WORK PLAN
FOR
REMEDIAL INVESTIGATION

OAKFIELD PROPERTIES, INC.
201 North Main Street
Oakfield, Wisconsin

WDNR BRRTS CASE #: 02-20-202459

Completed By

Engel & Associates, Inc.
N4737 Hwy 175 South
Fond du Lac, Wisconsin 54937

January 28, 1999

1.0 INTRODUCTION

Oakfield Properties, Inc. (OPI), is the current owner of the building and land registered as 201 North Main Street, Oakfield, Wisconsin. Concurrent with OPIs ownership, the current occupant D. Mueller Industries, Inc. (DMI), is an active metals fabrication business, which has been in operation at this facility since 1986. Operations primarily involve stamp cutting, grinding, and welding of stock metals for variety of industrial manufacturing facilities speciality equipment. The majority of stock metals used at DMI is aluminum and stainless steel. Virtually no painting or de-greasing type activities are associated with the current operations, hence, during the ownership of the site by OPI, there has not been a need for bulk industrial fluid storage, either above or below ground.

One (1) 6,000 gallon underground storage tank (UST) is registered to the site according to the Department of Commerce (COMM) storage tank data base. The registration indicates the contents of the tank to be that of petroleum fuel oil, however, the Wisconsin Department of Natural Resources (WDNR) has information indicating that other possible contents of the UST could have been cutting oil, used in former operations at the site. The exact contents of the tank and the date of installation are unknown because both the installation and use of the tank occurred prior to ownership of the site by Oakfield Properties, Inc. Having no use for the UST, Oakfield Properties, Inc., had the tank removed in1998. A site assessment was not conducted at that time.

Discovery of Vinyl Chloride in the monitoring well(s) at the Hi-D-Ho's Garage gas station site (Oakfield Petroleum, Inc.), located ½ block north of the OPI property, prompted the WDNR to look at potential responsible parties up-gradient. The Hi-D-Ho's site is currently in the long term environmental (groundwater) monitoring phase pending closure review by the WDNR. Laboratory analyses of groundwater samples collected from the site, has detected and quantified vinyl chloride, an industrial grade contaminant, in two (2) monitoring wells, MW-2 and MW-3, at the Oakfield Petroleum site. Concentrations range from 1,400 to 540 ug/L, respectively. The groundwater enforcement standard for vinyl chloride in groundwater is 0.2 ug/L. The WDNR, in conducting their search of possible sources for the industrial contaminant, identified the Oakfield Properties, Inc., site as a potential source.

On August 20, 1998, Engel & Associates, Inc. (ENGEL), along with Strata Morph Geoexploration, L.L.C., of Sun Prairie, Wisconsin, completed Phase II soil and groundwater sampling activities, using a GEOPROBE™ at the OPI site. Three (3) borehole locations were selected, based on the approximate position of the removed 6,000 gallon tank, as depicted on Figure 2.

Results of the assessment indicated contamination was present in subsurface soil surrounding the the former UST. Contaminant levels for diesel range organics (DRO) is soil ranged from 77 mg/Kg to 961 mg/kg. Elevated volatile organic compounds (VOCs) were also detected. Groundwater collected from the GP-3 borehole, contained vinyl chloride (600 ug/L) and 1,1,1-trichloroethylene (TCE) (700 ug/L), among other petroleum/chlorinated contaminants.

Based on the results of the assessment, a release of petroleum-solvent contaminants was immediately reported to the WDNR. A Responsible Party letter was issued from the WDNR - Northeast District office on November 5, 1998 informing Oakfield Properties, Inc., of their responsibilities under Section 292.11, Wisconsin Statues (hazardous substances spills law) to conduct a petroleum related remedial investigation and clean-up action as appropriate.

In November 1998, additional soil and sludge samples, collected from drainage structures located under the OPI building, were analyzed and found to contain similar petroleum and chlorinated solvent contaminants. Most specifically, results for diesel range organic (DRO) analysis indicated concentrations in the 119,000 to 121,000 mg/kg and concentrations of trichloroethene (ug/L) range from of 211 to 4280 ug/L. This suggested that some portion of the oil and chlorinated solvent based cutting fluids may have been discharged directly to the subsurface via a system of underground concrete vault type structures, rainwater collection cisterns, and associated water & sewer piping, (Figure 2).

Inspection of the subterranean rainwater collection system detected that the water collection cisterns are contained in larger concrete vault-type structures. An 18-inch square concrete channel way connects the two known vault structures. Numerous water lines were observed to enter and exit the west vault structure. Two (2) sewer lines were observed in the east vault. The upper sewer line appears be coming from the former degreasing room and a floor level sewer line outlet for discharging fluids from the vault structures. Where this sewer line discharges to is not currently known at this time, however, investigative activities will attempt to discern the point of discharge. In addition, the east vault contains a 6-inch steel well casing protruding from the floor, that has a steady artesian flow of groundwater.

The following work plan is an outline of the initial investigation phase activities proposed for the project. In addition, the work plan provides the philosophy for follow up investigation, as may be necessary, at the site. This work plan is prepared in accordance with NR 716.09, Wisconsin Administrative Code.

2.0 SITE LOCATION

Site Address:	Oakfield Properties, Inc. 201 North Main Street Oakfield, Wisconsin 53065
Cadastral Location:	NW1/4 of the NE1/4, Section 14, T14N, R16E, Town of Oakfield, Fond Du Lac County, Wisconsin (See Figure 1)

3.0 RESPONSIBLE PARTY AND CONSULTANT :

Responsible Party/ Contact:	Oakfield Properties, Inc. Mr. Don Mueller 201 North Main Street Oakfield, WI 53065 Phone: (920) 583-3565 Fax: (920) 583-3485
Project Consultant:	Engel & Associates, Inc. N4737 Hwy. 175 S. Fond du Lac, WI 54937-9210 Phone: (920) 929-9279 Fax: (920) 929-8754
Consultant Contact & Project Manager:	Ronald J. Engel, P. G.

4.0 REGIONAL GEOLOGY & HYDROGEOLOGY

The topography and drainage of the area has been described in *Water Resources of Wisconsin, Fox - Wolf River Basin;* By Perry G. Olcott (Hydrologic Investigations Atlas HA-321). In East Central Wisconsin, the topography is considered rolling with moderate relief, primarily controlled by the underlying bedrock surface, as modified by glacial erosion and deposition. The Niagara Escarpment, formed by uplifting of Silurian age dolomite, extends from the Horicon Marsh toand beyond the Village of Pipe, dividing Fond du Lac County into two (2) physiographic regions. East of the escarpment glacial features are common; the topography west of the escarpment is nearly level to gently sloping. The regional geology, in the vicinity of the Village of Oakfield, consists of recent surficial alluvial deposits and primarily late Wisconsinan (Pleistocene) glacial deposits overlying Silurian, Ordovician and Cambrian dolomites, shales and sandstones.

The alluvial deposits are found mostly associated with streams and lakes and consist of sands, silts, and clays. The glacial till deposits, found in southern Fond du Lac County, are generally fine to coarse-grained clay, silt, sand, and gravel in varying percentages. Thickness of the glacial tills range from less than 10 feet to more than 150 feet in end moraines and pre-glacial bedrock valleys. The Waupun Ground Moraine is found in the general site area and consists of unstratified clay, silt, sand, gravel, with occasional to frequent boulder zones, constituting the Wayside Member of the Horicon formation. Surface soils consist of the Fox Silt Loam, which is characteristic of broad outwash planes. Adjacent surface soils consist of Elliott Silt Loam and Morely Silt Loam, both of which typify calcareous soils with a high shale content.

Bedrock units present include (from youngest to oldest) the Silurian Niagara Dolomite overlying the Maquoketa Shale, which stratigraphically overlies the Ordovician Sinnipee Group. The Sinnipee consists of the Galena, Decorah, and Platteville Formations, undivided. Other bedrock units, successively older stratigraphically, include the St. Peter Group, Prairie du Chien Group, and Tunnel City Group. Precambrian schists, gneiss, etc., form the basement complex.

The Niagara dolomite forms the escarpment located approximately 1/4 mile south of the site. Many small contact springs and seeps occur at the base of the escarpment, near the contact of the dolomite and the underlying Maquoketa shale. Based upon the private well information, the Maquoketa Shale formation is 105 to 114 feet thick in the area.

Surface water quality is generally fair to good. Iron and calcium are normally high and cause persistent water quality problems. Nutrient, biological, and chemical contaminants cause local and aerial degradation to the water's value. Infiltration rates, in the ground moraine tills of the area, range from 0.6" to 2.0" per hour.

Wetland areas and drainage adjacent to the site consist of:

* Several intermittent streams which drain the contact springs at the base of the Niagara Escarpment.

* The East Branch of the Fond du Lac River located 1.25 miles to the north is the major drainage feature of the region.

Numerous small intermittent creeks and streams exist in the area, which drain highland areas and feed into the lowland wetland areas. It is not expected that the contaminants identified at the site will impact any of these surface water resources.

In this area, most of the potable water comes from wells developed in the formations underlying the Maquoketa Shale. These include the Sinnipee and St. Peter Groups with recharge areas located 5 to 30 miles west of the site. To a lesser extent, some potable wells are found in the glacial drift aquifer and the unconfined Niagara aquifer which primarily receive most of their water through infiltration of atmospheric precipitation. The potentiometric surface generally slopes towards the east, however, local cones of depression exist around area communities.

The geology, within the vicinity of the Oakfield Properties site, is characterized by geologic logs obtained from the Wisconsin Geologic and Natural History Survey (WGNHS). Selected copies are included as Appendix A. The indicated regional thickness of the unconsolidated glacial and alluvial material ranges from approximately 9 to 22 feet and is estimated to be 18 (+/-) feet thick at the site.

5.0 BOREHOLE & MONITORING WELL INSTALLATION AND SAMPLING STRATEGY

Equipment decontamination procedures will be conducted to minimize the possibility of cross-contamination between Geoprobe, drilling, sampling equipment and the individual bore holes. All drilling equipment (i.e. core samplers, drill rod, bits, and drill rig unit) will be decontaminated with a high-pressure, steam-cleaning system, prior to and after, Geoprobing or drilling at the site. Clean sets of core samplers will be used in the installation of each successive borehole. Stainless steel sampling equipment will be decontaminated between samples as follows:

* Tap water/trisodium phosphate detergent (TSP) wash
* Tap water rinse
* Deionized water rinse
* Air dried

Soil sampling at the OPI site will initially be conducted utilizing a Geoprobe™ soil sampling unit. Bore holes will be initially advanced around the perimeter of the UST basin, around and within the building adjacent to the degreasing room and the east vault areas, progressing to the property boundaries as maybe necessary (Figure 2). One (1) boring will be advanced immediately adjacent to the former tank pit to delineate the full sediment profile and determine the vertical extent of contamination at this possible source. Initially, bore holes will extend to a depth of approximately five (5) feet below non-detectable photoionization detector (PID) readings or to the underlying bedrock (shale) surface. It is estimated that the final depth of borings will be15 to 20 feet BGL. Based on field observations of the soil profile, and the results of PID field headspace analyses, a determination will be made whether additional borings are necessary to define the extent of petroleum and/or solvent impacted soil at the site. Bore hole sampling, accompanied by field headspace screening of soil samples, will continue until the expanse of the contaminant plume is defined. When PID readings are "non-detect" it will be assumed that the contaminant plume is defined, pending confirmation from soil samples submitted for laboratory analysis.

Groundwater data and samples will be collected from selected bore holes to determine whether contaminants have migrated to the uppermost aquifer at the site. 1-inch PVC temporary monitoring points will be set with a sand filter pack and bentonite seals, to facilitate groundwater (table) data collection. The temporary monitoring points will be installed in a triangular geometry to provide the best information possible to determine groundwater flow direction and gradient.

Following receipt of initial laboratory and groundwater level data, ENGEL will evaluate the necessity and locations for installation of permanent water table observation wells and/or piezometer(s) to determine horizontal and vertical movement of contaminants in the groundwater at the site.

Drilling and sampling activities are expected to occur on OPI property. In the event that groundwater contamination has migrated off site, ENGEL will coordinate with adjacent property owners to obtain drilling access and allow for definition of the soil and/or groundwater contaminant plume(s).

6.0 BORE HOLE AND MONITORING WELL SPECIFICATIONS

Borehole installation, abandonment and well installation will be conducted in compliance with Chapter NR 141, Wisconsin Administrative Code. Approved materials for filter pack, annular and surface seals, and abandonment will be used. All monitoring wells, including water table observation wells (WTOWs) and piezometers shall be developed in accordance with the requirements outlined in NR 141. The well riser pipe and screen to be used in well construction will consist of two (2) inch I.D. schedule 40 polyvinyl chloride (PVC) with flush-threaded joints. Well screens will be factory cut with 0.010-inch slots and will not exceed 15 feet in length. It is not anticipated that variances for well construction will be necessary.

7.0 SAMPLING AND ANALYSIS SPECIFICATIONS

Soil sampling will be performed with the use of a truck-mounted Geoprobe™. The Geoprobe unit pushes a 2.25 inch I. D., 48 inch long, stainless steel core sampler into the soils to facilitate sample retrieval. A new polyethylene sleeve insert will be placed inside the core barrel each time a sample is retrieved to protect against cross-contamination of samples. Depth of penetration will be dependent on the coarseness of the sediments encountered. Borehole soil core samples will be qualitatively screened for the presence of ionizable organic compounds (IOCs) using a PID and classified using the Unified Soil Classification System (USCS). Selected sample(s) from each borehole will be submitted to an analytical laboratory for analysis of:

* Diesel Range Organics (DRO);
* Volatile Organic Compounds (VOCs);

The selection of these samples will be based on field observations such as PID measurements, soil staining and obvious petroleum or solvent odors. If no headspace readings or petroleum related odors are detected, and visual staining is not observed, typically one (1) soil sample will be collected from a bore hole at the soil/water interface.

Following monitoring well development and purging events, groundwater samples will be collected from the wells with disposable bailers. Samples are transferred from the bailer directly into laboratory-provided sample containers. The groundwater samples will be submitted to an analytical laboratory for the chemical analysis of:

* Volatile Organic Compounds (VOCs) for a minimum of the initial round of sampling;

* Metals analysis may be conducted during the investigation.

Samples to be analyzed for VOCs shall be containerized in 40-ml vials and preserved with hydrochloric acid. Groundwater samples to be analyzed for lead are preserved with nitric acid.

After investigating actual site conditions, it may be determined that additional soil and/or groundwater sample analyses are required. Additional sampling may also be conducted as directed by the WDNR Project Manager.

8.0 SITE SURVEY

The site will be surveyed after the initial borehole sampling and temporary groundwater monitoring points have been installed. Additional survey activities will be conducted when actual 2-inch monitoring well(s) installations are completed. The surveyor will establish a site bench mark to be used for reference during future drilling and/or remedial construction activities. The survey will include the locating of surficial physical features including structures, utilities, signs, pavement and property boundaries, soil borehole/monitoring well locations, and other pertinent features. Elevations of features will be established to allow for contouring as necessary.

9.0 PRIVATE WELLS

Water supply for Oakfield Properties building, as well as neighboring commercial and residential properties is provided by two municipal wells. Figure 1 depicts the location of the municipal wells. The locations and names of additional wells of record are included in Appendix A. The Village of Oakfield municipal water supply wells, #1 and #2, are located approximately 750 feet and 800 feet north of the release site. A third Village well has been installed approximately 2,000 (+/-) feet to the south, however this well is currently not in use. Both active Village wells are cased below the Maquoketa shale (127 and 135 feet BGL, respectively. The new well (#3) is also cased below the shale. It is not expected that the local water supply wells have been, or will be, impacted by the release, however, periodic sample collection and laboratory analysis for volatile organic compounds is currently being conducted by the Village of Oakfield.

10.0 INVESTIGATIVE WASTE MANAGEMENT

Waste materials that may be generated during the investigative phase of this project include: drill cuttings, decontamination waters, and well development water. Contaminated drill cuttings will either be temporarily stored in DOT-17 drums kept on site or placed on, and covered with, plastic sheeting until proper disposal can be arranged.

Decontamination and well development water will be collected and temporarily stored in DOT-17 drums located on site. In the event of developing and purging a larger diameter groundwater test/recovery well, extracted water will either be discharged to an on-site holding tank for future treatment or transported to a licensed disposal/treatment facility. Composite and/or grab samples will be collected and laboratory analyzed for determination of disposal and/or treatment requirements. Arrangements will be made for the waste waters to be treated and/or disposed of in a timely manner.

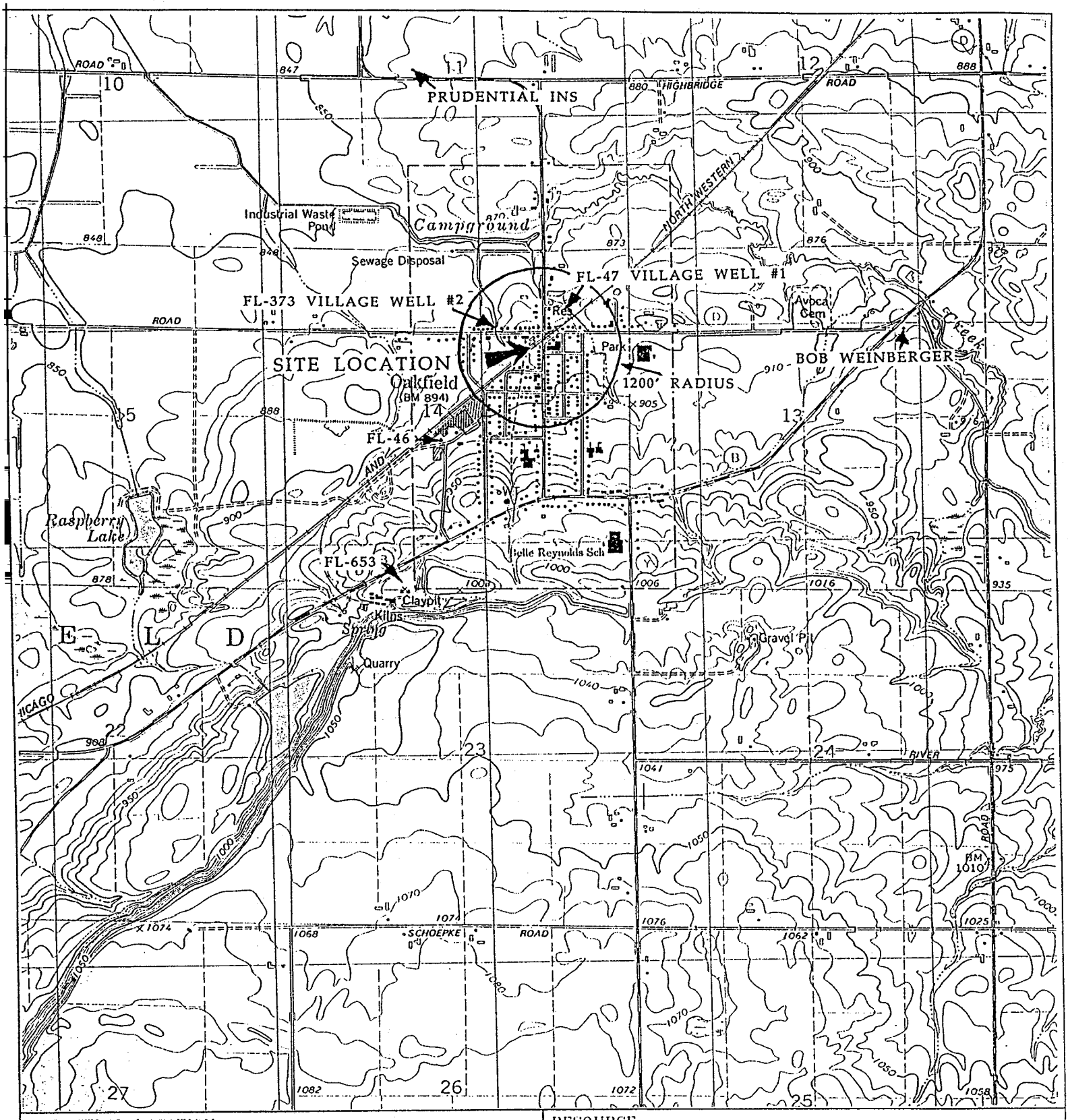
11.0 INVESTIGATIVE SCHEDULE

The overall work plan has been discussed with Mr. Dave Carper, WDNR, NE District, including the bore hole placement strategy, method of sampling, etc., and has been verbally approved. A copy of the completed work plan will be submitted for the WDNR files. Following commodity services bidding on site investigative activities will commence. It is anticipated that Geoprobe™ soil sampling activities will be completed during the month of February, 1999. Additional sampling and/or well installation, if required, will be initiated pending analyses of the first round sampling data and scheduling of the drilling contractor. Hollow stem auger (HSA) drilling for monitoring well installations shall be conducted following complete delineation of the soil contaminant plume and completion of initial groundwater analysis for better placement of monitoring wells and/or additional bore holes.

12.0 REPORTING

Upon delineating the degree and extent of soil and groundwater contamination at the facility, ENGEL will prepare a Site Investigation report in substantial conformance with ch. NR 716, WAC. The report will include a brief description of investigative procedures, including any alterations of this plan, field and laboratory data obtained from these procedures, environmental analysis of the data, and recommendations for compliance with applicable state statutes and administrative codes.

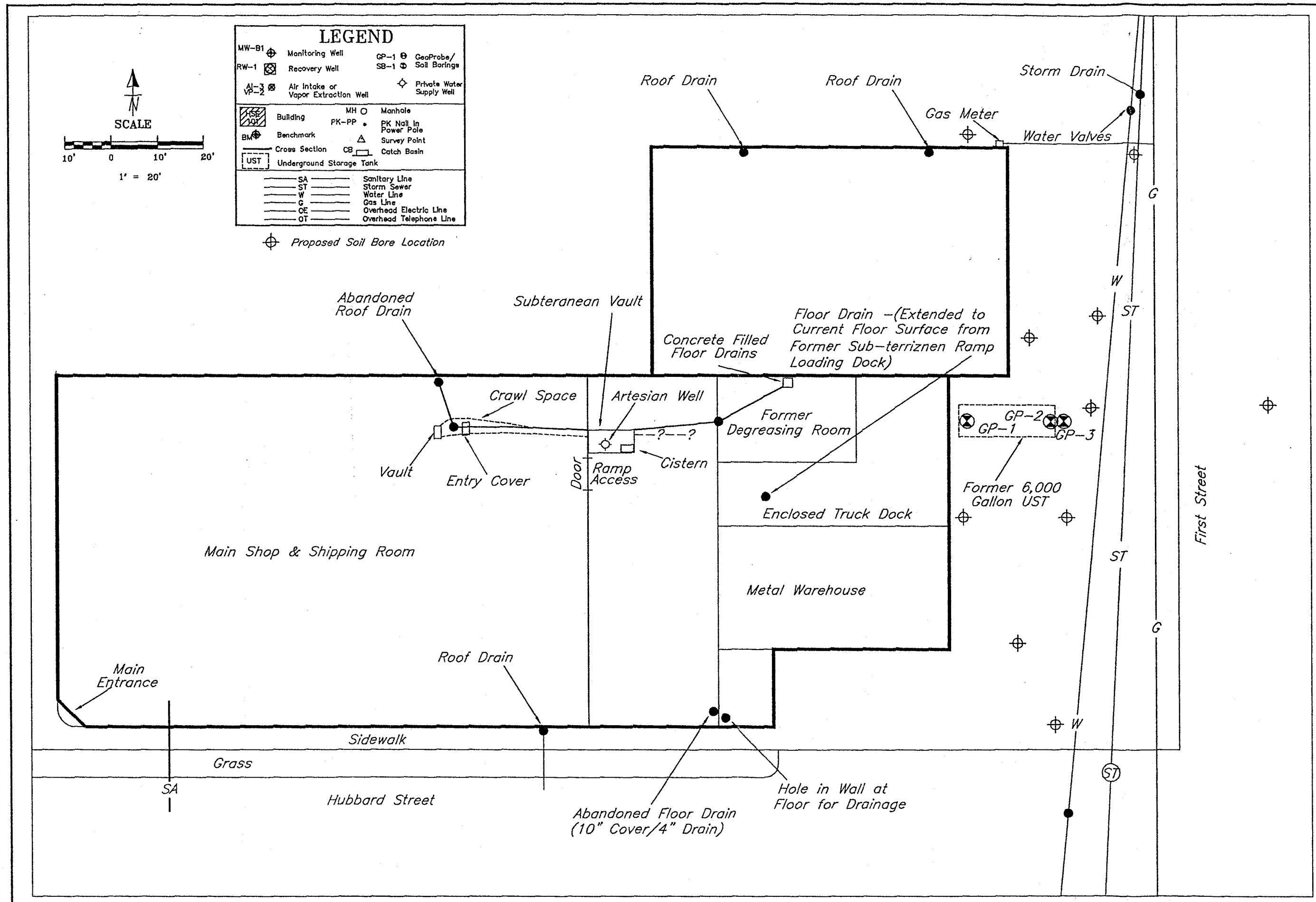
If site cleanup is necessary, ENGEL will prepare a Remedial Action Plan (RAP) conforming to ch. NR 724, WAC. The RAP will utilize subsurface data obtained from the site investigation to evaluate technically feasible alternatives for remediating contaminated soil and/or groundwater. A detailed cost estimate for the selected remedial alternative including site closure will be provided at that time.



CADASTRAL LOCATION:
NW 1/4 NE 1/4 SEC 14 T14N R16E
FOND DU LAC COUNTY
OAKFIELD, WI

RESOURCE:
OAKFIELD 7.5' QUADRANGLE
NE/4 WAUPAN 15' QUAD., 1974
U. S. GEOLOGICAL SURVEY

113-02	Site Location	ENGEL & ASSOCIATES, INC.	Revision History: OAKFIELD
FIGURE: 1	OAKFIELD STANDARD STATION OAKFIELD, WI	N4737 Highway 175 S Fond du Lac, WI 54937 414-929-9279 Fax: 414-929-8754	Initials: CWM; Date: 6-28-95; Note: Scale: 1:24,000



FILE REFERENCE: oakfield-plot1
DRAWN: DDS 9/98

ENGEL & ASSOCIATES, INC.
N4737 HIGHWAY 175 S.
FOND DU LAC, WI 54937
920-929-9279 FAX: 920-929-8754

Proposed Soil Bore Locations
Oakfield Properties
Oakfield, Wisconsin

275-01

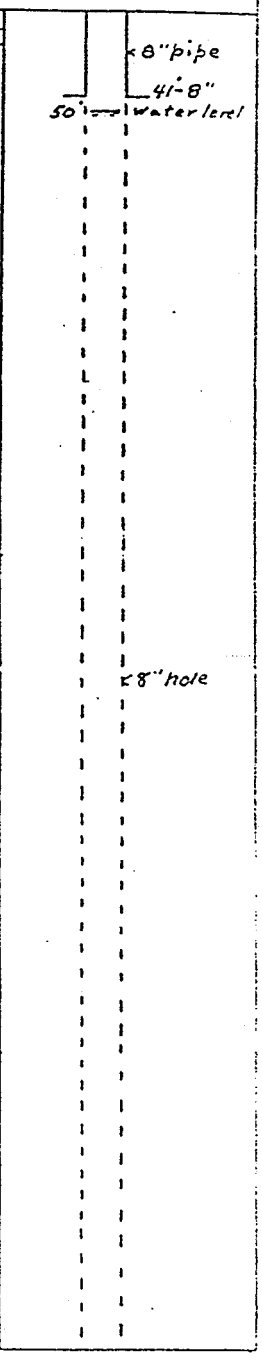
FIGURE
2

FL-46

OAKFIELD CANNING CO. WELL, OAKFIELD, WIS.

NE 1/4, NE 1/4, SW 1/4 Sec. 14, T. 14, R. 16 E.
J.J. Faust & Sons, Drillers, 1925
Samples examined by F.T. Thwaites Nos. 75126-75256
Elevation ~~895~~ 906' ETH.

RICHMOND DRIFT	124	9	0-9	9	Till, buff, stony
		10	9-19	10	Shale, gray and buff, very calcareous
		114	19-133	114	Shale, blue, calcareous
GALENA-BLACK RIVER	229	15	133-148	15	Dolomite, gray and blue
		99	148-247	99	Dolomite, gray
		10	247-257	10	Dolomite, gray, few blue spots
		30	257-287	30	Dolomite, light gray
		5	287-292	5	Dolomite, light and dark gray
		10	292-302	10	Dolomite, gray
		10	302-312	10	Dolomite, mottled blue and gray
		5	312-317	5	Dolomite, light and dark gray
		33	317-350	33	Dolomite, light gray
		12	350-362	12	Dolomite, gray, blue spots
ST. PETER	73	25	362-387	25	Sandstone, fine to coarse, gray, calcareous
		6	387-393	6	Sandstone, fine to medium, white
		17	393-410	17	Sandstone, fine to medium, gray and pink, quartzitic
		5	410-415	5	Sandstone, fine to medium, dark pink; shale, red
		5	415-420	5	Sandstone like above; chert pebbles; red & green shale
		5	420-425	5	Sandstone, fine, gray, calcareous
		5	425-430	5	Sandstone, coarse, white, some green shale
		5	430-435	5	Sandstone, coarse to fine, pebbles of gray chert
LOWER MAGNESIAN	111	5	435-440	5	Dolomite, gray, chert, white
		36	440-476	36	Dolomite, light gray and gray
		9	476-485	9	Dolomite, pink
		30	485-515	30	Dolomite, gray
		25	515-540	25	Sandstone, fine to medium, gray, calcareous with layers of gray dolomite and oolitic chert
		6	540-546	6	Dolomite, gray, floating sand
JORDAN	31	30	546-576	30	Sandstone, medium to fine, light gray, very calcareous
FRANCONIA	49	12	576-588	12	Sandstone, medium to fine, gray and pink, glauconitic
		37	588-625	37	Shale, dark pink, sandy, calcareous, some glauconite
MAZOMANIE	65	10	625-635	10	Sandstone, medium-fine, light pink, calcareous, glauconitic
		10	635-645	10	Ss., medium-fine, gray, calcareous, glauconitic
		20	645-665	20	Sandstone, coarse to fine, light pink, calcareous
		15	665-680	15	Sandstone, fine to medium, light gray
		5	680-685	5	Sandstone, like above; some pink dolomite
		5	685-690	5	Ss., very fine, dark gray, shaly, pyritic



FL-47

VILLAGE WELL, OAKFIELD, WIS.

SW1/4 NE1/4, NE1/4, Sec. 14, T. 14 N., R. 16 E.

J. J. Faust and Sons, Contractors, 1931

Samples sent by T. J. Burns; Chairman Water Works Committee

Samples examined by F. T. Thwaites, Nos. 85940-86027

Alt 875'

DRIFT	16	0-16	16	Glacial till, gray, dolomitic
	105½	16-121½	105½	Shale, blue-gray, dolomitic
RICHMOND (MAQUOKETA)		121½-206	84½	Dolomite, light gray
GALENA-PLATTEVILLE		206-211	5	Dolomite, light gray, blue spots
		211-216	5	Dolomite, light gray
		216-231	15	Dolomite, mottled, blue and blue-gray
		231-256	25	Dolomite, light gray, few blue spots
		256-266	10	Dolomite, light gray
		266-276	10	Dolomite, light gray, few blue spots
		276-292	16	Dolomite, blue-gray
		292-317	25	Dolomite, light gray, very few blue spots
		317-342	25	Dolomite, light gray, blue spots, shaly
		342-347	5	Sandstone, medium to fine, lt. gray, dol. py.
	235	347-357	10	Sandstone, medium to very fine, gray, dol.
ST. PETER		357-368	11	Sandstone, medium to fine, light gray
		368-384	16	Sandstone, medium, white, frosted grains
		384-394	10	Sandstone, medium to fine, white
		394-429	34	Sandstone, medium, white
		429-439	10	Sandstone, medium to fine, white
	84	439-441	2	Conglomerate, pebs. white chert in coarse ss.

Formations: Drift; Richmond (Maquoketa); Galena-Platteville; St. Peter

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT

Form 3300-15 / Rev. 2-79

JAN 4 1984

RECONSTRUCTION WELL #1

1. COUNTY: Fond du Lac

CHECK (✓) ONE: ☐ Town ☒ Village ☐ City

Name: OAKFIELD

LOCATION: ¼ Section or Gov't. Lot: NE,NE | Section: 14 | Township: 14N | Range: 16E

OR – Grid or Street No. | Street or Road Name: Main St.

AND – If available subdivision name, lot & block No.

3. NAME ☐ OWNER ☐ AGENT AT TIME OF DRILLING CHECK (✓) ONE: Village of Oakfield

ADDRESS: Village Hall

POST OFFICE: Oakfield | ZIP CODE: WIS 53065

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

Building	Sanitary Bldg. Drain		Sanitary Bldg. Sewer		Floor Drain Connected To:		Storm Bldg. Drain		Storm Bldg. Sewer	
	C.I.	Other	C.I.	Other	C.I. Sewer	Other Sewer	C.I.	Other	C.I.	Other

Street Sewer		Other Sewers		Foundation Drain Connected to:		Sewage Sump		Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit	Manure Hopper or Retention or Pnuematic Tank
San.	Storm	C.I.	Other	Sewer	Sewage Sump	C.I.	Other				Seepage Pit	
				Clearwater Dr.	Clearwater Sump						Seepage Bed	
											Seepage Trench	

Privy	Pet Waste Pit	Pit: Nonconforming Existing	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
		Well									
		Pump									
		Tank									

Temporary Manure Stack or Platform	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)

5. Well is intended to supply water for: Village

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
12"	Surface	441'			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification Mfg. & Method of Assembly	From (ft.)	To (ft.)
10"	Bl. P.E. new steel 40.48 1B Welded 0.365" WALL	Surface	127
12"	existing	Surface	122

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
Neat Cement	Surface	127

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Existing Well	Surface	441
Following from W.G.&N.H.S. log:		
0-16' Drift		
16'-121.5' Maquoketa Shale		
121.5'-357' Galena/Platteville Dolomite		
357'-441' St. Peter Sandstone		

10. TYPE OF DRILLING MACHINE USED

☒ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud ☐ Rotary-hammer w/drilling mud & air ☐ Rotary-hammer & air ☐ Reverse Rotary ☐ Jetting with: ☐ Air ☐ Water

Well construction completed on 2-23 19 83

11. MISCELLANEOUS DATA

Yield Test: 2 Hrs. at 343 GPM

Depth from surface to normal water level 73 Ft.

Depth of water level when pumping 113 Ft. Stabilized ☒ Yes ☐ No

Sp.cap.= 343/40 = 8.6 gpm/ft

Well is terminated 12 inches ☒ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to _____ 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: LAYNE-NORTHWEST Div. of Layne-Western Co., Inc.
W.A. Majeskie W.A. Majeskie Registered Well Driller

Business Name and Complete Mailing Address:
6005 W. Martin Drive
Milwaukee, WI 53213

cc: S.D. SGS WELL LOG BOOK

FL-373

WELL CONSTRUCTOR'S REPORT — WISCONSIN STATE BOARD OF HEALTH — Wel 6

1. COUNTY: Fond Du Lac

CHECK ONE: ☐ Town ☒ Village ☐ City

NAME: Oakfield, Wis.

2. LOCATION (Number and Street or ¼ section, section, township and range. Also give subdivision name, lot and block numbers when available.)

NE/4, NW/4, NE/4, s-14, T-14N, R-16E. Well #2

3. OWNER AT TIME OF DRILLING

Village of Oakfield, Wis.

4. OWNER'S COMPLETE MAIL ADDRESS

Oakfield, Wisconsin

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

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

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

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

6. Well is intended to supply water for:

Municipality

7. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
25"	Surface	135'			
17"	135'	471'			

8. CASING, LINER, CURBING, AND SCREEN

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
6"	Steel	2 ft. + Surface	40'5"
17"		4' +	135'1"

9. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
Neat cement	2' + Surface	135'1"

10. FORMATIONS

Kind	From (ft.)	To (ft.)
Drift	0 Surface	22'
Shale	22'	126'
Limestone	126'	354'
Sandstone	354'	470'
Green Sandstone	470'	471'

Well construction completed on July 19 67

Well is terminated 48 inches ☒ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

11. MISCELLANEOUS DATA

Yield test: 5 Hrs. at 500 GPM

Depth from surface to normal water level 50 ft.

Depth to water level when pumping 106 ft.

Water sample sent to State Lab on June 21st, 1967 laboratory on: 19

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, subsurface pumprooms, access pits, etc., should be given on reverse side.

SIGNATURE: Layne Northwest Company
T. E. Leicht Registered Well Driller

COMPLETE MAIL ADDRESS: Layne Northwest Company
6005 W. Martin Drive Milw. Wis. 53213

Please do not write in space below

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

cc: Region #3
SG.S. - JOAN WARDEN
FILE

UNIVERSITY OF WISCONSIN GEOLOGICAL & NATURAL HISTORY SURVEY
1815 University Avenue, Madison, Wisconsin 53706

Log No. FL-373
Sample Nos. 280023-280116

Well name Village of Oakfield, Wisconsin, Well #2
Owner.... Village of Oakfield, Wisconsin
Address.. c/o Village Clerk, Village Hall Oakfield, Wisconsin
Driller.. Layne Northwest Co.
Engineer. McMahon & Assoc., Engineers Menasha, Wisconsin

County: Fond du Lac
Completed... 7/67
Field check.
Altitude.... 860' ETM
Use..... Municipal
Static w. l. 50'
Spec. cap... 8.9

R. 16E.
T. 14 N.
Sec. 14

Quad. Waupun 15'

Drill Hole						Casing & Liner Pipe or Curbing							
Dia.	from	to	Dia.	from	to	Dia.	Wgt.& Kind	from	to	Dia.	Wgt.& Kind	from	to
25"	0	135'				25"	Steel	+2'	40'5"				
17"	135'	471'				17"		+4'	135'1"				

Grout: Kind	from	to
Neat cement	+2'	135'1"

Samples from 5' to 471'
Date received: 9/26/67
Examined by: J.M. Warren
Issued: 1/69
Date: 5/10/68

Formations: Surface, Maquoketa, Platteville-Galena, St. Peter

Remarks: Well tested for 5 hours at 500 gpm with 56 feet of drawdown. Additional abbreviations: vrbl-variable, hdns,hardness,tex-texture

LOG OF WELL:

S	0-5	5		NO SAMPLE
15'	5-10	5		Snd,pl yl bn&mxd clr,Vfn,ang,P srtg,tr fn/C;mch st,ltl cl
	10-15	5		Snd,pl yl bn&mxd clr,Vfn,ang P srtg,tr fn/C;mch st,ltl cl,tr org ma
M	15-30	15		Sh,gry,G srtg,vrbl hdns,tr ol gry;tr xln&disagg dol,pyr&Vfn qtz snd
A	30-35	5		Sh,lt ol gry,G srtg,dolic,vrbl hdns;tr Vfn snd&dol rmbs
Q	35-40	5		Sh,lt ol gry,G srtg,dolic,vrbl hdns;tr xln dol&dol rmbs&cvd mat
U	40-65	15		Sh,lt ol gry,G srtg,dolic,vrbl hdns;few dol rmbs,tr xln dol,slgt tr dissem pyr
O	65-70	5		Sh,lt ol gry,G srtg,dolic,vrbl hdns;few dol rmbs,tr xln dol,foss fr
K	70-80	10		Sh,lt ol gry mot lt gry,G srtg,dolic,vrbl hdns;tr dol rmbs&xln dol
E	80-85	5		Sh,lt ol gry mot lt gry,dolic,vrbl hdns;tr dol rmbs,xln dol,pyr
T	85-90	5		Sh,lt ol gry mot lt gry,dolic,vrbl hdns;tr dol rmbs,xln dol,lim spk
A	90-95	5		Sh,lt ol gry mot lt gry,dolic,vrbl hdns;tr dol rmbs& lim spks
	95-100	5		Sh,lt ol gry mot lt gry,G srtg,dolic,vrbl hdns;tr dol rmbs
	100-120	20		Sh,lt ol gry mot lt gry,G srtg,slgt dolic,vrbl hdns;tr dol rmbs
110'	120-125	5		Sh,V lt ol gry mot ol gry,dolic,vrbl hdns;tr dol rmbs& lim spks
	125-130	5		Dol,gry or pnk&gry or,Vfn,dns,ltl fn&M;ltl gry sh,tr lim spks&foss
P	130-135	5		Dol,gry or mot lt bn,fn&Vfn,dns;tr sug tex,tr M/C,tr sty bn dol;
=	135-145	10		Dol,gry or,fn&Vfn,dns,tr M;tr xln&dissem pyr
	145-155	10		Dol,gry or,fn&Vfn,dns,tr M;
	155-165	10		Dol,gry or mot V pl or,fn,dns,ltl Vfn,tr M,tr sug tex;slgt tr xln &dissem pyr
	165-175	10		Dol,V pl or/ mot gry or,fn,dns;ltl M,tr Vfn&C,tr sug tex;tr xln& dissem pyr
	175-180	5		Dol,gry or,fn,dns,ltl Vfn,tr M,tr sug tex;slgt tr bn sh
	180-185	5		Dol,gry or,fn,dns,ltl M&Vfn,tr sug tex;tr xln&dissem pyr,lim spks
	185-190	5		Dol,V pl or,fn&Vfn,dns,tr M,C,ltl sug tex;tr xln&dissem pyr,Fe stn

UNIVERSITY OF WISCONSIN GEOLOGICAL & NATURAL HISTORY SURVEY
1815 University Avenue, Madison, Wisconsin 53706

Log No. FL-373

Well name Village of Oakfield, Wisconsin, Well #2
Sample Nos. 280023 to 280116

PLATTEVILLE-GALENA

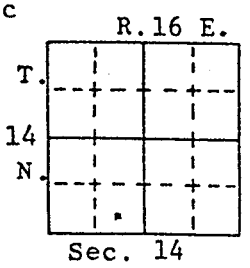
	190-195	5	Dol,pl gry or&mxd grys,fn&Vfn,dns,tr M/VC;tr pyr,slgt tr foss frag
	195-200	5	Dol,gry or,fn&Vfn,dns,slgr tr M/VC;tr bn sh&pyr
	200-205	5	Dol,gry or mot gry,fn&Vfn,dns,tr M/VC;tr xln&dissem pyr
	205-210	5	Dol,gry or,fn&Vfn,dns,tr M&C,tr micro xln;tr xln&dissem pyr
	210-220	10	Dol,gry or,fn&Vfn,dns,tr M&C;tr xln&dissem pyr
	220-230	10	Dol,xmd grys,fn,dns,ltl M&Vfn,tr C&VC,ltl fossif;slgt tr xln& dissem pyr
	230-235	5	Dol,mxd grys&gry or,dns,ltl M&Vfn,tr C&VC,tr fossif,tr sug tex;
	235-240	5	Dol,yl gry,fn,dns,ltl M&Vfn,tr C;tr xln&dissem pyr
	240-245	5	Dol,V pl or mot yl gry,M&fn,dns,tr C&Vfn,tr sug tex;tr xln&dissem
	245-250	5	Dol,V pl or mot yl gry,M&fn,dns,tr C&Vfn,ltl sug tex,tr fossif;
	250-255	5	Dol,V pl gry or mot yl gry,fn,dns,ltl M&Vfn,tr sug tex;tr dissem p
	255-260	5	Dol,V pl gry or,M&fn,dns,tr Vfn,tr sug tex;tr xln&dissem pyr
	260-265	5	Dol,pl gry or,M&fn,dns,tr Vfn,C&VC,tr sug tex;tr xln&dissem pyr
	265-270	5	Dol,pl gry or,M&fn,dns,tr Vfn,C&VC,tr sug tex;tr xln&dissem pyr
	270-275	5	Dol,pl gry or,M&fn,dns,tr Vfn&C,tr-ltl fossif;tr xln&dissem pyr
	275-280	5	Dol,pl gry or,M&fn,dns,ltl Vfn,tr C,tr fossif;tr xln&dissem pyr
	280-285	5	Dol,lt ol gry mot yl bn&lt gry,fn&Vfn,dns,tr M&C,ltl fossif;
	285-290	5	Dol,lt ol gry mot yl bn&lt gry,fn&Vfn,dns,tr M,mch fossif,tr sndy;
	290-300	10	Dol,pl yl bn mot gry&gry or,fn&Vfn,dns,tr M&C,tr fossif;tr xln& dissem pyr
	300-305	5	Dol,pl gry or mot gry&pl yl bn,fn&Vfn,dns,tr M&C,ltl fossif;
	305-310	5	Dol,lt ol gry,fn&Vfn,dns,tr M,tr sug tex;tr xln&dissem pyr
	310-315	5	Dol,V pl yl bn&mxd grys,fn&Vfn,dns,gry-Vfn/M&fossif;tr xln pyr
	315-335	20	Dol,lt ol gry, Vfn,dns,tr fn;ltl dissem pyr
	335-340	5	Dol,lt ol gry mot yl gry&ol gry,Vfn,dns,ltl fn;ltl dissem pyr
	340-345	5	Dol,lt ol gry,Vfn,dns,tr fn;ltl dissem pyr,tr xln,tr lim spks
230'	345-350	5	Dol,lt ol gry,Vfn,dns,tr fn;ltl dissem pyr,tr xln,tr fn&M snd
	350-355	5	Dol,lt ol gry,Vfn,dns,tr fn&M,tr sndy(fn/C);tr dissem pyr,ltl xln
	355-360	5	Ss,lt ol gry,M,tr G pyr-&dol-cem,mch fn,ltl C,tr Vfn&VC;ltl st&dol
	360-365	5	Ss,lt ol gry,M&fn,rnd,P srtg,ltl C,tr Vfn;ltl st,tr dol,slgt tr lim
	365-370	5	Ss,lt ol gry,M,tr G pyr-&dol-cem,ltl fn,C,tr Vfn;ltl st&dol
	370-375	5	Ss,lt ol gry,M&fn,Srnd,P srtg,ltl C,tr Vfn;tr-ltl st,tr dol,lim&pyr
	375-395	20	Ss,gry or pnk,M,Srnd,P srtg,tr G pyr-&dol-cem,ltl C&fn,tr Vfn;tr- ltl st,tr pyr&Fe stn
	395-410	15	Ss,pl gry or pnk,M,Srnd,P srtg,tr G or dol-cem,tr pyr-cem,mch C, ltl fn,tr VC&Vfn;tr st
	410-415	5	Ss,pl or,M,Srnd,P srtg,mch fn,ltl C,tr Vfn;ltl st,slgt tr dol&lim-c
	415-435	20	Ss,V pl or,M&fn,rnd,P srtg,tr F lim-cem,ltl C,tr VC&Vfn;tr st&pyr
	435-440	5	Ss,V pl or,M&fn,Srnd,F srtg,tr G or&gn dol-cem,ltl C;
	440-445	5	Ss,V pl or,M&fn,Srnd,F srtg,tr G or&gn dol-cem,ltl C;tr gn sh&gry d
	445-450	5	Ss,yl gry,M&fn,Srnd,F srtg,tr G pyr-cem,ltl C;tr dol
	450-455	5	Ss,V pl or,M&fn,Srnd,P srtg,tr G pyr-cem,ltl C,tr Vfn;ltl st,tr lim
	455-460	5	Ss,V pl gry or,M&fn,Srnd,P srtg,ltl C,tr Vfn&VC;tr st,lim,pyr&dol
	460-465	5	Ss,V pl yl gry,M,rnd,F srtg,tr lim-,pyr&calc-cem,mch C&fn,tr VC;
116'	465-471	6	Ss,V pl yl bn,M,rnd,F srtg,tr lim-,pyr,calc-cem,mch fn,ltl C,tr Vfn
			END OF LOG
	325-335	10	Dol,lt ol gry,Vfn,dns,tr fn;ltl dissem pyr,tr fn&M snd&gn gry sh

UNIVERSITY OF WISCONSIN GEOLOGICAL & NATURAL HISTORY SURVEY
1817 Mineral Point Rd., Madison, Wisconsin 53705

Log No.FL-653

Well name Oakfield Shale Brick & Tile Co. T.H. #1
Town of Oakfield
Owner.... Oakfield Shale Brick & Tile Co.
Address..
Driller..
Engineer.

County: Fond du Lac
Completed... 1960?
Field check.
Altitude.... 970' ETM
Use..... Test
Static w.l..
Spec. cap...



Location: SE¼,NE¼,SW¼,SE¼,SW¼,sec. 14,T14N,R16E. Quad. Oakfield 7½'

Drill Hole						Casing & Liner Pipe or Curbing							
Dia.	from	to	Dia.	from	to	Dia.	Wgt.& Kind	from	to	Dia.	Wgt.& Kind	from	to

Grout	from	to

Drilling method:
Samples from 16' to 56' Rec'd: 1960?

Studied by: M.E. Ostrom

Issued: 10/08/85

Formations: Drift, Maquoketa Formation.

Remarks: Samples not retained.

LOG OF WELL:

	Depths	Graphic Section	Rock Type	Color	Grain Size Mode	Grain Size Range	Miscellaneous Characteristics
ft.	0-16		NO	SAMPLE.			
?	16-17		Shale	Gn gray	—	—	Dolic. Much silt. Little sand. Trace pyrite.
	17-20		"	"	—	—	Dolic. Mch gy mot dk gy dol. Ltl sand,silt. Trace pyrite.
M	20-26		"	"	—	—	Same but little dolomite.
A	26-29		"	"	—	—	Dolic. Little sand,silt. Trace pyrite.
Q.	29-31		"	"	—	—	Dolic. Much silt. Little dolomite,sand.
	31-33		"	"	—	—	Same but no dolomite.
	33-34		"	"	—	—	Same plus little dolomite.
	34-37		"	"	—	—	Same but much dolomite.
	37-42		"	"	—	—	Same but little dolomite.
39'	42-55		"	"	—	—	Same but trace dolomite.
			END OF LOG				

County ..... Twp. ..... Sec. .....

(Office Record—Do not fill in) 14-16-11

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 Prudential Ins. Co. (If a joint ownership give name of responsible official. Also name of each individual holding an interest. Use a separate sheet and attach hereto.)

Driller R. J. Wells

Address Minneapolis Minn. (City, village, township, county)

Address Oakfield

Date of Report Apr. 16, 1938

Registration No. 23

Give below the location of the property on which well is drilled.

If incorporated village or city: .....

If unincorporated hamlet ..... Name ..... Lot ..... Blk. ..... Street and No.

If Lake Shore Plat ..... Name ..... County ..... Twp. ..... Highway

If Farm Tomahawk Lac (Name of Plat) Oakfield (Lake) Lot 11 Blk. ..... Street

County ..... Twp. ..... Sec. ..... Highway

If School ..... County ..... Twp. ..... Sec. ..... District

If other public building ..... Kind ..... County ..... Twp. ..... Sec.

Miscellaneous ..... Kind ..... County ..... Twp. ..... Sec.

WELL LOG and REPORT

Screens, Seals Grouts, etc.	Well Diagram (Each vertical line equals 1')	Kind of Casing, liner, shoe, etc. (Each horizontal line equals 5')	Formations State if dry or water bearing	Record of FINAL Pumping Test
	8 6 4 2 0 2 4 6 8	Steel Pipe with shoe to rock 102'-4"	Drift + clay 80'	Duration of test. Hours 10
	25		Shale to rock	Pumping Rate. G. P. M. 270 per H
	50		Rock 35'	
	75			Depth of pump in well. Ft. 98
	100			
	125			Standing water-level (from surface.) Ft. 27
	136'		Nearly dry 2'-	
	150		Rock	Water level when pumping Ft. 109
	175			
	200			Water. End of test. Check: Clear —
	225			Cloudy .....
	250			Turbid .....
	300			Was well sterilized before test? Yes — No ..... Date Mar. 26
	350			
	400			To which Laboratory was sample sent? Madison Date Apr. 13
	500			Was the well sealed on completion? Yes — No .....
	600			How high did you leave casing above grade? 16"
	700			Well was completed Mar. 25 1938
				Well Driller: R. J. Wells. Signature.
				(Be sure to complete the report on the reverse side)

PREMISES DIAGRAM

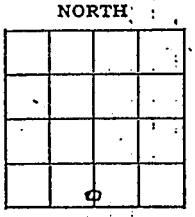
(See Rules)

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 for specimen Diagram.

REMARKS:

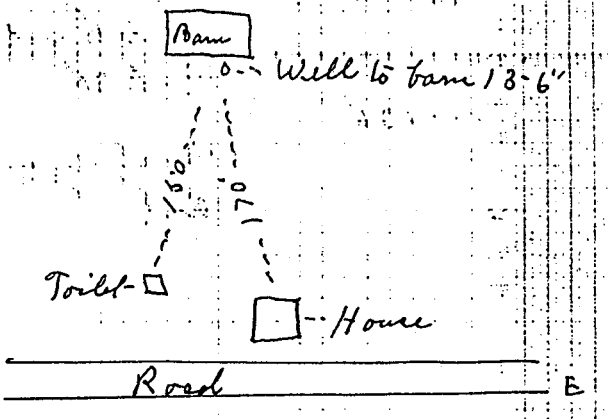
Indicate position of premises in the Section

NORTH

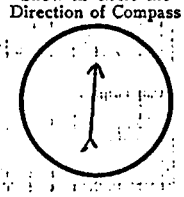


B Cashil head head at 30' 4 sticks
" " " " 40' " "
The Land slopes to north to ward river which is about 180 rods north of buildings

Sec. 11 T. 12 R. 16 (E) (W) (Each division equals 10') (If more or less indicate: .....)



Show in circle the Direction of Compass



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.

Wel 6 Box 5

WELL CONSTRUCTOR'S REPORT TO WISCONSIN STATE BOARD OF HEALTH

See Instructions on Reverse Side

1. County Fond du Lac — Town ☑ Oakfield; Village ☐; City ☐ (Check one and give name)

2. Location SE ¼ - NW ¼ Sec 13 - T 14 N - R 16 E
Name of street and number of premise or Section, Town and Range numbers

3. Owner ☑ or Agent ☐ Bob. Weinberger
Name of individual, partnership or firm

4. Mail Address Oakfield Wisc.
Complete address required

5. From well to nearest: Building 100 ft; sewer — ft; drain — ft; septic tank — ft; dry well or filter bed — ft; abandoned well — ft.

6. Well is intended to supply water for: Slaughter house

7. DRILLHOLE:

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
6	114	392			

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
4	11. # Steel	5	168

9. GROUT:

Kind	From (ft.)	To (ft.)

10. FORMATIONS:

Kind	From (ft.)	To (ft.)
Shale	114	155
Lime rock	155	377
Sandstone	377	392

RECEIVED
OCT 19 1960
SANITARY ENGINEERING

Construction of the well was completed on: Sept 30 1960

The well is terminated 60 inches ☑ above, below ☐ the permanent ground surface.

Was the well disinfected upon completion? Yes ✓ No ____

Was the well sealed watertight upon completion? Yes ✓ No ____

11. MISCELLANEOUS DATA:

Yield test: 5 Hrs. at 10 GPM.

Depth from surface to water-level: 47 ft.

Water-level when pumping: 120 ft.

Water sample was sent to the state laboratory at: Madison (City) on Oct 4 1960

Signature Oscar Schroepfer (Registered Well Driller) — Box Byron, Wis. (Complete Mail Address)

Please do not write in space below

Rec'd OCT 5 - 1960 No. 38856

Ans'd ____

Interpretation UNSAFE
Iron = 11.1 parts per million
pH = 8.4

	10 ml	10 ml	10 ml	10 ml	10 ml
Gas—24 hrs.					
48 hrs.	+	+	+	+	0
Confirm	+	+	0	0	
B. Coli	2/5				

Examiner ____

INSTRUCTIONS

ALL INFORMATION INDICATED ON THE FACE OF THIS FORM MUST BE GIVEN

PLEASE BE GUIDED BY THE FOLLOWING:

Numbers below correspond to numbers of items of the form on the opposite side.

1. Name of the County and the name of the Town, Village or City. Indicate which is given.
2. If Rural: Number and the ¼ of the Section, the number of the Town North, and the number of the Range East or West.
   If Urban: Name of the Street and the number of the Premise.
3. Name of the Owner. If the name of the owner cannot be given, give instead the name of the Agent. Indicate which is given.
4. Name of the Street and the number of the Premise or the number of the Mail Route, the name of the Post Office and the name of the State.
5. Distance, in feet, from the well to the nearest building and to each source of pollution shown.
6. Indicate: Home, farm, school, tavern, creamery, community, industry, etc.
7. Show the diameter and depth of the initial drillhole or excavation and each reduction in size to bottom. If well was reconstructed, show diameter and depth of original well on first line.
8. Show diameter and kind of casing pipe, liner pipe or curbing and actual position in the well, measured from the surface.
9. Show kind of material (mud or cement) used in sealing the annular space, from and to what depths from the surface. If neither was used indicate "none".
10. Show thickness of each formation and the total depth at the base thereof.
11. Provide the data indicated.

Note: The Well Construction Report (Well Log) may be forwarded with the water sample from a newly constructed or reconstructed well, instead of the report requested by the State Laboratory of Hygiene, on the form which accompanies the sample bottle.

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, subsurface pumprooms, access pits, etc., may be given here:

This well was 114 ft deep with 6" casing said to be 90 ft. and extending up 2½ ft in approved pit.

We installed 4" liner with packer at the 168 ft level.

If more space is needed another sheet may be attached.

Rev. 6-30M-(6-50)

RECEIVED
NOV 20 1951
BUREAU
SAN. ENG.

WELL CONSTRUCTOR'S REPORT TO WISCONSIN STATE BOARD OF HEALTH

See Instructions on Reverse Side

1. County Fond du Lac { Town ☒ / Village ☐ / City ☐ } Oakfield — Check one and give name

2. Location Highway 151 Section 14 — Name of street and number of premise or Section, Town and Range numbers (14N-16E)

3. Owner ☒ or Agent ☐ Michael & Hubert Harbenadel Bros — Name of individual, partnership or firm

4. Mail Address R # 4 Fond du Lac Wis — Complete address required

5. From well to nearest: Building 20 ft; sewer none ft; drain 50 ft; septic tank none ft; dry well or filter bed none ft; abandoned well none ft.

6. Well is intended to supply water for Drinking Livestock & Farm use

7. DRILLHOLE:

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8	0	30	6	0	108

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
8		0	20
6		0	30

9. GROUT:

Kind	From (ft.)	To (ft.)
Neat Cement	15	30
Puddled Clay	0	15

10. FORMATIONS:

Kind	From (ft.)	To (ft.)
Clay	0	10
Sandy Clay	10	20
Rock	20	108

Construction of the well was completed on: Nov 15 19 57

The well is terminated 12 inches ☒ above, below ☐ the permanent ground surface.

Was the well disinfected upon completion? Yes ✓ No

Was the well sealed watertight upon completion? Yes ✓ No

11. MISCELLANEOUS DATA:

Yield test: 8 Hrs. at 10 GPM.

Depth from surface to water-level: 6 ft.

Water-level when pumping: 12 ft.

Water sample was sent to the state laboratory at: Madison (City) on Oct 30 1957

Signature Harbenadel Bros R # 4 Fond du Lac Wis
Registered Well Driller — Complete Mail Address

Please do not write in space below

Rec'd ____ No. ____

Ans'd ____

Interpretation ____

	10 ml	10 ml	10 ml	10 ml	10 ml
Gas—24 hrs.					
48 hrs.					
Confirm					
B. Coli					

Examiner ____

INSTRUCTIONS

ALL INFORMATION INDICATED ON THE FACE OF THIS FORM MUST BE GIVEN

PLEASE BE GUIDED BY THE FOLLOWING:

Numbers below correspond to numbers of items of the form on the opposite side.

1. Name of the County and the name of the Town, Village or City. Indicate which is given.
2. If Rural: Number and the ¼ of the Section, the number of the Town North, and the number of the Range East or West.
   If Urban: Name of the Street and the number of the Premise.
3. Name of the Owner. If the name of the owner cannot be given, give instead the name of the Agent. Indicate which is given.
4. Name of the Street and the number of the Premise or the number of the Mail Route, the name of the Post Office and the name of the State.
5. Distance, in feet, from the well to the nearest building and to each source of pollution shown.
6. Indicate: Home, farm, school, tavern, creamery, community, industry, etc.
7. Show the diameter and depth of the initial drillhole or excavation and each reduction in size to bottom. If well was reconstructed, show diameter and depth of original well on first line.
8. Show diameter and kind of casing pipe, liner pipe or curbing and actual position in the well, measured from the surface.
9. Show kind of material (mud or cement) used in sealing the annular space, from and to what depths from the surface. If neither was used indicate "none".
10. Show thickness of each formation and the total depth at the base thereof.
11. Provide the data indicated.

Note: The Well Construction Report (Well Log) may be forwarded with the water sample from a newly constructed or reconstructed well, instead of the report requested by the State Laboratory of Hygiene, on the form which accompanies the sample bottle.

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, subsurface pumprooms, access pits, etc., may be given here:

The 8" pipe has been removed after the Neat Cement was placed

Mr. Thomas Calabrese

In reply to your request for Well Construction Report

This is to inform you that to the best of our knowledge we have reported all Wells drilled by us

Yours Truly Fredericks Bros

By M. E. F.

If more space is needed another sheet may be attached.

Will you kindly send Corrected address to have Water tested for hardness

WELL CONSTRUCTOR'S REPORT TO WISCONSIN STATE BOARD OF HEALTH

See Instructions on Reverse Side

RECEIVED
JUL 7 1948
BUREAU
SAN. ENG.

1. County Tandolac { Town ☒ / Village ☐ / City ☐ } Towns — Check one and give name

2. Location 1 mile east of village S13 T14 16E
Name of street and number of premise or Sec. Tn. and R. numbers

3. Owner ☑ or Agent ☐ Robert Tuswille
Name of individual, partnership or firm

4. Mail Address Oakfield Wis
Complete address required

5. From well to nearest: Building 7 ft; sewer ____ ft; drain ____ ft; septic tank ____ ft; dry well or filter bed ____ ft; abandoned well ____ ft.

6. Well is intended to supply water for: Farm

7. DRILLHOLE:

Dia. (in.)	From (ft.)	To (ft.)
6		449

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind	From (ft.)	To (ft.)
6	Steel well pipe with shoe		163

9. GROUT:

Kind	From (ft.)	To (ft.)
Drillings		

10. FORMATIONS:

Kind	From (ft.)	To (ft.)
Sand & Gravel clay	0	30
S. Shale	30	163
Trenton	163	414
St Peter	414	449
3' of Shale at 226 & 329		

11. MISCELLANEOUS DATA:

Yield test: 12 Hrs. at 800 GPM.

Depth from surface to water: 81 ft.

Water-level when pumping: 101 ft.

Water sample sent to laboratory at Madison on June 28 1948

Construction of the well was completed on June 28 1948

The well is terminated 6 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 R J Wells
Registered Well Driller

Oakfield Wis
Complete Mail Address

INSTRUCTIONS

ALL INFORMATION INDICATED ON THE FACE OF THIS FORM MUST BE GIVEN

PLEASE BE GUIDED BY THE FOLLOWING:

Numbers below correspond to numbers of items of the form on the opposite side.

1. Name of the County and the name of the Town, Village or City. Indicate which is given.
2. If Rural: Number and the ¼ of the Section, the number of the Town North, and the number of the Range East or West.
   If Urban: Name of the Street and the number of the Premise.
3. Name of the Owner. If the name of the owner cannot be given, give instead the name of the Agent. Indicate which is given.
4. Name of the Street and the number of the Premise or the number of the Mail Route, the name of the Post Office and the name of the State.
5. Distance, in feet, from the well to the nearest building and to each source of pollution shown.
6. Indicate: Home, farm, school, tavern, creamery, community, industry, etc.
7. Show the diameter and depth of the initial drillhole or excavation and each reduction in size to bottom. If well was reconstructed, show diameter and depth of original well on first line.
8. Show diameter and kind of casing pipe, liner pipe or curbing and actual position in the well, measured from the surface.
9. Show kind of material (mud or cement) used in sealing the annular space, from and to what depths from the surface. If neither was used indicate "none".
10. Show depth of each formation.
11. Provide the data indicated.

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, subsurface pumprooms, access pits, etc., may be given here:

Started with 8" pipe to 20'
Put in 6" pipe with shoe to 57'
Pulled 6" pipe and shot at 57'
Run 8" hole to about 60'
Put back 6" and drilled & drove to 163' to Trenton
There is a 12" well about 8' from new well
and they are using it yet.

If more space is needed another sheet may be attached.

WELL CONSTRUCTOR'S REPORT TO WISCONSIN STATE BOARD OF HEALTH

See Instructions on Reverse Side

1. County Fond du Lac (Town ☑ Village ☐ City ☐) Oakfield — Check one and give name

2. Location NE ¼ - SE ¼ Sec 11 T 14 R 16 E
Name of street and number of premise or Section, Town and Range numbers

3. Owner ☑ or Agent ☐ Sam Smith
Name of individual, partnership or firm

4. Mail Address 310 So Main St Fond du Lac Wis.
Complete address required

5. From well to nearest: Building 15 ft; sewer 50 ft; drain 30 ft; septic tank 75 ft; dry well or filter bed 100 ft; abandoned well ____ ft.

6. Well is intended to supply water for: Home

7. DRILLHOLE:

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
10	0	20	6	22	240
8	20	22			

8. CASING AND LINER PIPE OR CURBING:

Dia. (in.)	Kind and Weight	From (ft.)	To (ft.)
6	19.45# Steel	0	222

9. GROUT:

Kind	From (ft.)	To (ft.)
Shale	0	122

10. FORMATIONS:

Kind	From (ft.)	To (ft.)
Drift	0	18
Shale	18	122
Galena limerock	122	240

RECEIVED
JUN 26 1956
ENVIRONMENTAL SANITATION

Construction of the well was completed on: June 18 19 56

The well is terminated 15 inches ☑ above, below ☐ the permanent ground surface.

Was the well disinfected upon completion? Yes ✓ No ____

Was the well sealed watertight upon completion? Yes ✓ No ____

11. MISCELLANEOUS DATA:

Yield test: 4 Hrs. at 12 GPM.

Depth from surface to water-level: 37 ft.

Water-level when pumping: 60 ft.

Water sample was sent to the state laboratory at: Madison City on June 18 1956

Signature Oscar Schweftel (Registered Well Driller) So Byron Wis. (Complete Mail Address)

Please do not write in space below

Rec'd JUN 19 1956 No. 1916

Ans'd ____

Interpretation SAFE

	10 ml	10 ml	10 ml	10 ml	10 ml
Gas—24 hrs.					
48 hrs.	0				
Confirm					
B. Coli	0/5				

Examiner ____