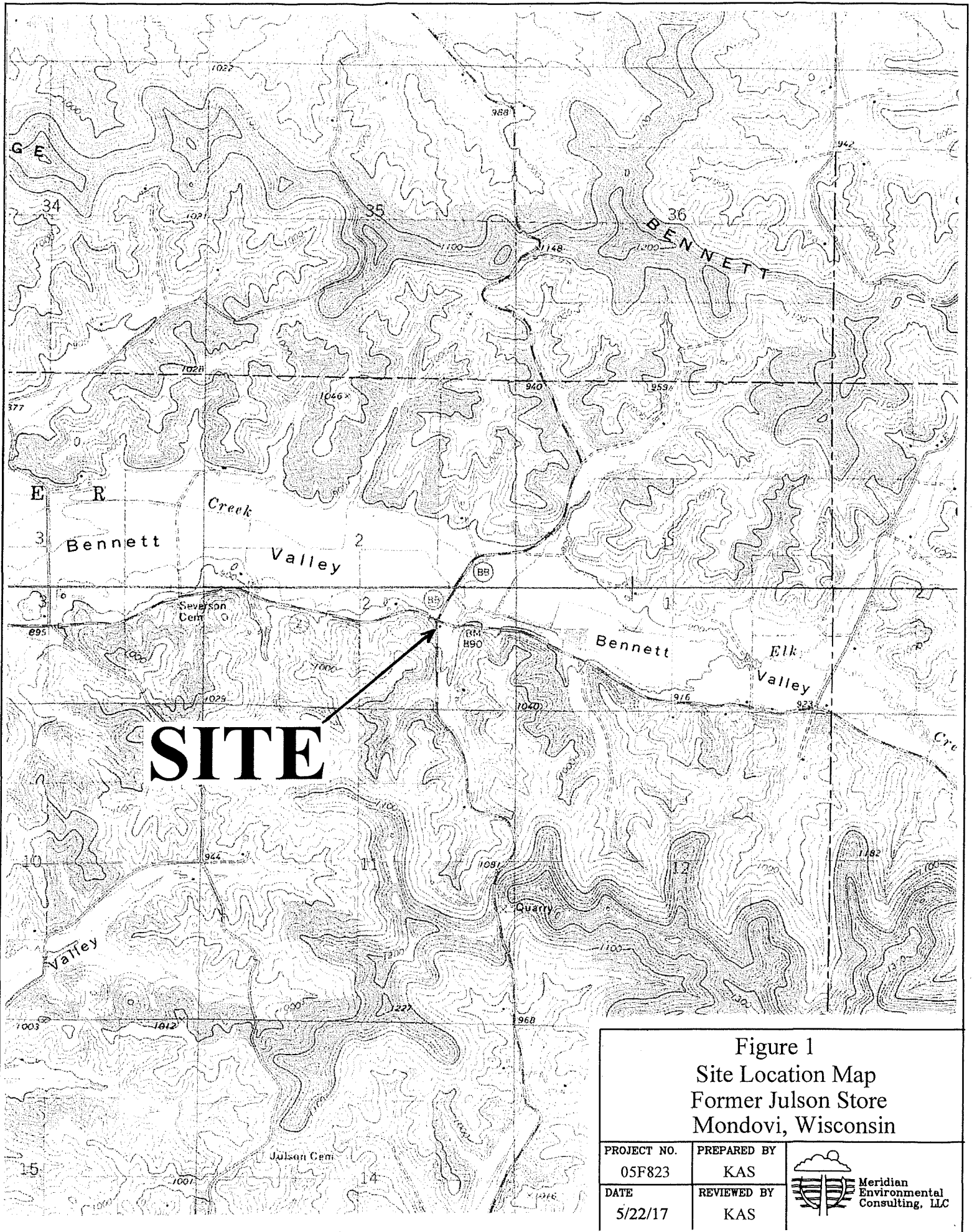
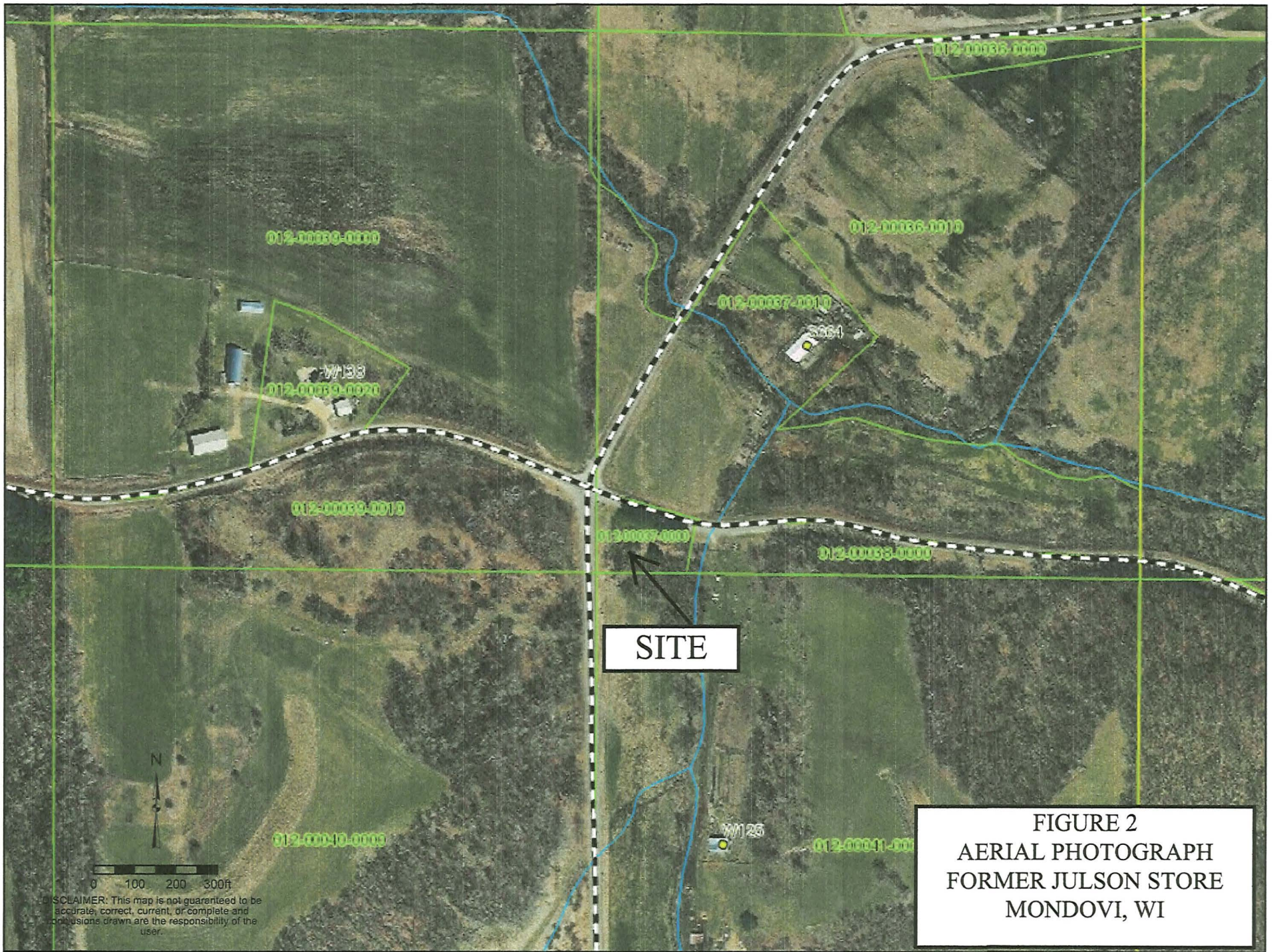


Figure 1  
 Site Location Map  
 Former Julson Store  
 Mondovi, Wisconsin

PROJECT NO. 05F823	PREPARED BY KAS
DATE 5/22/17	REVIEWED BY KAS





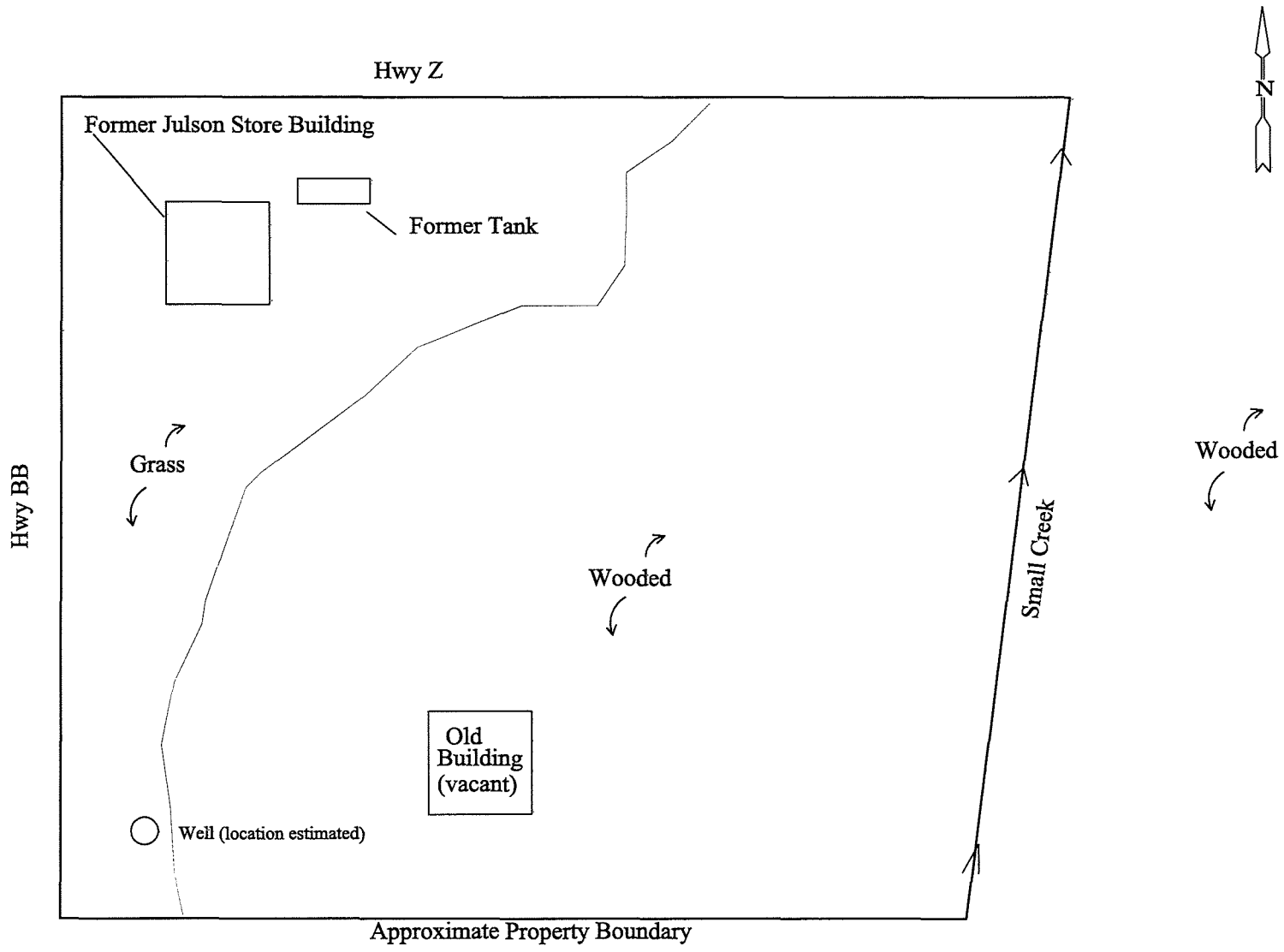


SITE

FIGURE 2  
AERIAL PHOTOGRAPH  
FORMER JULSON STORE  
MONDOVI, WI

DISCLAIMER: This map is not guaranteed to be accurate, correct, current, or complete and conclusions drawn are the responsibility of the user.





↖ Farm Pasture ↗

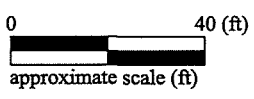

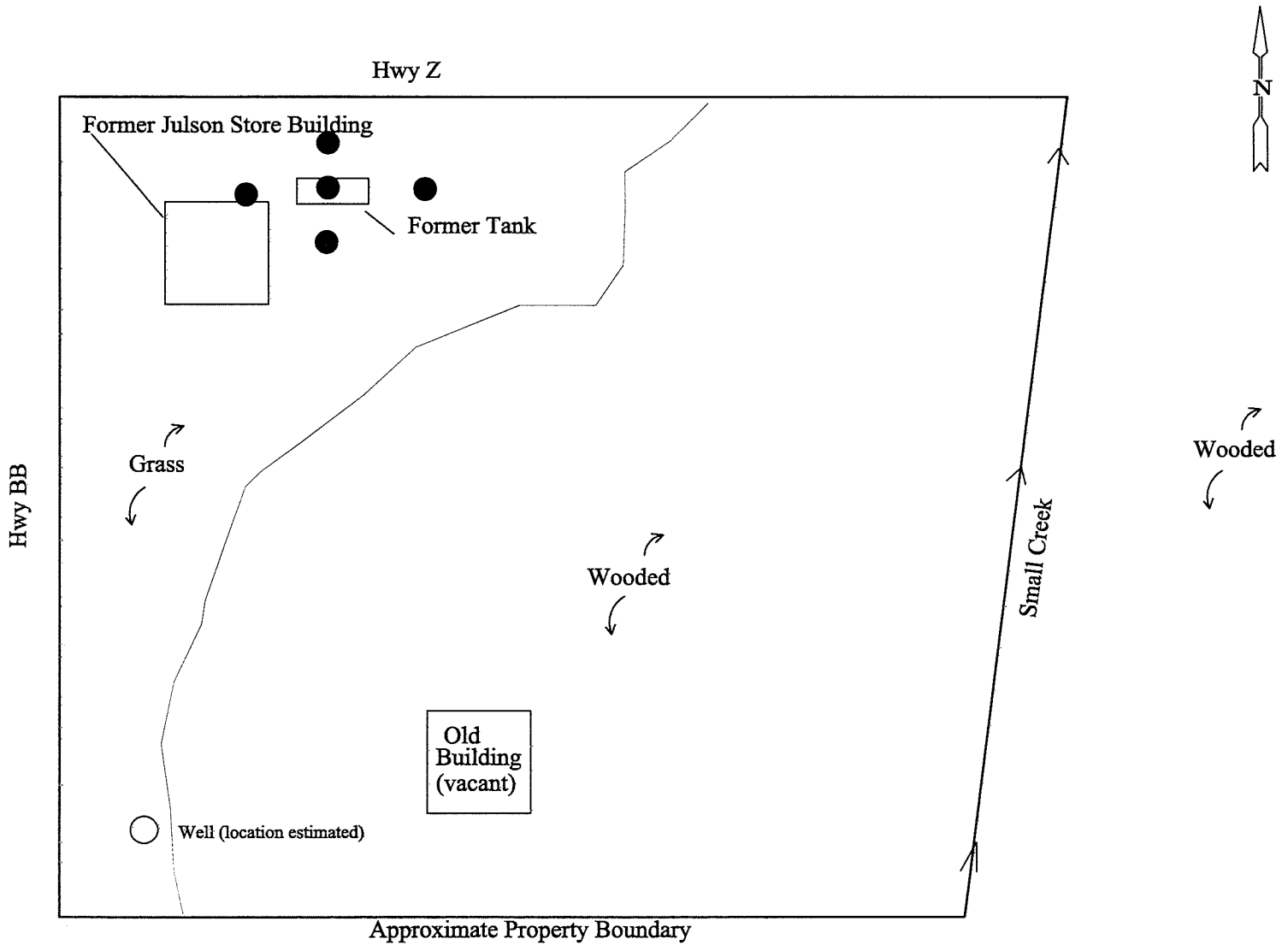


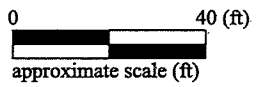
Figure 3  
Site Diagram  
Julson Store (Former)  
Mondovi, WI

PROJECT NO. 05F823	PREPARED BY KAS	 Meridian Environmental Consulting, LLC
DATE 5/23/17	REVIEWED BY KAS	





● Proposed Soil Boring



↖ Farm Pasture ↗

Figure 4  
Proposed Soil Borings  
Julson Store (Former)  
Mondovi, WI

PROJECT NO.  
05F823

PREPARED BY  
KAS

DATE  
5/23/17

REVIEWED BY  
KAS



## **APPENDIX A**

### **Tank Inspector Report**

September 20, 1994

Western Wisconsin Inspection  
919 Fairfax St.  
Altoona, WI 54720

MEMO TO: DNR Eileen Kramer  
1300 W. Clairemont Ave.  
Eau Claire, WI 54701

RE: Tank closure contamination  
Hwy. BB & Z W 125  
Mondovi, WI 54755  
Town of Dover  
Buffalo County

OWNER: John Marum  
W 490 Cty. Z  
Mondovi, WI 54755

Please be advised that obvious contamination was present at the above location when a 300 gallon gasoline tank was removed. It should be noted that a well is present on this property and a stream is approximately 200 ft. from the tank location.

OBVIOUS CONTAMINATION: 5 1/2 foot---odor and stain present

TANK: Empty with a 2" x 6" hole in the bottom  
300 gallon steel---38" x 5'  
Appears to have had a dispenser directly  
over the top of the tank (probably years ago)

TANK LOCATION ON PROPERTY: 3 feet from the main building (Northeast corner)  
Tank installation was East/West

WELL: 85' South of tank location

STREAM: 200' East of tank location

The property owner was not present when the tank was removed and a site assessment was omitted because of the hole in the tank and the location of the well/stream.

Sincerely,  
*M Lear*  
Morris Lear  
Tank Inspector



**APACHE HOSE & BELTING**

3001 4th ST. S.E. • P.O. Box 14747  
MINNEAPOLIS, MINNESOTA 55414

PHONE  
612-331-3145  
FAX  
612-331-6537

WATS  
1-800-328-4149

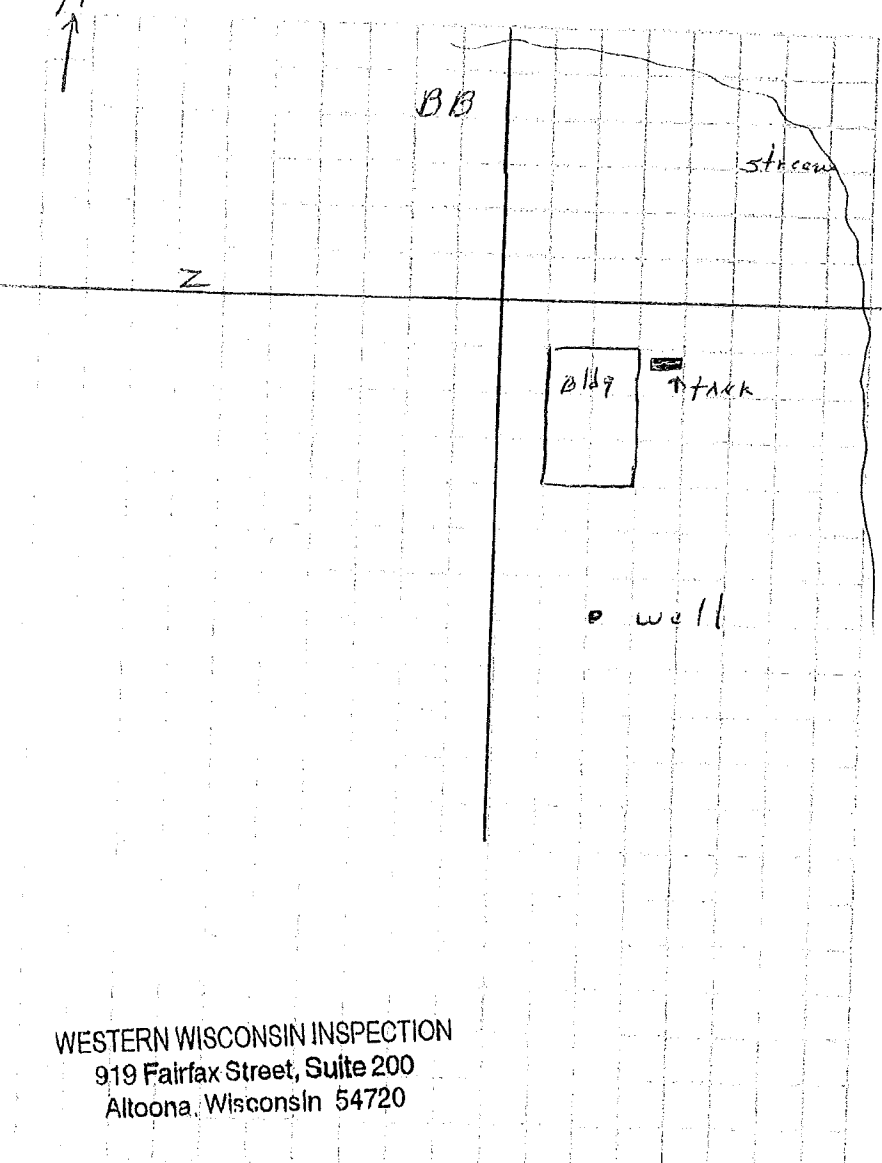
E MEMO  
Rev. 2-92

Date	Time
7-20	1:43

Loop  
Wisc. Insp'n's

Received by **ME**

Returning Your Call     Will Call Again     Called to See You



They took tank out this a.m. - will send info.

John Marum  
in Dover -  
Co.

ation  
11 is  
ank

x 6" hole in the bottom  
1---38" x 5'  
had a dispenser directly  
the tank (probably years ago)

main building (Northeast corner)  
on was East/West

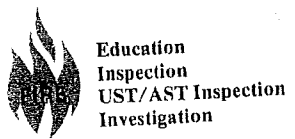
nk location  
nk location

WESTERN WISCONSIN INSPECTION  
919 Fairfax Street, Suite 200  
Altoona, Wisconsin 54720

assessment was omitted because of the hole in the tank and the location of the



**BUCK LEAR**



919 Fairfax Street  
Altoona, Wisconsin 54720  
Phone: (715) 833-7671  
Fax: (715) 833-7634



### UNDERGROUND PETROLEUM PRODUCT TANK INVENTORY

Send Completed Form To:  
Safety & Buildings Division  
P.O. Box 7969  
Madison, WI 53707  
Telephone: (608) 267-5280

For Office Use Only:  
Tank ID #

Information Required By Sec. 102.142, Wis. Stats.

Underground tanks in Wisconsin that have stored or currently store petroleum or regulated substances must be registered. Please see the reverse side for additional information on this program. An underground storage tank is defined as any tank with at least 10 percent of its total volume (included piping) located below ground level. A separate form is needed for each tank. Send each completed form to the agency designated in the top right corner. Have you previously registered this tank by submitting a form?  YES  NO If yes, are you correcting/updating information only?  Yes  No The information you provide may be used by other government agency programs (Privacy Law, s. 15.04 (1)(m)).

This registration applies to a tank that is (check one):			Fire Department Providing Fire Coverage Where Tank Located:  <u>06023</u>
1A. <input type="checkbox"/> In Use or	1B. <input type="checkbox"/> Newly Installed	4. <input checked="" type="checkbox"/> Closed - Tank Removed	
2. <input type="checkbox"/> Abandoned With Product	6. <input type="checkbox"/> Closed - Filled With Inert Material	8. <input type="checkbox"/> Changed Ownership (Indicate new owner below)	
3. <input type="checkbox"/> Abandoned No Product (empty) or With Water	7. <input type="checkbox"/> Out of Service - Provide Date: _____		

**A. IDENTIFICATION: (Please Print)**

1. Tank Site Name <u>JOHN + DIANE MARUM</u>		Site Address <u>Hwy "BB" + "Z"</u>		Site Telephone No. <u>(715) 946-3415</u>	
<input type="checkbox"/> City <u>Dover</u>	<input type="checkbox"/> Village	<input checked="" type="checkbox"/> Town of:	State <u>WI</u>	Zip Code <u>54755</u>	County <u>Buffalo</u>
2. Owner Name (mail sent here unless indicated otherwise in #3 below) <u>JOHN + DIANE MARUM</u>			Owner Mailing Address (mail sent here unless indicated otherwise in #3) <u>W490 CTY Z</u>		
<input type="checkbox"/> City <u>MONDOVI</u>	<input type="checkbox"/> Village	<input type="checkbox"/> Town of:	State <u>WI</u>	Zip Code <u>54755</u>	County <u>BUFFALO</u>
3. Alternate Mailing Name If Different Than #2			Alternate Mailing Street Address If Different From #2		
<input type="checkbox"/> City	<input type="checkbox"/> Village	<input type="checkbox"/> Town of:	State	Zip Code	County
4. Tank Age (date installed, if known: or years old)		5. Tank Capacity (gallons) <u>300</u>		6. Tank Manufacturer's Name (if known)	

**B. TYPE OF USER (check one):**

1. <input type="checkbox"/> Gas Station	2. <input type="checkbox"/> Bulk Storage	3. <input type="checkbox"/> Utility	4. <input checked="" type="checkbox"/> Mercantile
5. <input type="checkbox"/> Industrial	6. <input type="checkbox"/> Government	7. <input type="checkbox"/> School	8. <input type="checkbox"/> Residential
9. <input type="checkbox"/> Agricultural	10. <input type="checkbox"/> Other (specify): _____		

**C. TANK CONSTRUCTION:**

1. <input checked="" type="checkbox"/> Bare Steel	2. <input type="checkbox"/> Cathodically Protected and Coated Steel (A. <input type="checkbox"/> Sacrificial Anodes or B. <input type="checkbox"/> Impressed Current)	
3. <input type="checkbox"/> Coated Steel	4. <input type="checkbox"/> Fiberglass	5. <input type="checkbox"/> Other (specify): _____
6. <input type="checkbox"/> Relined - Date _____	7. <input type="checkbox"/> Steel - Fiberglass Reinforced Plastic Composite	9. <input type="checkbox"/> Unknown
Approval: 1. <input type="checkbox"/> Nat'l Std. 2. <input type="checkbox"/> UL 3. <input type="checkbox"/> Other: _____		
Is Tank Double Walled? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Spill Containment? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Overfill Protection Provided? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, identify type: _____		
Tank leak detection method: 1. <input type="checkbox"/> Automatic tank gauging 2. <input type="checkbox"/> Vapor monitoring 3. <input type="checkbox"/> Groundwater monitoring 4. <input type="checkbox"/> Inventory control and tightness testing 5. <input type="checkbox"/> Interstitial monitoring 6. <input type="checkbox"/> Not required at present 7. <input type="checkbox"/> Manual Tank Gauging (only for tanks of 1,000 gallons or less)		

**D. PIPING CONSTRUCTION**

1. <input type="checkbox"/> Bare Steel	2. <input type="checkbox"/> Cathodically Protected and Coated or Wrapped Steel (A. <input type="checkbox"/> Sacrificial Anodes or B. <input type="checkbox"/> Impressed Current)		3. <input type="checkbox"/> Coated Steel
4. <input type="checkbox"/> Fiberglass	5. <input type="checkbox"/> Other (specify): _____		9. <input type="checkbox"/> Unknown
Piping System Type: 1. <input type="checkbox"/> Pressurized piping with: A. <input type="checkbox"/> auto shutoff; B. <input type="checkbox"/> alarm; or C. <input type="checkbox"/> flow restrictor 2. <input type="checkbox"/> Suction piping with check valve at tank 3. <input type="checkbox"/> Suction piping with check valve at pump and inspectable			
Piping leak detection method: used if pressurized or check valve at tank: 1. <input type="checkbox"/> Vapor monitoring 2. <input type="checkbox"/> Interstitial monitoring 3. <input type="checkbox"/> Groundwater monitoring 4. <input type="checkbox"/> Tightness testing 5. <input type="checkbox"/> Line Leak Detector 6. <input type="checkbox"/> Not Required			
Approval: 1. <input type="checkbox"/> Nat'l Std. 2. <input type="checkbox"/> UL 3. <input type="checkbox"/> Other: _____			Double Walled: <input type="checkbox"/> Yes <input type="checkbox"/> No

**E. TANK CONTENTS**

1. <input type="checkbox"/> Diesel	2. <input checked="" type="checkbox"/> Leaded	3. <input type="checkbox"/> Unleaded	4. <input type="checkbox"/> Fuel Oil
5. <input type="checkbox"/> Gasohol	6. <input type="checkbox"/> Other	7. <input type="checkbox"/> Empty	8. <input type="checkbox"/> Sand/Gravel/Slurry
9. <input type="checkbox"/> Unknown	10. <input type="checkbox"/> Premix	11. <input type="checkbox"/> Waste Oil	12. <input type="checkbox"/> Propane
13. <input type="checkbox"/> Chemical *		14. <input type="checkbox"/> Kerosene	15. <input type="checkbox"/> Aviation

\* If # 13 is checked, indicate the chemical name(s) or number(s) of the chemical or waste.

If Tank Closed, Give Date (mo/day/yr): <u>Sept 20, 1994</u>	Has a site assessment been completed? (see reverse side for details) <input type="checkbox"/> Yes <input type="checkbox"/> No
--	--

If installation of a new tank is being reported, indicate who performed the installation inspection:	
1. <input type="checkbox"/> Fire Department	2. <input type="checkbox"/> DILHR
3. <input type="checkbox"/> Other (identify) _____	
Name of Owner or Operator (please print): <u>John Marum</u>	Indicate Whether: <input type="checkbox"/> Owner or <input checked="" type="checkbox"/> Operator
Signature of Owner or Operator: <u>Harold W B ...</u>	Date Signed: <u>9/20/94</u>

## CHECKLIST FOR UNDERGROUND TANK CLOSURE

**RETURN COMPLETED CHECKLIST TO:**  
Safety & Buildings Division  
Fire Prevention & Underground  
Storage Tank Section  
P. O. Box 7969, Madison, WI 53707

**Complete one form for  
each site closure.**

**A. IDENTIFICATION: (Please Print)** Indicate whether closure is for:  Tank System  Tank Only  Piping Only

1. Site Name <b>JOHN &amp; DIANE MARUM</b>			2. Owner Name <b>JOHN &amp; DIANE MARUM</b>		
Site Street Address (not P.O. Box) <b>Hwy 'BB' &amp; Z W125</b>			Owner Street Address <b>W490 CTY Z</b>		
<input type="checkbox"/> City <b>Daver</b>	<input type="checkbox"/> Village	<input checked="" type="checkbox"/> Town of: <b>Daver</b>	<input type="checkbox"/> City	<input type="checkbox"/> Village	<input type="checkbox"/> Town of: <b>MONDOVI</b>
State <b>WI</b>	Zip Code <b>54755</b>	County <b>Buffalo</b>	State <b>WI</b>	Zip Code <b>54755</b>	County <b>BUFFALO</b>
3. Closure Company Name (Print) <b>EAU CLAIRE EQUIPMENT</b>		Closure Company Street Address <b>2620 DAVEY ST</b>			
Closure Company Telephone No. (include area code) <b>(715) 832-2987</b>		Closure Company City, State, Zip Code <b>EAU CLAIRE, WI 54701</b>			
4. Name of Company Performing Closure Assessment			Assessment Company Street Address, City, State, Zip Code		
Telephone # (include area code) ( )	Certified Assessor Name (Print)		Assessor Signature		Assessor Certification No.

Tank ID #	Closure	Temp. Closure	Closure In Place	Tank Capacity	Contents *	Closure Assessment
1.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	300	02	<input type="checkbox"/> Y <input type="checkbox"/> N
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/> Y <input type="checkbox"/> N
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/> Y <input type="checkbox"/> N
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/> Y <input type="checkbox"/> N
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/> Y <input type="checkbox"/> N
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/> Y <input type="checkbox"/> N

\* Indicate which product by numeric code: 01-Diesel; 02-Leaded; 03-Unleaded; 04-Fuel Oil; 05-Gasohol; 06-Other; 09-Unknown; 10-Premix; 11-Waste oil; 13-Chemical (indicate the chemical name(s) or numbers(s)); 14-Kerosene; 15-Aviation.

Written notification was provided to the local agent 15 days in advance of closure date.  Y  N  NA  
 All local permits were obtained before beginning closure.  Y  N  NA

**Check applicable box at right in response to all statements in Sections B - E.**

**B. TEMPORARILY OUT OF SERVICE**

Written inspector approval of temporary closure obtained, which is effective until (provide date) _____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
1. Product Removed			
a. Product lines drained into tank (or other container) and resulting liquid removed, AND	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
b. All product removed to bottom of suction line, OR	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
c. All product removed to within 1" of bottom.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
2. Fill pipe, gauge pipe, tank truck vapor recovery fittings, and vapor return lines capped.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
3. All product lines at the islands or pumps located elsewhere are removed and capped, OR	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
4. Dispensers/pumps left in place but locked and power disconnected.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
5. Vent lines left open.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>
6. Inventory form filed indicating temporary closure.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/>	<input type="checkbox"/>

**C. CLOSURE BY REMOVAL**

1. Product from piping drained into tank (or other container).	<input type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2. Piping disconnected from tank and removed.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. All liquid and residue removed from tank using explosion proof pumps or hand pumps.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4. All pump motors and suction hoses bonded to tank or otherwise grounded.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5. Fill pipes, gauge pipes, vapor recovery connections, submersible pumps and other fixtures removed.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>NOTE: DROP TUBE SHOULD NOT BE REMOVED IF THE TANK IS TO BE PURGED THROUGH THE USE OF AN EDUCTOR.</b>			
6. Vent lines left connected until tanks purged.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7. Tank openings temporarily plugged so vapors exit through vent.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8. Tank atmosphere reduced to 10% of the lower flammable range (LEL) - see Section F.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Tank removed from excavation after <b>PURGING/INERTING</b> ; placed on level ground and blocked to prevent movement.	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. Tank cleaned before being removed being removed from site.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



**APPENDIX B**  
**Potable Well Logs**



WELL CONSTRUCTOR'S REPORT  
FORM 3300-15

SEP 12 1975 OCT 7 1975

NOTE  
WHITE COPY - DIVISION'S COPY  
GREEN COPY - DRILLER'S COPY  
YELLOW COPY - OWNER'S COPY

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES  
Box 450  
Madison, Wisconsin 53701

1. COUNTY Buffalo CHECK ONE  Town  Village  City Dover NAME

2. LOCATION NE SW Section 1 Township 23N Range 10W 3. OWNER AT TIME OF DRILLING Owain A. Julson

OR - Grid or street no. Street name ADDRESS Rt 3 Box 237

AND - If available subdivision name, lot & block no. POST OFFICE Monrovi Wis.

4. Distance in feet from well to nearest: BUILDING SANITARY SEWER FLOOR DRAIN FOUNDATION DRAIN WASTE WATER DRAIN  
C. I. TILE C. I. TILE SEWER CONNECTED INDEPENDENT C. I. TILE  
(Record answer in appropriate block) 12 39

CLEAR WATER DRAIN SEPTIC TANK PRIVY SEEPAGE PIT ABSORPTION FIELD BARN SILO ABANDONED WELL SINK HOLE  
C. I. TILE 105 112 130

OTHER POLLUTION SOURCES (Give description such as dump, quarry, drainage well, stream, pond, lake, etc.)

5. Well is intended to supply water for: Farm

6. DRILLHOLE						9. FORMATIONS		
Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)	Kind	From (ft.)	To (ft.)
8	Surface	55				sand	Surface	15
4	55	68				soft sandstone	15	47
7. CASING, LINER, CURBING, AND SCREEN								
Dia. (in.)	Kind and Weight		From (ft.)	To (ft.)				
4	New Bl Steel T&C 11.00		Surface	55		Sandstone 47 68		

8. GROUT OR OTHER SEALING MATERIAL Kind From (ft.) To (ft.)

Puddled Clay Surface 7

Cement 7 55

10. TYPE OF DRILLING MACHINE USED

Cable Tool  Direct Rotary  Reverse Rotary

Rotary - air w/drilling mud  Rotary - hammer with drilling mud & air  Jetting with  Air  Water

Well construction completed on 9-3 1975

11. MISCELLANEOUS DATA

Yield test: 3 Hrs. at 18 GPM

Well is terminated 12 inches  above  below final grade

Depth from surface to normal water level 30 ft. Well disinfected upon completion  Yes  No

Depth to water level when pumping 35 ft. Well sealed watertight upon completion  Yes  No

Water sample sent to Madison laboratory on: 9-10 1975

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, sub-surface pumprooms, access pits, etc., should be given on reverse side.

SIGNATURE Carl F. Schultz Registered Well Driller COMPLETE MAIL ADDRESS Cochrane, Wis. 54622

Please do not write in space below 1856005

COLIFORM TEST RESULT BF1032 GAS - 24 HRS. GAS - 48 HRS. CONFIRMED REMARKS plot

REV. 3-71

WISCONSIN UNIQUE WELL NUMBER  
**Source:** ELECTRONICALLY **YO445**

State of Wi-Private Water Systems-DG/2 Form 3300-77A  
 Department Of Natural Resources, Box 7921 (Rev 02/02)bw  
 Madison, WI 53707

Property Owner **BAUER, RICK & SHARI** Telephone Number **715-563-4707**

**1. Well Location** Depth **45** FT  
 T=Town C=City V=Village  
 T of **DOVER** Fire# **W22**

Mailing Address **W22 COUNTY ROAD Z**  
 City **ELEVA** State **WI** Zip Code **54738**

Street Address or Road Name and Number  
**COUNTY ROAD Z**

County of Well Location **6 BUFFALO** Co Well Permit No **WC W** Well Completion Date **November 6, 2015**

Subdivision Name Lot# Block #

Well Constructor **OIUM, KELLY WELL DRILLING INC** License # **8217** Facility ID (Public)

Gov't Lot or **SE** 1/4 of **SE** 1/4 of

Address **N50021 MISSELL ROAD** Public Well Plan Approval#

Section **1** T **23** N R **10** W

City **STRUM** State **WI** Zip Code **54770** Date Of Approval

**2. Well Type** **1** (See item 12 below)  
 1=New 2=Replacement 3=Reconstruction

Hicap Permanent Well # Common Well # Specific Capacity **1** gpm/ft

of previous unique well # \_\_\_\_\_ constructed in \_\_\_\_\_

**3. Well Serves** # of homes and or **HOME** High Capacity: Well? **N**  
**P** (eg: barn, restaurant, church, school, industry, etc.) Property? **N**

Reason for replaced or reconstructed Well?  
**1** 1=Drilled 2=Driven Point 3=Jetted 4=Other

**4. Is the well located upslope or sideslope and not downslope from any contamination sources, including those on neighboring properties?** **Y**

- Well located in floodplain? **N**  
 Distance in feet from well to nearest: (including proposed)
- |                                   |   |  |
|-----------------------------------|---|--|
| 1. Landfill                       | 9. Downspout/ Yard Hydrant  | 17. Wastewater Sump  |
| 12 2. Building Overhang           | 10. Privy   | 18. Paved Animal Barn Pen  |
| 45 3. 1=Septic 2= Holding Tank    | 11. Foundation Drain to Clearwater  | 19. Animal Yard or Shelter   |
| 4. Sewage Absorption Unit         | 12. Foundation Drain to Sewer   | 20. Silo   |
| 5. Nonconforming Pit              | 13. Building Drain<br>1=Cast Iron or Plastic 2=Other                      | 21. Barn Gutter  |
| 6. Buried Home Heating Oil Tank   | 14. Building Sewer 1=Gravity 2=Pressure<br>1=Cast Iron or Plastic 2=Other | 22. Manure Pipe 1=Gravity 2=Pressure<br>1=Cast iron or Plastic 2=Other |
| 7. Buried Petroleum Tank          | 15. Collector Sewer: ___ units ___ in. diam.                              | 23. Other manure Storage   |
| 8. 2 1=Shoreline 2= Swimming Pool | 16. Clearwater Sump   | 24. Ditch  |
|                                   |   | 25. Other NR 812 Waste Source  |

**5. Drillhole Dimensions and Construction Method**

From		To	Upper Enlarged Drillhole	Lower Open Bedrock
Dia. (in.)	(ft)	(ft)		
10.0	surface	5	-- 1. Rotary - Mud Circulation -----	
			-- 2. Rotary - Air -----	
			-- 3. Rotary - Air and Foam -----	
6.0	5	45	-- 4. Drill-Through Casing Hammer	
			-- 5. Reverse Rotary	
			-- 6. Cable-tool Bit ___ in. dia -----	
			-- 7. Temp. Outer Casing ___ in. dia. ___ depth ft. Removed?	
			Other	

**8. Geology**

Geology Codes	Type, Caving/Noncaving, Color, Hardness, etc	From (ft.)	To (ft.)
__I_	Top Soil	0	2
B_U_	Black, Muck	2	33
THN_	Tan, Hard, Sandstone	33	45

**6. Casing Liner Screen**

Dia. (in.)	Material, Weight, Specification	From (ft.)	To (ft.)
6.0	6.620 X A53B.280 EW TC	surface	34
Dia. (in.)	Screen type, material & slot size	From	To

**9. Static Water Level**  
**4.0** feet **B** ground surface  
 A=Above B=Below

**11. Well Is:** 24 in. A Grade  
 Developed? **Y** A=Above B=Below  
 Disinfected? **Y**  
 Capped? **Y**

**10. Pump Test**  
 Pumping level **25.0** ft. below surface  
 Pumping at **20.0** GP M **2.0** Hrs

**7. Grout or Other Sealing Material**

Method	Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement
		surface		

**12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property?**  
 If no, explain

**13. Initials of Well Constructor or Supervisory Driller** **KO** Date Signed **11/18/15**  
**Initials of Drill Rig Operator (Mandatory unless same as above)** **BG** Date Signed **11/18/15**

Additional Comments? Variance Issued? **N**  
 Owner Sent Label? **Y** More Geology?

**ELECTRONIC** Batch **88888888**

WISCONSIN UNIQUE WELL NUMBER  
**Source: ELECTRONICALLY** **WO451**

State of Wi-Private Water Systems-DG/2 Form 3300-77A  
 Department Of Natural Resources, Box 7921 (Rev 02/02)bw  
 Madison, WI 53707

Property Owner **WOLTER, JANINE** Telephone **715-946-3076**

**1. Well Location** Depth **50** FT  
 T=Town C=City V=Village  
 T of **DOVER** Fire# **S614**

Mailing Address **S614 WOOD RD**

City **MONDOVI** State **WI** Zip Code **54755**

Street Address or Road Name and Number  
**WOOD RD**

County of Well Location **6 BUFFALO** WC Co Well Permit No **W** Well Completion Date **August 10, 2009**

Subdivision Name Lot# Block #

Well Constructor **KELLY OIUM** License # **6244** Facility ID (Public)

Gov't Lot or **NW** 1/4 of **NW** 1/4 of

Address **PO BOX 96** Public Well Plan Approval#

Section **1** T **23** N R **10** W

City **STRUM** State **WI** Zip Code **54770** Date Of Approval

**2. Well Type** **1** (See item 12 below)  
 1=New 2=Replacement 3=Reconstruction

Hicap Permanent Well # Common Well # Specific Capacity **4.5** gpm/ft

of previous unique well # \_\_\_\_\_ constructed in \_\_\_\_\_

**3. Well Serves** # of homes and or **P** High Capacity: Well? **N**  
 (eg: barn, restaurant, church, school, industry, etc.) Property? **N**

Reason for replaced or reconstructed Well?

M=Munic O=OTM N=NonCom P=Private Z=Other X=NonPot A=Anode L=Loop H=Drillhole

**1** 1=Drilled 2=Driven Point 3=Jetted 4=Other

**4. Is the well located upslope or sideslope and not downslope from any contamination sources, including those on neighboring properties?** **Y**

- Well located in floodplain? **N**  
 Distance in feet from well to nearest: (including proposed)
- |                                 |   |  |
|---------------------------------|---|--|
| 1. Landfill                     | 9. Downspout/ Yard Hydrant  | 17. Wastewater Sump  |
| 2. Building Overhang            | 10. Privy   | 18. Paved Animal Barn Pen  |
| 3. 1=Septic 2= Holding Tank     | 11. Foundation Drain to Clearwater  | 19. Animal Yard or Shelter   |
| 4. Sewage Absorption Unit       | 12. Foundation Drain to Sewer   | 20. Silo   |
| 5. Nonconforming Pit            | 13. Building Drain<br>1=Cast Iron or Plastic 2=Other                      | 21. Barn Gutter  |
| 6. Buried Home Heating Oil Tank | 14. Building Sewer 1=Gravity 2=Pressure<br>1=Cast Iron or Plastic 2=Other | 22. Manure Pipe 1=Gravity 2=Pressure<br>1=Cast iron or Plastic 2=Other |
| 7. Buried Petroleum Tank        | 15. Collector Sewer: ___ units ___ in. diam.                              | 23. Other manure Storage   |
| 8. 1=Shoreline 2= Swimming Pool | 16. Clearwater Sump   | 24. Ditch  |
|                                 |   | 25. Other NR 812 Waste Source  |

**5. Drillhole Dimensions and Construction Method**

From (ft)	To (ft)	Upper Enlarged Drillhole	Lower Open Bedrock
8.0	4	1. Rotary - Mud Circulation	
		2. Rotary - Air	
		3. Rotary - Air and Foam	
6.0	50	4. Drill-Through Casing Hammer	
		5. Reverse Rotary	
		6. Cable-tool Bit in. dia	
		7. Temp. Outer Casing in. dia. depth ft. Removed?	
		Other	

**8. Geology**

Geology Codes	Type, Caving/Noncaving, Color, Hardness, etc	From (ft.)	To (ft.)
TQX_	Tan/Brown, Caving, Sand & Clay	0	37
TSN_	Tan/Brown, Soft/Loose, Sandstone	37	39
THN_	Tan/Brown, Hard/Firm, Sandstone	39	50

**6. Casing Liner Screen**

Dia. (in.)	Material, Weight, Specification	From (ft.)	To (ft.)
6.0	IPSCO ASTM A53B.280 P/E STEEL CASING	surface	40

Manufacturer & Method of Assembly

Dia. (in.)	Screen type, material & slot size	From	To

**9. Static Water Level**  
**29.0** feet **B** ground surface  
 A=Above B=Below

**11. Well Is:** 18 in. A Grade  
 A=Above B=Below

**10. Pump Test**  
 Pumping level **33.0** ft. below surface  
 Pumping at **18.0** GP M **2.0** Hrs

Developed? **Y**  
 Disinfected? **Y**  
 Capped? **Y**

**7. Grout or Other Sealing Material**

Method	Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement
	BENTONITE W/ SLURRY	surface	4.0	1

**12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property?**  
 If no, explain

**13. Initials of Well Constructor or Supervisory Driller** **KO** Date Signed **8/20/09**

Initials of Drill Rig Operator (Mandatory unless same as above) **DT** Date Signed **8/20/09**

Additional Comments? Variance Issued? **N**  
 Owner Sent Label? **Y** More Geology?

**ELECTRONIC** **Batch 88888888**

**WISCONSIN UNIQUE WELL NUMBER**  
**Source: WELL CONSTRUCTION** **RE629**

Property Owner: **GOODWIN, DENNIS** Telephone Number: **651-436-6040**

Mailing Address: **11392 14TH N**

City: **LAKE ELMO** State: **MN** Zip Code: **55042**

County of Well Location: **6 BUFFALO** Co Well Permit No: **WC W** Well Completion Date: **December 5, 2003**

State of WI-Private Water Systems-DG/2 Department Of Natural Resources, Box 7921 Madison, WI 53707 Form 3300-77A (Rev 02/02)bw

Depth **95** FT

**1. Well Location**  
 T=Town C=City V=Village  
 T of **DOVER** Fire#

Street Address or Road Name and Number  
**CLAYTON NELSON RD**

Subdivision Name Lot# Block #

Well Constructor: **PELKE GLEN PLBG HTG & WELL DRLG** License #: **131** Facility ID (Public)

Address: **835 RIVERSIDE AVE** Public Well Plan Approval#

City: **MONDOVI** State: **WI** Zip Code: **54755** Date Of Approval

Hicap Permanent Well # Common Well # Specific Capacity: **1.1 gpm/ft**

Gov't Lot or **NE** 1/4 of **NE** 1/4 of  
 Section **1 T 23 N R 10 W**

**3. Well Serves** # of homes and or **P** (eg: barn, restaurant, church, school, industry, etc.) High Capacity: Well? **N** Property? **N**

M=Munic O=OTM N=NonCom P=Private Z=Other X=NonPot A=Anode L=Loop H=Drillhole

**2. Well Type** **1** (See item 12 below)  
 1=New 2=Replacement 3=Reconstruction  
 of previous unique well # \_\_\_\_\_ constructed in \_\_\_\_\_

Reason for replaced or reconstructed Well?  
**NEW HOUSE CONSTRUCTION-NO**

**1** 1=Drilled 2=Driven Point 3=Jetted 4=Other

**4. Is the well located upslope or sideslope and not downslope from any contamination sources, including those on neighboring properties?** **Y**

Well located in floodplain? **N**  
 Distance in feet from well to nearest: (including proposed)

1. Landfill	9. Downspout/ Yard Hydrant	17. Wastewater Sump
15 2. Building Overhang	10. Privy	18. Paved Animal Barn Pen
3. 1=Septic 2= Holding Tank	11. Foundation Drain to Clearwater	19. Animal Yard or Shelter
4. Sewage Absorption Unit	12. Foundation Drain to Sewer	20. Silo
5. Nonconforming Pit	13. Building Drain 1=Cast Iron or Plastic 2=Other	21. Barn Gutter
6. Buried Home Heating Oil Tank	14. Building Sewer 1=Gravity 2=Pressure 1=Cast Iron or Plastic 2=Other	22. Manure Pipe 1=Gravity 2=Pressure 1=Cast iron or Plastic 2=Other
7. Buried Petroleum Tank	15. Collector Sewer: ___ units ___ in. diam.	23. Other manure Storage
8. 1=Shoreline 2= Swimming Pool	16. Clearwater Sump	24. Ditch
		25. Other NR 812 Waste Source

**5. Drillhole Dimensions and Construction Method**

From (ft)	To (ft)	Upper Enlarged Drillhole	Lower Open Bedrock
10.0	surface	1. Rotary - Mud Circulation	
6.0	30	2. Rotary - Air	
	95	3. Rotary - Air and Foam	
		4. Drill-Through Casing Hammer	
		5. Reverse Rotary	
		X 6. Cable-tool Bit 10 in. dia	
		7. Temp. Outer Casing ___ in. dia. ___ depth ft. Removed?	
		Other	

**8. Geology**

Geology Codes	Type, Caving/Noncaving, Color, Hardness, etc	From (ft.)	To (ft.)
<u>C</u>	CLAY	0	6
EHN	FIRM GREEN SANDSTONE	6	36
THN	FIRM BROWN SANDSTONE	36	95

**6. Casing Liner Screen**

Dia. (in.)	Material, Weight, Specification	From (ft.)	To (ft.)
6.0	NEW BLK T/C PIPE ASTM A53 G B (LTV STEEL) 19.45LBS	surface	36

**9. Static Water Level**  
**68.0** feet **B** ground surface  
 A=Above B=Below

**10. Pump Test**  
 Pumping level **86.0** ft. below surface  
 Pumping at **20.0** GP M **1.0** Hrs

**7. Grout or Other Sealing Material**

Method	Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement
TREMIE PIPE-GROUT PUMP	PORTLAND CEMENT	surface	30.0	6 S

**11. Well Is:** 18 in. A Grade  
 A=Above B=Below

Developed? **Y**  
 Disinfected? **Y**  
 Capped? **Y**

**12.** Did you notify the owner of the need to permanently abandon and fill all unused wells on this property?  
 If no, explain

**13. Initials of Well Constructor or Supervisory Driller** **GNP** Date Signed **12/12/03**

Initials of Drill Rig Operator (Mandatory unless same as above) Date Signed **12/12/03**



**WISCONSIN UNIQUE WELL NUMBER**  
**Source: WELL CONSTRUCTION** **TW382**

Property Owner **BRADSHAW, GUY** Telephone Number **212-925-1379**

Mailing Address **825 312TH AVE**

City **BURLINGTON** State **WI** Zip Code **53105**

County of Well Location **6 BUFFALO** Co Well Permit No **WC W** Well Completion Date **January 11, 2007**

State of Wi-Private Water Systems-DG/2  
 Department Of Natural Resources, Box 7921  
 Madison, WI 53707

Form 3300-77A  
 (Rev 02/02)bw

**1. Well Location** Depth **160** FT

T=Town C=City V=Village  
**T of DOVER** Fire#

Street Address or Road Name and Number  
**CO RD BB CLAYTON NELSON RD**

Subdivision Name Lot# Block #

Well Constructor **PELKE GLEN PLBG HTG & WELL DRLG** License # **131** Facility ID (Public)

Address **835 RIVERSIDE AVE** Public Well Plan Approval#

City **MONDOVI** State **WI** Zip Code **54755** Date Of Approval

Hicap Permanent Well # Common Well # Specific Capacity **1.5** gpm/ft

Gov't Lot or **NE** 1/4 of **NE** 1/4 of

Section **1** T **23** N R **10** W

**2. Well Type** **1** (See item 12 below)

1=New 2=Replacement 3=Reconstruction

of previous unique well # \_\_\_\_\_ constructed in \_\_\_\_\_

Reason for replaced or reconstructed Well?  
**NEW HOUSE CONSTRUCTION-NO**

**1** 1=Drilled 2=Driven Point 3=Jetted 4=Other

**3. Well Serves** # of homes and or **P** High Capacity: Well? **N** Property? **N**

(eg: barn, restaurant, church, school, industry, etc.)

M=Munic O=OTM N=NonCom P=Private Z=Other X=NonPot A=Anode L=Loop H=Drillhole

**4. Is the well located upslope or sideslope and not downslope from any contamination sources, including those on neighboring properties?** **Y**

Well located in floodplain? **N**

Distance in feet from well to nearest: (including proposed)

1. Landfill	9. Downspout/ Yard Hydrant	17. Wastewater Sump
15 2. Building Overhang	10. Privy	18. Paved Animal Barn Pen
50 3. 1=Septic 2= Holding Tank	11. Foundation Drain to Clearwater	19. Animal Yard or Shelter
60 4. Sewage Absorption Unit	12. Foundation Drain to Sewer	20. Silo
5. Nonconforming Pit	13. Building Drain	21. Barn Gutter
6. Buried Home Heating Oil Tank	1=Cast Iron or Plastic 2=Other	22. Manure Pipe 1=Gravity 2=Pressure
7. Buried Petroleum Tank	14. Building Sewer 1=Gravity 2=Pressure	1=Cast iron or Plastic 2=Other
8. 2 1=Shoreline 2= Swimming Pool	15. Collector Sewer: ___ units ___ in. diam.	23. Other manure Storage
	16. Clearwater Sump	24. Ditch
		25. Other NR 812 Waste Source

**5. Drillhole Dimensions and Construction Method**

From	To	Upper Enlarged Drillhole	Lower Open Bedrock
Dia.(in.)	(ft)	(ft)	
10.0	surface	30	
6.0	30	160	

1. Rotary - Mud Circulation  
 2. Rotary - Air  
 3. Rotary - Air and Foam  
 4. Drill-Through Casing Hammer  
 5. Reverse Rotary  
 X 6. Cable-tool Bit **10** in. dia  
 7. Temp. Outer Casing \_\_\_ in. dia. \_\_\_ depth ft. Removed?  
 Other

**8. Geology**

Geology Codes	Type, Caving/Noncaving, Color, Hardness, etc	From (ft.)	To (ft.)
T_C_	BROWN CLAY	0	10
E_N_	GREEN SANDSTONE	10	50
THN_	FIRM BROWN SANDSTON	50	160

**6. Casing Liner Screen**

Dia. (in.)	Material, Weight, Specification	From (ft.)	To (ft.)
6.0	NEW BLK T/C PIPE ASTM A-53 GR B LTV STEEL 19.45 LBS A F SEIDEMAN NNK	surface	50

Manufacturer & Method of Assembly

**9. Static Water Level** **125.0** feet **B** ground surface  
 A=Above B=Below

**11. Well Is:** 24 in. A Grade  
 A=Above B=Below

**10. Pump Test**  
 Pumping level **138.0** ft. below surface  
 Pumping at **20.0** GP M **1.0** Hrs  
 Developed? **Y**  
 Disinfected? **Y**  
 Capped? **Y**

**7. Grout or Other Sealing Material**

Method	Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement
GROUT PUMP TREMMIE PIPE	PORTLAND CEMENT	surface	30.0	12 S

**12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property?**  
 If no, explain

**13. Initials of Well Constructor or Supervisory Driller** **GNP** Date Signed **1/18/07**

Initials of Drill Rig Operator (Mandatory unless same as above) Date Signed **1/18/07**

WELL CONSTRUCTOR'S REPORT TO WISCONSIN STATE BOARD OF HEALTH  
See Instructions on Reverse Side

1. County Buffalo Town  Dover  
Village   
City  Check one and give name

2. Location NWSE Sec 2 T 23N R 10W  
Name of street and number of premise or Section, Town and Range numbers

3. Owner  or Agent  Marvin Ferrite DEC 17 1959  
Name of individual, partnership or firm

4. Mail Address Mondovi, Wis ENVIRONMENTAL SANITATION  
Complete address required

5. From well to nearest: Building 5 ft; sewer 22 ft; drain \_\_\_\_\_ ft; septic tank 42 ft;  
dry well or filter bed 105 ft; abandoned well \_\_\_\_\_ ft.

6. Well is intended to supply water for: Farm

7. DRILLHOLE:

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8	0	40			
4	40	110			

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	Lin	0	42

9. GROUT:

Kind	From (ft.)	To (ft.)
Cement	7	42

11. MISCELLANEOUS DATA:

Yield test: 5 1/2 Hrs. at 560 GPM.  
Depth from surface to water-level: 33 ft.  
Water-level when pumping: 31 ft.  
Water sample was sent to the state laboratory at:  
Madison on Dec 2 1959  
City

10. FORMATIONS:

Kind	From (ft.)	To (ft.)
Sand	0	16
Sand rock	16	55
Blue rock	55	110

RECEIVED  
JAN 25 1960  
ENVIRONMENTAL SANITATION

Construction of the well was completed on:  
Nov 18 1959

The well is terminated 10 inches  
 above, below  the permanent ground surface.

Was the well disinfected upon completion?  
Yes  No \_\_\_\_\_

Was the well sealed watertight upon completion?  
Yes  No \_\_\_\_\_

Signature Milo Higley Registered Well Driller  
Box 167 Eleva, Wis Complete Mail Address

REC 31959 No. 42068  
10 ml 10 ml 10 ml 10 ml 10 ml

Ans'd **SAFE** Gas-24 hrs. \_\_\_\_\_

Interpretation \_\_\_\_\_  
48 hrs. \_\_\_\_\_  
Confirm \_\_\_\_\_

B. Coli 0  
Examiner \_\_\_\_\_

1856003  
plet

BF1033

County Buffalo Twp. Lower Sec. 2  
 NW, SE, Section 2 T23N, R10W

TO THE WISCONSIN STATE BOARD OF HEALTH,  
 WELL DRILLING DIVISION, MADISON, WIS.

**WELL LOG PREMISES DIAGRAM, and REPORT**

For Official Record of the Board  
 (TO BE USED FOR THAT PURPOSE ONLY)

Owner Paul George Driller Oscar Julson  
 (If a joint ownership give name of responsible official. Also name of each individual holding an interest. Use a separate sheet and attach hereto.)  
 Address Mondovi Lower Buffalo Address Mondovi Wis  
 (City, village, township, county)  
 Date of Report April 2 1939  
 Registration No. 165

Give below the location of the property on which well is drilled.  
 If incorporated village or city: \_\_\_\_\_  
 If unincorporated hamlet: \_\_\_\_\_  
 If Lake Shore Plat: \_\_\_\_\_  
 If Subdivision: \_\_\_\_\_  
 If Farm Paul George Buffalo Lower 3 103  
 (Name County Twp. Sec. Lot Blk.)  
 If School: \_\_\_\_\_  
 If other public building: \_\_\_\_\_  
 (Name County Twp. Sec. Highway District Blk. Sec.)

**WELL LOG and REPORT**

Kind of casing and liner in feet. Kind of shoe. Indicate grout, screen, seal, etc.	WELL DIAGRAM Vertical Lines = in. Dia. Horizontal Lines = ft. Depth Use a red line to show casing	Give depth of formations in feet. State if dry or water bearing.	Record of FINAL Pumping Test
17 ft 4 in Well drilled special steel pipe 4 in steel drive shoe		4 ft top soil and sand --- 76 ft Red sand Rock --- 13 ft Light sand Rock Water Bearing --- 15 ft Blush sand Rock Water Bearing --- typed version of above: 4 ft. top soil and sand 76 ft. Red sand Rock 13 ft. light sand Rock Water Bearing 15 ft. Blush sand Rock Water Bearing	Duration of test. Hours <u>2</u> Pumping Rate. G. P. M. <u>7</u> Depth of pump in well. Ft. <u>103</u> Standing water-level (from surface.) Ft. <u>80</u> Water level when pumping Ft. _____ Water. End of test. Check: Clear <input checked="" type="checkbox"/> Cloudy _____ Turbid _____ Was well sterilized before test? Yes _____ No <input checked="" type="checkbox"/> Date _____ To which Laboratory was sample sent? <u>Madison</u> Date <u>3-19-39</u> Was the well sealed on completion? Yes <input checked="" type="checkbox"/> No _____ How high did you leave casing above grade? <u>18</u> Well was completed <u>April 20</u> 19 <u>38</u> Well Driller: <u>Oscar Julson</u> Signature (Be sure to complete the report on the reverse side)

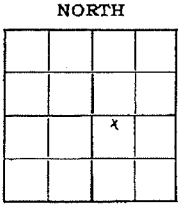
# PREMISES DIAGRAM

(See Rules)

Draw a representative sketch of the premises on which this well is located, showing the location of the well with reference to buildings and possible sources of pollution. Indicate the condition of the surroundings by printing descriptive words like high, low, level, slope, lake, river, swamp, forest, meadow, barnyard, cesspool, privy, sewer, etc., at their respective locations and show distance from the well on the sketch. Also show direction of the compass. See Part III of Code for specimen Diagram.

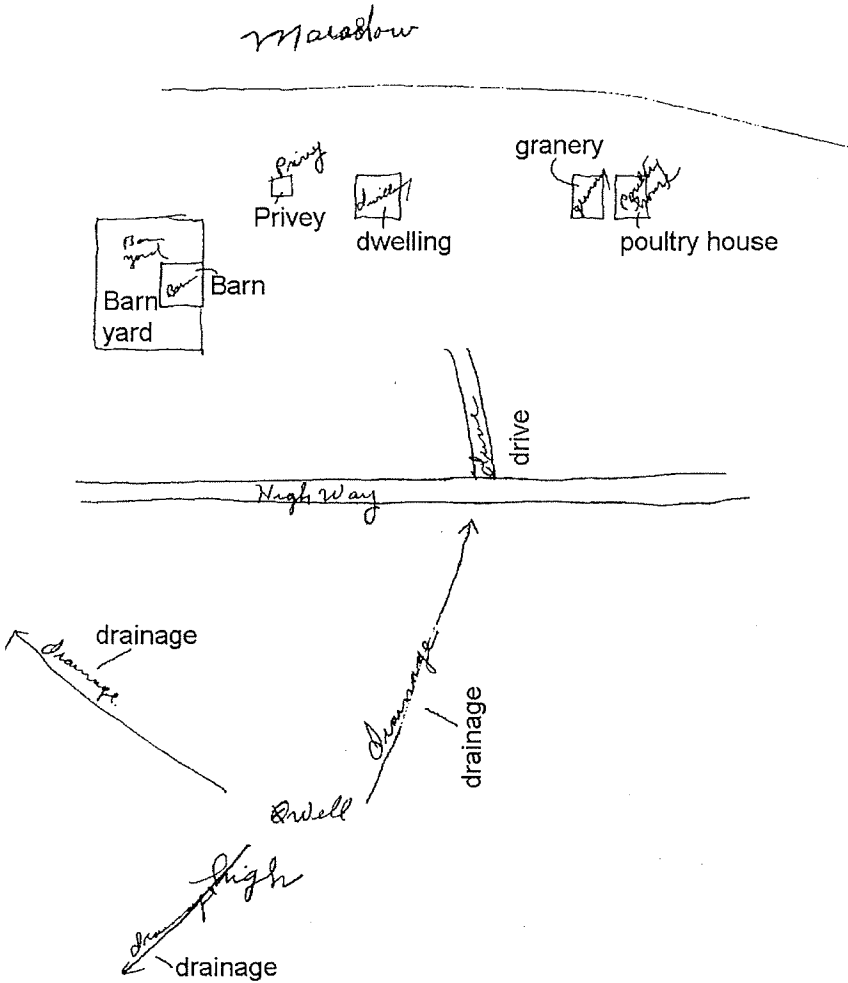
REMARKS : Report blasting and unusual items in this space :

The large square represents one Section of land divided into 36 40 A. tracts. Indicate the location of premises in the Section.

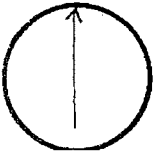


Sec. 2 T. 23 N. R. 10 W. (E) (W) (Each division equals 10') (If more or less indicate: .....)

DRAW PREMISES DIAGRAM BELOW.  
(See Sec. 32 and Illustrations Part III Well Drilling Code)



Show in circle the "North" Direction of the Diagram.



Note: Additional copies of this form may be obtained at 5c per copy in lots of 10 or more. Send remittance with order to State Board of Health, Well Drilling Division, Madison.

75

WELL CONSTRUCTOR'S REPORT

WISCONSIN STATE BOARD OF HEALTH

Wel 6

1. COUNTY Buffalo CHECK ONE  Town  Village  City Dover NAME

2. LOCATION (Number and Street or 1/4 section, section, township and range. Also give subdivision name, lot and block numbers when available.)  
N.W. 1/4 of S.E. 1/4 Sec. 2 T. 23. N. R. 10. W.

3. OWNER AT TIME OF DRILLING  
Marvin Finnie

4. OWNER'S COMPLETE MAIL ADDRESS  
Rt. 1. Mondovi, Wis

5. Distance in feet from well to nearest:

BUILDING	SANITARY SEWER	FLOOR DRAIN	FOUNDATION DRAIN	WASTE WATER DRAIN
C. I.	TILE	C. I.	SEWER CONNECTED	INDEPENDENT
6'				70'

CLEAR WATER DRAIN	SEPTIC TANK	PRIVY	SEEPAGE PIT	ABSORPTION FIELD	BARN	SILLO	ABANDONED WELL	SINK HOLE
C. I.	TILE							
	50'		74'		200'	200'	17'	

OTHER POLLUTION SOURCES (Give description such as dump, quarry, drainage well, stream, pond, lake, etc.)

6. Well is intended to supply water for: Domestic Purposes

7. DRILLHOLE						10. FORMATIONS		
Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)	Kind	From (ft.)	To (ft.)
10"	Surface	30'	6"	30'	55'	Sand + top soil	Surface	5'
						Sandstone (soft)	5'	47'
						Sandstone (firm)	47'	55'

8. CASING, LINER, CURBING, AND SCREEN			
Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
6"	Steel	Surface	52'

9. GROUT OR OTHER SEALING MATERIAL		
Kind	From (ft.)	To (ft.)
Pressure Cement	Surface	30'
10 sacks Cement		

Well construction completed on 11/29/1966

11. MISCELLANEOUS DATA			
Yield test:	3 Hrs. at	15 GPM	Well is terminated 8 inches <input checked="" type="checkbox"/> above <input type="checkbox"/> below final grade
Depth from surface to normal water level	34 ft.		Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth to water level when pumping	44 ft.		Well sealed watertight upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water sample sent to	<u>Eau Claire, Wis</u>	laboratory on:	<u>11/29/1966</u>

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, sub-surface pumprooms, access pits, etc., should be given on reverse side.

SIGNATURE Dave Olson Registered Well Driller

COMPLETE MAIL ADDRESS  
**OLSON BROS. WELL DRILLING CO.**  
R #1 EAU CLAIRE, WIS.

Please do not write in space below

COLIFORM TEST RESULT	GAS - 24 HRS.	GAS - 48 HRS.	CONFIRMED	REMARKS
				1856004

BF1035

Plot

Old well caved in - apparently not enough casing.  
Will be abandoned proper.



WELL CONSTRUCTOR'S REPORT

Well-6

6961 82030 DEC 28 1969

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES  
Box 450  
Madison, Wisconsin 53701

WHITE COPY - DIVISION'S COPY  
GREEN COPY - DRILLER'S COPY  
YELLOW COPY - OWNER'S COPY

1. COUNTY Buffalo CHECK ONE  Town  Village  City Dover NAME

2. LOCATION (Number and Street or 1/4 section, section, township and range. Also give subdivision name, lot and block numbers when available.)  
NW 1/4 Sec 2 - T 23 N - R 10 W (NW, SW, NW) Sec. 2

3. OWNER AT TIME OF DRILLING  
Oscar Severson

4. OWNER'S COMPLETE MAIL ADDRESS  
RT # 1 Mondovi, Wis. 54755

5. Distance in feet from well to nearest: BUILDING SANITARY SEWER FLOOR DRAIN FOUNDATION DRAIN WASTE WATER DRAIN  
(Record answer in appropriate block) C. I. TILE C. I. TILE SEWER CONNECTED INDEPENDENT C. I. TILE

10	78	74				
----	----	----	--	--	--	--

CLEAR WATER DRAIN SEPTIC TANK PRIVY SEEPAGE PIT ABSORPTION FIELD BARN SILO ABANDONED WELL SINK HOLE  
C. I. TILE

	86				131	190		
--	----	--	--	--	-----	-----	--	--

OTHER POLLUTION SOURCES (Give description such as dump, quarry, drainage well, stream, pond, lake, etc.)

6. Well is intended to supply water for:

Dairy Farm

7. DRILLHOLE

Dis. (in.)	From (ft.)	To (ft.)	Dis. (in.)	From (ft.)	To (ft.)	10. FORMATIONS	Kind	From (ft.)	To (ft.)
8	Surface	23				Clay		Surface	21
4	23	86				Clay sand		21	43
						Sandstone		43	86

8. CASING, LINER, CURBING, AND SCREEN

Dis. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	New Bl. St. Steel T/C 10.82	Surface	52 1/2

9. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
Drill cuttings	Surface	23

Well construction completed on 12-10 1969

11. MISCELLANEOUS DATA

Yield test: 16 Hrs. at 16 GPM Well is terminated 14 inches  above  below final grade

Depth from surface to normal water level 24 ft. Well disinfected upon completion  Yes  No

Depth to water level when pumping 34 ft. Well sealed watertight upon completion  Yes  No

Water sample sent to Madison laboratory on: 12-22 1969

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, sub-surface pumprooms, access pits, etc., should be given on reverse side.

SIGNATURE Carl F. Schultz Registered Well Driller COMPLETE MAIL ADDRESS Cochran, Wis. 54622

Please do not write in space below

COLIFORM TEST RESULT	GAS - 24 HRS.	GAS - 48 HRS.	CONFIRMED	REMARKS
				1956037



WELL CONSTRUCTOR'S REPORT  
FORM 3300-15

SEP 15 1975

NOTE  
WHITE COPY - DIVISION'S COPY  
GREEN COPY - DRILLER'S COPY  
YELLOW COPY - OWNER'S COPY

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES  
Box 450  
Madison, Wisconsin 53701

1. COUNTY <i>Buffalo</i>		CHECK ONE <input checked="" type="checkbox"/> Town <input type="checkbox"/> Village <input type="checkbox"/> City <i>Dover</i>		NAME				
2. LOCATION <i>1/4 Section</i> <i>S E, NE</i>		Section <i>2</i>	Township <i>23N</i>	Range <i>10W</i>	3. OWNER AT TIME OF DRILLING <i>Erwin Klopp</i>			
OR - Grid or street no.		Street name		ADDRESS <i>Rt #3</i>				
AND - If available subdivision name, lot & block no.				POST OFFICE <i>Mondovi, Wis</i>				
4. Distance in feet from well to nearest: (Record answer in appropriate block)		BUILDING C. I.	SANITARY SEWER TILE	FLOOR DRAIN C. I.	FOUNDATION DRAIN SEWER CONNECTED INDEPENDENT	WASTE WATER DRAIN C. I.	TILE	
		<i>25</i>						
CLEAR WATER DRAIN C. I.	SEPTIC TANK TILE	PRIVY	SEEPAGE PIT	ABSORPTION FIELD	BARN	SILLO	ABANDONED WELL	SINK HOLE
	<i>72</i>			<i>84</i>				

OTHER POLLUTION SOURCES (Give description such as dump, quarry, drainage well, stream, pond, lake, etc.)

5. Well is intended to supply water for:  
*Home*

6. DRILLHOLE						9. FORMATIONS			
Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)	Kind	From (ft.)	To (ft.)	
<i>8</i>	Surface	<i>47</i>				<i>Sand</i>	Surface	<i>8</i>	
<i>4</i>	<i>47</i>	<i>54</i>				<i>Soft sandstone</i>	<i>8</i>	<i>38</i>	
7. CASING, LINER, CURBING, AND SCREEN									
Dia. (in.)	Kind and Weight		From (ft.)	To (ft.)					
<i>4</i>	<i>New Bl Steel T/pe</i> <i>10.89</i>		Surface	<i>47</i>	<i>Sandstone</i> <i>38</i> <i>54</i>				

8. GROUT OR OTHER SEALING MATERIAL			10. TYPE OF DRILLING MACHINE USED			
Kind	From (ft.)	To (ft.)	<input checked="" type="checkbox"/> Cable Tool	<input type="checkbox"/> Direct Rotary	<input type="checkbox"/> Reverse Rotary	
<i>Cuttings</i>	Surface	<i>7</i>	<input type="checkbox"/> Rotary - air w/drilling mud	<input type="checkbox"/> Rotary - hammer with drilling mud & air	<input type="checkbox"/> Jetting with	<input type="checkbox"/> Air <input type="checkbox"/> Water
<i>Cement</i>	<i>7</i>	<i>47</i>	Well construction completed on <i>9-4</i> <i>1975</i>			

11. MISCELLANEOUS DATA				Well is terminated	
Yield test:	<i>6</i> Hrs. at	<i>18</i> GPM	<i>14</i> inches	<input checked="" type="checkbox"/> above	final grade
Depth from surface to normal water level	<i>15</i> ft.	Well disinfected upon completion	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Depth to water level when pumping	<i>32</i> ft.	Well sealed watertight upon completion	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Water sample sent to	<i>Madison</i>		laboratory on:	<i>9-10</i>	<i>1975</i>

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, sub-surface pumphrooms, access pits, etc., should be given on reverse side.

SIGNATURE <i>Carl Schultz</i>	Registered Well Driller	COMPLETE MAIL ADDRESS <i>Cochrane, Wis. 54622</i>
Please do not write in space below		<i>1956038</i>

COLIFORM TEST RESULT	GAS - 24 HRS.	GAS - 48 HRS.	CONFIRMED	REMARKS

JAN 21 1987

1. COUNTY <b>Buffalo</b>		CHECK (✓) ONE: <input checked="" type="checkbox"/> Town <input type="checkbox"/> Village <input type="checkbox"/> City		Name <b>Dover</b>						
2. LOCATION <b>SE - SE</b>		Section <b>2</b>	Township <b>23N</b>	Range <b>10W</b>	3. NAME <input type="checkbox"/> OWNER <input checked="" type="checkbox"/> AGENT AT TIME OF DRILLING CHECK (✓) ONE <b>Realty World Anibas</b>					
OR - Grid or Street No.		Street or Road Name <b>Rt 3 Box 234, Mondovi, WI</b>		ADDRESS <b>760 E Main</b>						
AND - If available subdivision name, lot & block No.		POST OFFICE <b>Mondovi, WI 54755</b>		ZIP CODE						
4. Distance in feet from well to nearest: (Record answer in appropriate block) <b>15'</b>	Building	Sanitary Bldg. Drain C.I. Other	Sanitary Bldg. Sewer C.I. Other	Floor Drain Connected To: C.I. Sewer Other Sewer	Storm Bldg. Drain C.I. Other	Storm Bldg. Sewer C.I. Other				
	Street Sewer <b>None</b>	Other Sewers C.I. Other	Foundation Drain Connected to Sewer Sewage Sump Clearwater Dr. Clearwater Sump	Sewage Sump C.I. Other	Clearwater Sump	Septic Tank <b>75'</b>	Holding Tank	Sewage Absorption Unit Seepage Pit Seepage Bed Seepage Trench <b>100'</b>	Manure Hopper or Retention or Pneumatic Tank	
Privy <b>None</b>	Pit: Nonconforming Existing Well Pump Tank	Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin
Temporary Manure Stack or Platform <b>None</b>	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin Concrete Floor Only Concrete Floor and Partial Concrete Walls	Other (Describe) <b>Abandoned Well 60'</b>				
5. Well is intended to supply water for: <b>Single Family Home</b>				9. FORMATIONS						
6. DRILLHOLE				Kind	From (ft.)	To (ft.)				
Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)					
<b>10</b>	<b>Surface</b>	<b>40</b>	<b>6</b>	<b>40</b>	<b>58</b>	<b>Top Soil</b> <b>Clay</b> <b>Shale</b>	<b>Surface</b> <b>3</b> <b>11</b> <b>30</b>			
7. CASING, LINER, CURBING AND SCREEN				Material, Weight, Specification						
Dia. (in.)	Mfg. & Method of Assembly	From (ft.)	To (ft.)	SandStone						
<b>6</b>	<b>New Blk. St. T &amp; C ASTM A-53 19.45lbs.</b>	<b>Surface</b>	<b>43</b>	<b>30</b> <b>58</b>						
8. GROUT OR OTHER SEALING MATERIAL				10. TYPE OF DRILLING MACHINE USED						
Kind		From (ft.)	To (ft.)	<input checked="" type="checkbox"/> Cable Tool	<input type="checkbox"/> Rotary-hammer w/drilling mud & air	<input type="checkbox"/> Jetting with				
<b>Cement Grout</b>		<b>Surface</b>	<b>40</b>	<input type="checkbox"/> Rotary-air w/drilling mud	<input type="checkbox"/> Rotary-hammer & air	<input type="checkbox"/> Air				
				<input type="checkbox"/> Rotary-w/drilling mud	<input type="checkbox"/> Reverse Rotary	<input type="checkbox"/> Water				
11. MISCELLANEOUS DATA				Well construction completed on <b>December 16, 1986</b>						
Yield Test: <b>2</b>		Hrs. at <b>10</b>	GPM	Well is terminated <b>18</b> inches	<input checked="" type="checkbox"/> above final grade	<input type="checkbox"/> below				
Depth from surface to normal water level <b>20</b>		Fl.		Well disinfected upon completion	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No				
Depth of water level when pumping <b>30</b>		Fl. Stabilized <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Well sealed watertight upon completion	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No				
Water sample sent to <b>Will follow after installation of pump by Pelke Plumbing &amp; Heating, Inc.</b>				Laboratory on _____ 19 _____						
Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.										
Signature <i>Donald J. Seider</i> Registered Well Driller				Business Name and Complete Mailing Address <b>Pelke Plumbing &amp; Heating, Inc.</b> <b>835 Riverside Avenue, Mondovi, WI 54755</b>						

WELL CONSTRUCTOR'S REPORT

Well-6

WHITE COPY - DIVISION'S COPY  
GREEN COPY - DRILLER'S COPY  
YELLOW COPY - OWNER'S COPY

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES  
Box 450  
Madison, Wisconsin 53701

FEB 2 1971

1. COUNTY Buffalo CHECK ONE  Town  Village  City NAME Dover

2. LOCATION (Number and Street or 1/4 section, section, township and range. Also give subdivision name, lot and block numbers when available.)  
N 1/4 Sec 11 - T23N - R10W

3. OWNER AT TIME OF DRILLING  
Joseph Helgeson

4. OWNER'S COMPLETE MAIL ADDRESS  
RFD 2 Independence, Wis 54747

5. Distance in feet from well to nearest:  
(Record answer in appropriate block)

BUILDING C.I.	SANITARY SEWER C.I.	FLOOR DRAIN TILE	FOUNDATION DRAIN C.I.	WASTE WATER DRAIN C.I.
			SEWER CONNECTED	INDEPENDENT
27	35	34		

CLEAR WATER DRAIN C.I.	TILE	SEPTIC TANK	PRIVY	SEEPAGE PIT	ABSORPTION FIELD	BARN	SILLO	ABANDONED WELL	SINK HOLE
		51							

OTHER POLLUTION SOURCES (Give description such as dump, quarry, drainage well, stream, pond, lake, etc.)

6. Well is intended to supply water for: New Home

7. DRILLHOLE						10. FORMATIONS			
Dis. (in.)	From (ft.)	To (ft.)	Dis. (in.)	From (ft.)	To (ft.)	Kind	From (ft.)	To (ft.)	
8	Surface	22				Clay	Surface	5	
4	22	81				Sand	5	33	

8. CASING, LINER, CURBING, AND SCREEN			
Dis. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	New Bl Steel T+C 10.89	Surface	40

9. GROUT OR OTHER SEALING MATERIAL			
Kind	From (ft.)	To (ft.)	
Drill cuttings	Surface	22	

11. MISCELLANEOUS DATA

Yield test: 7 Hrs. at 15 GPM

Well is terminated: 12 inches  above  below final grade

Depth from surface to normal water level: 44 ft. Well disinfected upon completion  Yes  No

Depth to water level when pumping: 48 ft. Well sealed watertight upon completion  Yes  No

Water sample sent to Madison laboratory on: 2-1 1971

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, type of casing joints, method of finishing the well, amount of cement used in grouting, blasting, sub-surface pumprooms, access pits, etc., should be given on reverse side.

SIGNATURE Carl F. Schults Registered Well Driller COMPLETE MAIL ADDRESS Cochrane, Wis. 54622

Please do not write in space below

COLIFORM TEST RESULT	GAS - 24 HRS.	GAS - 48 HRS.	CONFIRMED	REMARKS
				1856010

dx

**WISCONSIN UNIQUE WELL NUMBER**  
**Source: ELECTRONICALLY** **YK507**

Property Owner **STRAIN, ZACHARY** Telephone **715-946-3330**

Mailing Address **S716 BAUER VALLEY ROAD**

City **ELEVA** State **WI** Zip Code **54738**

County of Well Location **WC** Co Well Permit No **W** Well Completion Date **July 3, 2014**

State of Wi-Private Water Systems-DG/2 Form 3300-77A  
 Department Of Natural Resources, Box 7921 (Rev 02/02)bw  
 Madison, WI 53707

**1. Well Location** Depth **65** FT

T=Town C=City V=Village Fire# **S716**  
 T of **DOVER**

Street Address or Road Name and Number  
**BAUER VALLEY ROAD**

Subdivision Name Lot# Block #

Well Constructor License # Facility ID (Public)  
**KELLY OIUM WELL DRILLING INC** **8217**

Address Public Well Plan Approval#  
**N50021 MISSELL ROAD**

City State Zip Code Date Of Approval  
**STRUM WI 54770**

Hicap Permanent Well # Common Well # Specific Capacity  
**10** gpm/ft

Gov't Lot or **SE** 1/4 of **SE** 1/4 of  
 Section **12 T 23 N R 10 W**

**3. Well Serves # of homes and or CATTLE**  
**P** (eg: barn, restaurant, church, school, industry, etc.) High Capacity: Well? **N** Property? **N**

M=Munic O=OTM N=NonCom P=Private Z=Other X=NonPot A=Anode L=Loop H=Drillhole

**2. Well Type 1** (See item 12 below)  
 1=New 2=Replacement 3=Reconstruction  
 of previous unique well # \_\_\_\_\_ constructed in \_\_\_\_\_  
 Reason for replaced or reconstructed Well?  
**1** 1=Drilled 2=Driven Point 3=Jetted 4=Other

- 4. Is the well located upslope or sideslope and not downslope from any contamination sources, including those on neighboring properties? Y**  
 Well located in floodplain? **N**  
 Distance in feet from well to nearest: (including proposed)
- |                                 |  |                                      |
|---------------------------------|--|--------------------------------------|
| 1. Landfill                     | 9. Downspout/ Yard Hydrant                   | 17. Wastewater Sump                  |
| <b>90</b> 2. Building Overhang  | 10. Privy                                    | 18. Paved Animal Barn Pen            |
| 3. 1=Septic 2= Holding Tank     | 11. Foundation Drain to Clearwater           | 19. Animal Yard or Shelter           |
| 4. Sewage Absorption Unit       | 12. Foundation Drain to Sewer                | 20. Silo                             |
| 5. Nonconforming Pit            | 13. Building Drain                           | 21. Barn Gutter                      |
| 6. Buried Home Heating Oil Tank | 1=Cast Iron or Plastic 2=Other               | 22. Manure Pipe 1=Gravity 2=Pressure |
| 7. Buried Petroleum Tank        | 14. Building Sewer 1=Gravity 2=Pressure      | 1=Cast iron or Plastic 2=Other       |
| 8. 1=Shoreline 2= Swimming Pool | 15. Collector Sewer: ___ units ___ in. diam. | 23. Other manure Storage             |
|                                 | 16. Clearwater Sump                          | 24. Ditch                            |
|                                 |  | 25. Other NR 812 Waste Source        |

**5. Drillhole Dimensions and Construction Method**

From (ft)	To (ft)	Upper Enlarged Drillhole	Lower Open Bedrock
10.0	30	1. Rotary - Mud Circulation	
		2. Rotary - Air	
		3. Rotary - Air and Foam	
		4. Drill-Through Casing Hammer	
		5. Reverse Rotary	
		X 6. Cable-tool Bit <b>10</b> in. dia	
		7. Temp. Outer Casing ___ in. dia. ___ depth ft. Removed?	
		Other	

**8. Geology**

Geology Codes	Type, Caving/Noncaving, Color, Hardness, etc	From (ft.)	To (ft.)
TVX_	Brown, Non-Caving, Sand & Clay	0	22
TVN_	Tan, Soft, Non-Caving, Sandstone	22	35
THN_	Tan/Brown, Hard/Firm, Sandstone	35	65

**6. Casing Liner Screen**

Dia. (in.)	Material, Weight, Specification	From (ft.)	To (ft.)
6.0	6.620 X A53B.280 EW TC	surface	35
Dia. (in.)	Manufacturer & Method of Assembly	From (ft.)	To (ft.)
	Screen type, material & slot size		

**9. Static Water Level**  
**18.0** feet **B** ground surface  
 A=Above B=Below

**11. Well Is:** 30 in. A Grade  
 A=Above B=Below

**10. Pump Test**  
 Pumping level **20.0** ft. below surface  
 Pumping at **20.0** GP M **2.0** Hrs

Developed? **Y**  
 Disinfected? **Y**  
 Capped? **Y**

**7. Grout or Other Sealing Material**

Method	From (ft.)	To (ft.)	# Sacks Cement
Method <b>GROUT PUMP TREMIE PIPE</b>			
Kind of Sealing Material			
<b>NEAT CEMENT GROUT</b>	surface	30.0	20 S

**12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property?**  
 If no, explain

**13. Initials of Well Constructor or Supervisory Driller** Date Signed  
**KO** **7/8/14**

Initials of Drill Rig Operator (Mandatory unless same as above) Date Signed  
**BG** **7/8/14**

**WISCONSIN UNIQUE WELL NUMBER**  
**Source: WELL CONSTRUCTION** **LI395**

State of Wi-Private Water Systems-DG/2 Form 3300-77A  
 Department Of Natural Resources, Box 7921 (Rev 02/02)bw  
 Madison, WI 53707

Property Owner **PATTROW, JIM** Telephone Number **- -**  
 Mailing Address **3030 110TH ST**

**1. Well Location** Depth **60** FT  
 T=Town C=City V=Village Fire#  
 T of **DOVER**

City **CHIPPEWA FALLS** State **WI** Zip Code **54729**  
 County of Well Location **6 BUFFALO WC** Co Well Permit No **W** Well Completion Date **October 29, 1996**

Street Address or Road Name and Number **CTY RD Z**  
 Subdivision Name Lot# Block #

Well Constructor **DONALD S FEDIE** License # **127** Facility ID (Public)  
 Address **W536 U S HWY 10** Public Well Plan Approval#

Gov't Lot or **NE** 1/4 of **NW** 1/4 of  
 Section **12** T **23** N R **10** W

City **MONDOVI** State **WI** Zip Code **54755** Date Of Approval  
 Hicap Permanent Well # Common Well # Specific Capacity **1.3** gpm/ft

**2. Well Type 1** (See item 12 below)  
 1=New 2=Replacement 3=Reconstruction  
 of previous unique well # \_\_\_\_\_ constructed in **0**

**3. Well Serves # of homes and or**  
**P** (eg: barn, restaurant, church, school, industry, etc.)  
 High Capacity: Well? **N** Property? **N**

Reason for replaced or reconstructed Well?  
**NEW CONSTRUCTION**  
**1** 1=Drilled 2=Driven Point 3=Jetted 4=Other

- 4. Is the well located upslope or sideslope and not downslope from any contamination sources, including those on neighboring properties? Y**  
 Well located in floodplain? **N**  
 Distance in feet from well to nearest: (including proposed)
- |                                 |  |                                      |
|---------------------------------|--|--------------------------------------|
| 1. Landfill                     | 9. Downspout/ Yard Hydrant                   | 17. Wastewater Sump                  |
| 2. Building Overhang            | 10. Privy                                    | 18. Paved Animal Barn Pen            |
| 3. 1=Septic 2= Holding Tank     | 11. Foundation Drain to Clearwater           | 19. Animal Yard or Shelter           |
| 4. Sewage Absorption Unit       | 12. Foundation Drain to Sewer                | 20. Silo                             |
| 5. Nonconforming Pit            | 13. Building Drain                           | 21. Barn Gutter                      |
| 6. Buried Home Heating Oil Tank | 14. Building Sewer 1=Gravity 2=Pressure      | 22. Manure Pipe 1=Gravity 2=Pressure |
| 7. Buried Petroleum Tank        | 15. Collector Sewer: ___ units ___ in. diam. | 23. Other manure Storage             |
| 8. 1=Shoreline 2= Swimming Pool | 16. Clearwater Sump                          | 24. Ditch                            |
|                                 |  | 25. Other NR 812 Waste Source        |

**5. Drillhole Dimensions and Construction Method**

From (ft)	To (ft)	Upper Enlarged Drillhole	Lower Open Bedrock
10.0	surface	-- 1. Rotary - Mud Circulation -----	
		-- 2. Rotary - Air -----	
		-- 3. Rotary - Air and Foam -----	
		-- 4. Drill-Through Casing Hammer	
		-- 5. Reverse Rotary	
		X -- 6. Cable-tool Bit 10 in. dia -----	
		-- 7. Temp. Outer Casing Removed? _____ in. dia. _____ depth ft.	
		Other	

**8. Geology**

Geology Codes	Type, Caving/Noncaving, Color, Hardness, etc	From (ft.)	To (ft.)
<u>  </u> TOP SOIL		0	1
<u>  </u> VC BROWN NON CAVING CLAY		1	7
<u>  </u> SN SOFT NON CAVING BROWN		7	21
<u>  </u> MN SEMIFIRM BROWN SANDSTONE		21	27
<u>  </u> HN FIRM BROWN SANDSTONE		27	60

**6. Casing Liner Screen**

Dia. (in.)	Material, Weight, Specification	From (ft.)	To (ft.)
6.0	TC PIPE ASTMA53 GR B 1945 LBS FT IPSCO USAAF SEIDEMAN CO	surface	33

**9. Static Water Level**  
**29.0** feet **B** ground surface  
 A=Above B=Below

**11. Well Is:** 16 in. A Grade  
 A=Above B=Below

**10. Pump Test**  
 Pumping level **38.0** ft. below surface  
 Pumping at **12.0** GP M **2.0** Hrs

Developed? **Y**  
 Disinfected? **Y**  
 Capped? **Y**

**7. Grout or Other Sealing Material**

Method	From (ft.)	To (ft.)	# Sacks Cement
TREMIE PIPE GRAVITY Kind of Sealing Material <b>DRILL SLURRY</b>	surface	1.0	
<b>NEAT CEMENT GROUT</b>	1.0	30.0	16 S

**12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property?**  
 If no, explain

**13. Initials of Well Constructor or Supervisory Driller** **DF** Date Signed **10/29/96**  
 Initials of Drill Rig Operator (Mandatory unless same as above) Date Signed **10/29/96**

**WISCONSIN UNIQUE WELL NUMBER**  
**Source: ELECTRONICALLY** **TR351**

Property Owner: **BAUER, DAREN** Telephone Number: **715-946-3226**

Mailing Address: **W47 CTY RD Z**

City: **ELEVA** State: **WI** Zip Code: **54738**

County of Well Location: **6 BUFFALO WC** Co Well Permit No: **W** Well Completion Date: **June 28, 2004**

State of Wi-Private Water Systems-DG/2  
 Department Of Natural Resources, Box 7921  
 Madison, WI 53707

Form 3300-77A  
 (Rev 02/02)bw

Depth **50** FT

**1. Well Location**  
 T=Town C=City V=Village  
 T of **DOVER** Fire# **W47**

Street Address or Road Name and Number  
**SAME**

Subdivision Name Lot# Block#

Well Constructor: **KELLY OIUM** License #: **6244** Facility ID (Public)

Address: **50855 THOMPSON RD** Public Well Plan Approval#

City: **ELEVA** State: **WI** Zip Code: **54738** Date Of Approval

Hicap Permanent Well # Common Well # Specific Capacity: **2.3 gpm/ft**

Gov't Lot or **NE** 1/4 of **NW** 1/4 of  
 Section **12 T 23 N R 10 W**

**2. Well Type 2** (See item 12 below)  
 1=New 2=Replacement 3=Reconstruction  
 of previous unique well # \_\_\_\_\_ constructed in \_\_\_\_\_

Reason for replaced or reconstructed Well?  
**1 1=Drilled 2=Driven Point 3=Jetted 4=Other**

**3. Well Serves # of homes and or CATTLE WATERER**  
**P** (eg: barn, restaurant, church, school, industry, etc.) High Capacity: Well? **N** Property? **N**

M=Munic O=OTM N=NonCom P=Private Z=Other X=NonPot A=Anode L=Loop H=Drillhole

**4. Is the well located upslope or sideslope and not downslope from any contamination sources, including those on neighboring properties? Y**

Well located in floodplain? **N**

Distance in feet from well to nearest: (including proposed)

1. Landfill	9. Downspout/ Yard Hydrant	17. Wastewater Sump
85 2. Building Overhang	10. Privy	18. Paved Animal Barn Pen
300 3. 1=Septic 2= Holding Tank	11. Foundation Drain to Clearwater	60 19. Animal Yard or Shelter
400 4. Sewage Absorption Unit	12. Foundation Drain to Sewer	20. Silo
5. Nonconforming Pit	13. Building Drain	21. Barn Gutter
6. Buried Home Heating Oil Tank	1=Cast Iron or Plastic 2=Other	22. Manure Pipe 1=Gravity 2=Pressure
7. Buried Petroleum Tank	14. Building Sewer 1=Gravity 2=Pressure	1=Cast iron or Plastic 2=Other
8. 2 1=Shoreline 2= Swimming Pool	15. Collector Sewer: ___ units ___ in. diam.	23. Other manure Storage
	16. Clearwater Sump	24. Ditch
		25. Other NR 812 Waste Source

**5. Drillhole Dimensions and Construction Method**

From Dia. (in.)	To Dia. (in.)	From (ft.)	To (ft.)	Construction Method
8.0	surface	30		1. Rotary - Mud Circulation
				2. Rotary - Air
				3. Rotary - Air and Foam
				4. Drill-Through Casing Hammer
				5. Reverse Rotary
				X 6. Cable-tool Bit 8 in. dia
				7. Temp. Outer Casing ___ in. dia. ___ depth ft. Removed?
				Other

**8. Geology**

Geology Codes	Type, Caving/Noncaving, Color, Hardness, etc	From (ft.)	To (ft.)
T_C_	Tan/Brown, Clay	0	21
TSN_	Tan/Brown, Soft/Loose, Sandstone	21	29
THN_	Tan/Brown, Hard/Firm, Sandstone	29	50

**6. Casing Liner Screen**

Dia. (in.)	Material, Weight, Specification	From (ft.)	To (ft.)
6.0	IPSCO ASTM A53B.280 P/E STEEL CASING	surface	31

Manufacturer & Method of Assembly

Dia. (in.)	Screen type, material & slot size	From	To

**9. Static Water Level**  
**14.0** feet **B** ground surface  
 A=Above B=Below

**11. Well Is:** 18 in. A Grade  
 A=Above B=Below

**10. Pump Test**  
 Pumping level **20.0** ft. below surface  
 Pumping at **14.0** GP M **2.0** Hrs

Developed? **Y**  
 Disinfected? **Y**  
 Capped? **Y**

**7. Grout or Other Sealing Material**

Method	From (ft.)	To (ft.)	# Sacks Cement
GROUT PUMP TREMMIE PIPE			
NEAT CEMENT GROUT	surface	30.0	10 S

Kind of Sealing Material

**12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property? Y**  
 If no, explain

**13. Initials of Well Constructor or Supervisory Driller** **KO** Date Signed **6/28/04**

Initials of Drill Rig Operator (Mandatory unless same as above) **DT** Date Signed **6/28/04**

**WELL CONSTRUCTOR'S REPORT TO WISCONSIN STATE BOARD OF HEALTH**  
See Instructions on Reverse Side

DEC 11 1945

1. County Buffalo Town Dover  
 Village \_\_\_\_\_  
 City \_\_\_\_\_  
 2. Location NE, NE, Sec 12 Town 2 3N R 10 W  
 3. Owner or Agent Jalmes Swanson  
 4. Address Elva Rout 2 Wis  
 5. From well to nearest: Building 4 ft; sewer none ft; drain \_\_\_\_\_ ft; septic tank \_\_\_\_\_ ft;  
 dry well or filter bed \_\_\_\_\_ ft; abandoned well \_\_\_\_\_ ft.  
 6. Well is intended to supply water for: house and farm

**7. DRILLHOLE OR EXCAVATION:**

Dis. (in.)	From (ft.)	To (ft.)
4"	8	48

**10. FORMATIONS:**

Kind	Thick-ness (ft.)	Total Depth (ft.)
clay 10 ft	10	
sand	20	30
4" steel pipe	36	44
sand rock		77

**8. CASING AND LINER PIPE OR CURBING:**

Dis. (in.)	Kind	From (ft.)	To (ft.)
4	steel pipe	7	44
4x6	concrete joined to collar	0	8

**9. GROUT:**

Kind	From (ft.)	To (ft.)
Puddled Clay	8	20

**11. MISCELLANEOUS DATA:**

Yield test: 2 Hrs. at 5 GPM.  
 Depth from surface to water: 20 ft.  
 Water-level when pumping: 25 ft.

Construction of the well was completed on Nov 16  
Nov 16 1945

The well is terminated \_\_\_\_\_ inches  
 (above) (below) the permanent grade.

Was the well disinfected upon completion?

Yes \_\_\_\_\_ No \_\_\_\_\_

Was the well sealed watertight upon completion?

Yes \_\_\_\_\_ No \_\_\_\_\_

Water sample sent to laboratory at  
Madison on Dec 3 1945

Signature Sam Higley  
 Registered Well Driller

Elva box 66  
 Complete Mail Address

1856006



## **APPENDIX C**

### **Health and Safety Plan**

# Site Health & Safety Plan

POST THIS DOCUMENT ON THE WORK SITE

**Project Name/No.:** Former Julson Store

**Site Address:** W125 County Road Z

**Project Manager:** Ken Shimko

**Beginning & Ending Dates of Field Activities:** June 2017 - ongoing

## EMERGENCY PHONE NUMBERS

### LOCAL EMERGENCY TELEPHONE NUMBERS:

**911**

Ambulance 911

Poison Control Center 1-800-222-1222

Fire 911

Police 911

Hazardous Materials Response Unit 911

**Project Manager:** Ken Shimko

Office: 715-832-6608

Cell: 715-579-0723

**Regulatory Agency(s):** Aaron Kent (715)839-1602  
(Department of Natural Resources – Eau Claire)

## MEDICAL EMERGENCY ROUTE

Hospital: Sacred Heart Hospital (in Eau Claire)

Phone number: 715/717-4121

Hospital address: 900 West Clairemont Ave, Eau Claire, WI 54701

Directions to nearest hospital (see attached map and driving directions):

*Take CTH BB north to Hwy. 10. Left on 10 to Mondovi. Turn right (north) on Hwy. 37 to City of Eau Claire. Stay on 37 to Clairemont Ave. Sacred Heart Hospital is directly across Clairemont on north side of Clairemont. Proceed through lights to Emergency Entrance.*

Distance & driving time to hospital: About 30 miles (45 minutes)

Hospital Emergency Room (715-717-4121)

## SITE INFORMATION

### PLANNED SITE ACTIVITIES:

Investigation of petroleum - impacted soil and ground water

### RESOURCES AVAILABLE ON-SITE:

Telephone No  
Restrooms No  
Water supply No

If unavailable, identify alternatives: City of Mondovi is located about 10 miles north of site (CTH BB to Hwy. 10. West on 10 to Mondovi).

### SITE HISTORICAL INFORMATION:

Site was a former country store which sold gasoline from a small underground storage tank. The tank has been removed. The former building is burned down. The property is vacant.

**POTENTIAL HAZARDS:**

Chemical Contaminants:

Hydrocarbons Yes  
Metals No  
Asbestos No  
Other: Yes Benzene and petroleum vapors. Avoid odors by standing upwind or away from contaminated soil/ground water, if present.

Electrical Yes  No   
Radiation Yes  No   
Noise Yes  No  Site machinery/equipment  
Fall & slip Yes  No   
Construction Equip. Yes  No  Drilling and Excavation equipment  
Biological Hazards Yes  No   
Heat Stress Yes  No   
Cold Stress Yes  No   
Confined spaces Yes  No   
Engulfment Hazards Yes  No

**REQUIRED HEALTH & SAFETY EQUIPMENT**

First Aid Kit Yes  No   
Hard Hat Yes  No   
Safety Glasses Yes  No  As Needed  
Hearing Protection Yes  No  As needed  
Safety Boots Yes  No   
Protective Gloves Yes  No  When sampling  
Protective Suits Yes  No

Respirator:

1/2 Mask Yes  No   
Full Face Yes  No   
PAPR Yes  No   
Cannister Type Yes  No   
SCBA Yes  No

**REQUIRED SITE MONITORING EQUIPMENT:**

hNU/Photoionization Detector Yes  (during soil work such as drilling or excavation)  
Oxygen Detector/Explosimeter Yes  No   
Organic Vapor Analyzer Yes  No   
Detector Tubes Yes  No   
Other:



**APPENDIX D**  
**Field Procedures**

## Field Procedures

The appendix describes field work procedures for this project. Where applicable, these procedures are performed in accordance with Wisconsin Department of Natural Resources (WDNR), Wisconsin Administrative Code requirements, American Society for Testing and Materials (ASTM) standards, or accepted engineering or geologic standards. Changes made in the field to accommodate site specific objectives are documented in the report.

### SOIL PROBE INSTALLATION

Soil probes are installed in accordance with the procedures described in Wisconsin Administrative Code, Chapter NR 141. Soil probe sampling consists of installing a hydraulically driven steel 2-inch diameter rod. The steel sampling device at the end of the rods is 4 feet long and assembled with a disposable plastic liner for sample collection. Samples are collected continuously using the following method:

When the rod is positioned at the top of the desired sampling interval, the piston stop pin is removed, and the sampler is driven the desired sample interval to encase the soil sample in the plastic liner. The rods are then retracted from the hole and brought to the surface. The plastic liner is removed from the sample rod that contains the undisturbed soil sample. The liner is split open with a clean utility knife and the soil is classified and then transferred to laboratory and field screening containers as described in the soil sample collection section in this appendix.

Meridian personnel are present during the field work to establish soil probe locations, determine soil sample intervals, classify soils using the Unified Soil Classification System (USCS), log soil probes, and collect and screen soil samples. Soil classification information is recorded on the soil borings logs (WDNR Form 4400-122) and copies are included in the site investigation report.

Sampling and soil probe equipment is decontaminated as described under the decontamination section in this appendix. Plastic liners are disposable and are not reused.

When the sampling is completed, soil probe holes are filled with bentonite and the surface material restored. Soil probe abandonment details are described on WDNR Form 3300-5W, and copies are included in the site investigation report. Soil cuttings generated during drilling are containerized and disposed properly.

### HOLLOW STEM AUGER BORING INSTALLATION

Hollow stem auger borings are installed by the contractor in accordance with the procedures described in Wisconsin Administrative Code, Chapter NR141. The contractor installs borings using a mobile drill rig equipped with 4 1/4-inch hollow stem augers. In general, soil samples are collected at 2.5-foot sample intervals from the surface to the boring terminus. Soil samples are obtained using a split spoon sampler (1 3/8 inches in diameter by 2 feet long) driven by a 140-pound hammer in accordance with the procedures described in ASTM D-1586.

Meridian personnel are present during the field work to establish soil boring locations, determine soil sample intervals, classify soils using the Unified Soil Classification System (USCS), log soil borings, and collect and field screen soil samples. Soil classification information is recorded on soil boring logs (WDNR Form 4400-122) and copies are included in the site investigation report.

The split spoons are decontaminated as described under the decontamination section in this appendix. Clean augers are used in each boring. All augers are steam cleaned before reuse.



When the sampling is completed, soil boreholes that were not converted into ground water monitoring wells are filled with bentonite and the surface restored. Soil boring abandonment details are described on WDNR Form 3300-5W, and copies are included in the site investigation report. Soil cuttings generated during drilling are containerized in 55-gallon drums on site and are labeled with the date and the soil's origin. The soil is later disposed at an appropriate facility.

### **SOIL SAMPLE COLLECTION**

Meridian personnel retrieve soil samples from the sampling equipment using a clean nitrile gloves and avoid collecting slough materials.

At each sampling point, we collect two groups of soil samples: headspace samples and samples for potential laboratory analysis. We place samples for headspace screening in clean sealing plastic bags. We use the headspace screening results to determine which soil samples should be preserved and/or sent to the laboratory. Soil collection methods used are in accordance with WDNR's *Leaking Underground Storage Tank and Petroleum Analytical and Quality Assurance Guidance*, July 1993, PUBL SW-130 93.

During collection of laboratory grade samples, we remove the soil from the sampling equipment and place it directly into a sample jar which is capped with a Teflon lined slip cap to prevent volatilization. These jars are temporarily stored on ice in a cooler. After field screening is done and within the prescribed 2 hours, the required sample amount is transferred to the correct laboratory container and a preservative is added if needed. For diesel range organic (DRO), gasoline range organic (GRO), volatile organic compound (VOC), or petroleum VOC (PVOC) samples, we weigh the jar on a scale before adding soil and again after the soils are added to verify that approximately 25 grams is contained. We then place the selected laboratory samples on ice in a cooler immediately after collection, and keep samples cool until analysis by the laboratory.

The specific collection method, including the size and type of containers used, are dependent on the type of analysis to be conducted. Within two hours of sample collection, we preserve samples chosen for laboratory analysis, based on field screening results, using the following procedure:

- GRO, VOC, and PVOC samples- Place approximately 25 grams soil into a 60-milliliter tared glass jar with a septum lid then add 20-milliliters of methanol as a field preservative.
- Metals-Fill a 125-milliliter plastic jar with soil. No preservative is added to these samples.
- Percent solids (moisture analysis)-Fill a 125-milliliter plastic jar with soil.

We prepare a methanol blank (one for each day of sampling) during preservation of the first soil sample. A methanol blank is prepared by filling a 60-milliliter jar with a single 25-milliliter vial of methanol supplied by the laboratory.

A chain-of-custody log, WDNR Form 4400-151 or equivalent, is completed when the samples are collected. We record the project name and number, sampler's names(s), sample location and depth, sample number, date and time of collection, type of sample, method of sample collection, number of containers, type of preservation, type of chemical analyses to be performed, field screening results (soils only), and additional remarks about the sample if needed on the chain-of-custody log. The individual(s) handling the samples signs and dates the log. Shipment arrangements are made so the samples arrive within the appropriate shipping time allowed by WDNR guidance.

**SOIL LABORATORY ANALYSIS**

Samples are analyzed by a laboratory certified by the WDNR. Analytical methods used are as follows:

<u>PARAMETER</u>	<u>METHOD</u>	<u>MDL</u>
GRO	WDNR Modified GRO	1.2 mg/kg
VOC's	EPA Method 8021	25µg/kg
PVOC's	EPA METHOD 8020	25µg/kg
Lead	EPA Method 6010B	0.1 mg/kg

**HEADSPACE SCREENING (FID)**

Headspace screening samples are qualitatively screened for organic vapors using a flame ionization detector (FID).

The FID is factory calibrated annually with three methane gas standards. The accuracy of the FID instrument is checked daily by adjusting the instrument to a "Zero Air" standard (<1 part per million [ppm] total hydrocarbons) and then using a 95 ppm methane gas standard to verify factory calibration. According to the manufacturer, the operation of the FID is acceptable if the response to the methane gas is within 20% of the 95-ppm standard. This equates to meter readings between 76 and 114. The FID response to the calibration gas is documented in the site investigation report.

After the soil sample to equilibrate in accordance with WDNR guidance, we screen the total organic vapors in the jar by piercing the lid and then immediately inserting the FID probe. Meter responses are recorded as instrument units (i.u.s) methane gas equivalents. The highest meter response is recorded in the field notes and/or on the soil boring logs. The FID responses are a relative indication of total ionizable volatile organic compounds present in the atmosphere surrounding the sample and do not necessarily represent the concentration of any specific compound in the sample.

**HEADSPACE SCREENING (PID)**

Headspace screening samples are qualitatively screened for organic vapors using a photo ionization detector (PID) equipped with a 10.6 eV lamp. Before we use the PID, we calibrate it using 100-ppm isobutylene gas.

After allowing the soil sample to equilibrate in accordance with WENR guidance, we screen the total organic vapors in the plastic bag by opening the bag and then immediately inserting the PID probe. Meter response are recorded as i.u.s isobutylene gas equivalents. The highest meter response is recorded in the field notes and/or on the soil boring logs. The PID responses are a relative indication of total ionizable volatile organic compounds present in the atmosphere surrounding the sample and do not necessarily represent the concentration of any specific compound.

**MONITORING WELL CONSTRUCTION AND DEVELOPMENT**

If monitoring wells are needed, they are installed by the contractor in accordance with the procedures described in Wisconsin Administrative Code NR 141. Monitoring well construction consists of 2-inch diameter PVC casing with a 0.010-inch slotted well screen. A 10-foot long well screen intercepting the water table is used for the wells. Filter packs for the monitoring wells consist of No. 30 sand installed from the base of the boring to 2 feet above the well screen.

A filter pack seal, consisting of 2 feet of No. 70 silica sand is installed above the filter pack. The remainder of the well has an annular space seal, consisting of 3/8-inch bentonite chips installed from the top of the fine sand to within

1 foot of the ground surface. A 1-foot concrete surface seal is placed around the well's protective cover. Monitoring wells are provided with a watertight well cap and either an aboveground or flush mount protective casing. All wells have locking caps. A blue Wisconsin Unique Well Number (WUWN) label is attached to the inside of the protective cover or flush mount manhole. Well construction details for wells are included in the site investigation report on Form 4400-113A. Ground water monitoring well information for the site is summarized on Form 4400-89.

Meridian personnel develop each monitoring well after installation in accordance with the procedures described in Wisconsin Administrative Code NR 141. We develop each well using a combination of surging and purging with a disposable bailer and a submersible pump. Approximately 10 well volumes are removed from each well. Each well is then allowed to stabilize for at least 3 days before it is sampled. Well development water is containerized and disposed of by a licensed facility. During well development, we document our observations of odor, color, and turbidity. A monitoring well development Form 4400-113B is included in the site investigation report for each well installed.

### **GROUND WATER SAMPLE COLLECTION**

We conduct ground water sampling using the procedures described in the *Groundwater Sampling Field Manual* (PUBL-DG 038 96), the *Groundwater Sampling Desk Reference* (PUBL-DG-037 96), and in-house sampling memorandums. Before they are sampled, the wells are allowed to stabilize at least 3 days after they are developed. Before purging the monitoring wells, we take static water level measurements with an electronic water level indicator.

To obtain representative samples, we purge approximately three well casing volumes from each well. The actual volume pumped is determined in the field and is dependent on the diameter of the well casing and the depth of the water in the well. We check the purged water for signs of contamination. If there is evidence of contamination, we store the purged water in containers on site for later disposal at a WDNR-approved facility. If there is no evidence of contamination, we dispose of the purged water by thin spreading the water next to the well. We collect samples from the next bailer of water after the well recharges.

We obtain the samples by lowering a disposable plastic bailer into the well using dedicated rope and collect samples directly from the bailer into laboratory-provided sample containers. Between sample locations, we decontaminate the water level indicator using the decontamination procedures describe in this appendix.

If relevant to the project, we may also measure natural attenuation parameters such as dissolved oxygen, redox or pH.

- Dissolved oxygen is measured using a colorimetric ampule.
- Redox-Obtain a sample from the bailer and transfer it to a jar. Insert the redox probe in the sample, stir the probe until the meter stabilizes, then record the reading.
- pH-Connect the pH probe to the redox probe and insert it into the same sample used for the redox reading (no stirring required), then record the reading.

We collect the analytical samples using the following procedures:

- GRO, VOC, and PVOC samples-Fill a 4 milliliter vial that has a cap and septum, and preserve the sample with 0.5 milliliter of dilute 1:1 hydrochloric acid.
- Dissolved lead and iron-Collect 250 milliliters in a disposable plastic container and store on ice. Filter sample through a 0.45-micron disposable filter within 2 hours of collection. Pour the filtrate into a polyethylene jar and preserve the sample with nitric acid. Store sample in an ice slurry.

- Nitrate+Nitrite as N-Fill a 250 milliliter polyethylene jar and preserve the sample with sulfuric acid. Store sample in an ice slurry.
- Sulfate-Fill a 250-milliliter polyethylene jar and store sample in an ice slurry. No preservative is added.

One trip blank is also analyzed for each sampling event. We place the sample on ice in a cooler; enclose a completed WDNR chain-of-custody record, Form 4400-151 or equivalent; and ship the cooler to the laboratory so it arrives within the shipping time allowed by WDNR.

Meridian initiates a chain-of-custody log, WDNR Form 4400-151 or equivalent, at the time of collection of ground water samples. We record the project name and number, sampler's name(s), sample location and depth, sample number, date and time of collection, type of sample, method of sample collection, number of containers, type of preservation, type of chemical analyses to be performed, method of shipment, and additional remarks about the sample if needed on the chain-of custody log.

In addition to a chain-of-custody, we complete a field sampling report for water sample collection. We record the type of monitoring well; depth to well bottom; depth to water; sampling method; well purging date, time, and volume; time of sample collection; sample filtering, if applicable; and observations, such as color, odor, and turbidity of samples.

**GROUND WATER LABORATORY ANALYSIS**

Samples are analyzed by a laboratory certified by the WDNR. Analytical methods used are as follows:

<u>PARAMETER</u>	<u>METHOD</u>	<u>LOD</u>	<u>LOQ</u>
GRO	WDNR Modified GRO	30 µg/L	81 µg/L
VOC's	EPA Method 8021	0.2 to 1.2 µg/L	0.5 to 4.0µg/L
PVOC's	EPA Method 8020	0.2 to 1.7 µg/L	0.5 to 5.5 µg/L
Lead	EPA Method 3020/7421	1.6 µg/L	5.1 µg/L
Nitrate+Nitrite	EPA Method 353.2	0.14 mg/L	0.43 mg/L
Sulfate	EPA Method 325.2	1 mg/L	4 mg/L
Dissolved Iron	EPA Method 236.1	0.020 mg/L	0.064 mg/L

**GROUND WATER SAMPLE COLLECTION FROM SOIL PROBES**

Meridian personnel conducts ground water sampling in accordance with the procedures described in the *Groundwater Sampling Field Manual* (PUBL-DG-038 96) and the *Groundwater Sampling Desk Reference* (PUBL-DG-037 96).

Following soil probe installation, a slotted rod with a sampling point (no plastic liner) is driven to the water table. The sample collector is opened allowing ground water to enter the collection tube. A 1/8-inch-diameter plastic hose is inserted through the steel rods to the water table. A vacuum pump is used to siphon the ground water through the hose and the ground water is drained into sample containers. We continue this process until enough volume is retrieved to fill all sample containers.

Samples are collected for analysis of the following parameters:

- GRO, VOC, and PVOC samples-Fill a 40- milliliter vial with cap that has a septum and preserve with 0.5 milliliter of dilute 1:1 hydrochloric acid.
- Dissolved lead and iron-Collect 250 milliliters in a disposable plastic container and store on ice. Filter sample through a 0.45-micron disposable filter within 2 hours of collection. Pour the filtrate into a polyethylene jar and preserve the sample with nitric acid. Store sample in an ice slurry.

We place the samples on ice in a cooler; enclose a completed WDNR chain-of-custody record, Form 4400-151 or equivalent; and ship the cooler to the laboratory so it arrives within the shipping time allowed by WDNR.

#### **SAMPLING EQUIPMENT DECONTAMINATION**

To reduce the potential for cross-contamination of samples, Meridian cleans reusable sampling equipment between each sampling interval using the following three-step procedure:

1. Soap and water wash-Remove visible soil by hand with a scrub brush using Alconox soap and tap water
2. Water rinse-Use tap water with a scrub brush to remove soap and left-over soil
3. Deionized water rinse-Use deionized water to rinse off any remaining soil, soap residue, or possible contaminants

The cleaning solution and rinse water was changed regularly during sampling. Tap water is obtained from a municipal water supply.